Journal of Research in Personality 78 (2019) 165–176

Contents lists available at ScienceDirect

Journal of Research in Personality

journal homepage: www.elsevier.com/locate/jrp

Full Length Article

Approaching the true self: Promotion focus predicts the experience of authenticity

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ARTICLE INFO

Article history:
Received 2 June 2018
Revised 29 November 2018
Accepted 2 December 2018
Available online 5 December 2018

Keywords:
Subjective authenticity
Regulatory focus
True self
Motivation

ABSTRACT

Research on subjective authenticity identifies several psychological antecedents that seem naturally tied to subjectively authentic experiences. Four studies ($N = 525$) tested the hypothesis that promotion focus (compared to prevention focus) represents another shared antecedent of subjective authenticity. Studies 1 and 2 examined correlations between regulatory focus and subjective authenticity in the context of goal-pursuit and interpersonal interactions. Studies 3 and 4 were within-subjects experiments designed to manipulate regulatory focus and examine the effects of promotion and prevention focus on subjective authenticity. Across all studies, we found that promotion focus (relative to prevention focus) was a robust predictor of subjective authenticity. Implications and future directions are discussed.

1. Introduction

> I wanted only to live in accord with the promptings which came from my true self. Why was that so very difficult?
>
> [–Hermann Hesse, Demian.]

Modern society and culture extol the virtues of living in accord with one's core values and expressing them openly and honestly (Harter, 2002). The proposed benefits of authenticity are well documented (e.g., in terms of well-being, Kernis & Goldman, 2006; see also Rivera et al., 2018), and growing research has started to examine situational factors or personality characteristics that engender feelings of authenticity (e.g., Fleeson & Wilt, 2010; Lenton, Slabu, Sedikides, & Power, 2013). Feelings of authenticity (or subjective authenticity) refer specifically to people's subjective judgment of whether their momentary experiences express who they truly are. Drawing from previous research and theory (Fleeson & Wilt, 2010; Higgins, 1998; Schmader & Sedikides, 2018), we propose that promotion focus (relative to prevention focus) facilitates subjective authenticity.

1.1. Subjective authenticity and its antecedents

Although the importance of authenticity has been recognized throughout human history (Harbus, 2002), the empirical study of this construct is relatively new (Harter, 2002). Newer still is research aimed specifically at examining what influences the subjective experience of authenticity. A growing body of research has identified a few different antecedents of subjective authentic experiences including positive mood (Lenton, Slabu, et al., 2013), satisfaction of autonomy (Thomaes, Sedikides, Vanden Bos, Hutteman, & Reijntjes, 2017), and social power (Kifer, Heller, Perunovic, & Galinsky, 2013; Kraus, Chen, & Keltner, 2011).

Recently, Fleeson and Wilt (2010) articulated two competing hypotheses related to the origins of subjective authenticity. The *trait-consistency hypothesis* suggests that people feel most authentic when they act in accordance with their dispositional traits. From this perspective, extraverts should feel most authentic when they behave in an extraverted manner, whereas introverts should feel most authentic when they behave in an introverted manner. This perspective is well-rooted in existing literature and can be seen as reflecting the more general assumption that some notion of fit or consistency (e.g., between trait and behavior, between person and environment, etc.) is of intrinsic value and is conducive to performance and well-being (Greguras & Diefendorff, 2009; Kraus et al., 2011; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997; Tamir, 2005; Winter, John, Stewart, Klohnen, & Duncan, 1998). By comparison, the *state-content significance hypothesis* suggests one's *current behavior* facilitates feelings of authenticity rather than the

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https://doi.org/10.1016/j.jrp.2018.12.001
0092-6566/

congruence between one's behavior and dispositional traits.[3] Fleeson and Wilt found strong support for the state-content significance hypothesis across three studies: People consistently reported higher levels of subjective authenticity when they behaved in an extraverted, agreeable, conscientious, emotionally stable, and intellectual manner. This occurred regardless of whether people's behaviors matched their self-reported dispositional traits.

Building on Fleeson and Wilt's (2010) analysis, the current research explored another type of behavioral or psychological content that we believed would predict the experience of subjective authenticity across individuals. Specifically, we propose that the self-regulatory motivational mindset of promotion focus should be more conducive to subjective authenticity compared to its counterpart, prevention focus.

1.2. Promotion focus and subjective authenticity

Regulatory Focus Theory (RFT, Higgins, 1997, 1998) distinguishes between two general types of motivational self-regulatory focus: promotion and prevention focus. Promotion focus emphasizes achievements of personal ideals (following the guide of the "ideal self"). Prevention focus emphasizes fulfillment of obligations that typically originate from authority figures such as parents (following the guide of the "ought self").[4] Research on regulatory fit (Higgins, 2005) suggests that both types of self-regulatory focus have a "preferred" strategy of goal-pursuit. For example, people characterized with a chronic promotion focus generally prefer an eager strategy (i.e., being sensitive to gains and non-gains), whereas people characterized with a chronic prevention focus generally prefer a vigilant strategy (i.e., being sensitive to losses and non-losses).

How might regulatory focus influence subjective authenticity? According to the trait-consistency hypothesis outlined above, people should feel most authentic when their current strategy of goal-pursuit matches their chronic "preferred" regulatory focus. Such a prediction is consistent with previous work in RFT that suggests people experience a sense of "fit" and rightness when trait and state regulatory focus match (Avnet & Higgins, 2003, 2006; Bohns et al., 2013; Camacho, Higgins & Luger, 2003; Freitas & Higgins, 2002; Higgins, 2005; Higgins, Cesario, Hagiwara, Spiegel, & Pittman, 2010). This position is also consistent with Schmader and Sedikides' (2018) recent theoretical framework on subjective authenticity—the State Authenticity as Fit to Environment (SAFE) Model. The SAFE Model proposes that subjective authenticity originates from perceptions of fit to the environment. One type of "fit" was self-concept fit, which "occurs when environments automatically activate the most chronically accessible (or default) aspects of the self" (Schmader & Sedikides, 2018, p. 231). In the context of the current research, the SAFE model would predict people with a chronic promotion focus should feel more authentic in situations that prompt them to follow their ideal self and adopt an eager strategy. Similarly, people characterized with a chronic prevention focus should feel more authentic in situations that prompt them to follow their ought self and adopt a vigilant strategy.

The state-content significance hypothesis, however, predicts that the different modes of regulatory focus might have *direct* relationships to authenticity. Much like how Fleeson and Wilt (2010) found that participants felt more authentic when acting extraverted regardless of their trait-level extraversion, it may be that the different forms of regulatory focus promote (or hinder) authenticity for people regardless of whether there is a match. Specifically, we propose that promotion focus, relative to prevention focus, is naturally tied to subjective authenticity across individuals.

According to the state-content significance hypothesis, certain behaviors feel more natural and less constrained by external influences. When individuals engage in these actions, their subsequent psychological mindsets contribute to the expression of core values and thus enhance subjective authenticity. In line with this idea, we contend that promotion focus, relative to prevention focus, functions similarly in fostering authentic experiences. People under promotion focus tend to adopt explorative and risk-taking strategies oriented towards desirable outcomes (Higgins, 1998), which could allow them to express their "true" selves more easily. Similarly, promotion focus is positively associated with openness (Vaughn, Baumann, & Klemann, 2008) and positive mood states (Higgins, 1997, 1998), which are known predictors of subjective authenticity (e.g., Fleeson & Wilt, 2010; Lenton, Slabu, et al., 2013). Moreover, according to RFT (Higgins, 1997, 1998), promotion and prevention focus each serves distinct needs: Promotion focus orients people toward nurturance, whereas prevention focus orients people toward security. Nurturance-related needs, such as autonomy, are generally regarded as an integral part of authentic experiences (Kernis & Goldman, 2006; Lenton, Bruder, Slabu & Sedikides, 2013; Ryan & Deci, 2000; Ryan & Ryan, 2018; Sheldon & Elliot, 1998; Slabu, Lenton, Sedikides & Bruder, 2014). Security-related needs, however, are more "lower-ordered" (Colby, 1968; James, 1890/1948; Maslow, 1968, 1971) and have little to do with nurturance and growth. Excessive concerns about security may even distract from self-expression and development (Sheldon & Kasser, 1998, 2001). Consistent with this reasoning, recent research has demonstrated that promotion focus supports nurturance-related needs, whereas prevention focus can undermine feelings of basic needs satisfaction (Vaughn, 2017). Given the connection between satisfaction of nurturance-related needs and subjective authenticity, we hypothesize that promotion focus, compared to prevention focus, should be more conducive to feelings of authenticity in a variety of settings.

One recent cross-sectional correlational study supports our hypothesis, demonstrating a positive correlation between promotion focus and trait authenticity (Akfirat, Gül, & Yetim, 2016). In the present research, we aim to further examine whether this relationship holds true for subjective judgments of state authenticity as opposed to trait-level authenticity. Moreover, we intend to identify the contours of this relationship by examining it in various contexts (i.e., goal-pursuit, interpersonal interactions, and self-relevant decision-making) and through different methodological lenses (i.e., correlational studies using multilevel modeling and within-subjects experiments).

1.3. Overview of the present research

We conducted four studies to test the hypothesis that promotion focus positively predicts authenticity.[5] In the first two studies, we examined the correlations between measures of promotion/

[3] Fleeson and Wilt (2010) originally examined antecedents of subjective authenticity on a state level. Compared to their usage of the "state-content significance hypothesis," our use of this idea is more generic (we retain the label "state-content significance hypothesis" for the sake of continuity within the literature). Our focus is not on the state-versus-trait distinction but on whether promotion focus could robustly predict subjective authenticity across individuals (as opposed to the notion of consistency or "fit" expressed by the trait-consistency hypothesis). We have speculated that both momentary regulatory focus and chronic, trait regulatory focus should predict subjective authenticity. As a result, we are open to the use of trait measures (especially in Study 2).

[4] There is some conceptual ambiguity over how regulatory focus should be defined. Our definition and operationalization follow most closely to what Summerville and Roese (2008) referred to as the "self-guide definition." The merit of the self-guide definition is that its operationalization is less confounded with positive affect or approach/avoidance. Interested readers are encouraged to consult Summerville and Roese (2008) for more details and discussion about an alternative conceptualization.

[5] The reported studies were not preregistered.

prevention focus and authenticity within goal-pursuits (Study 1) and a group interaction (Study 2). In Studies 3 and 4, we directly manipulated regulatory focus and tested the causal link between promotion/prevention focus and subjective authenticity. Informed consent was obtained for each of the four studies. Full scripts, materials, and data for the studies are available online on the Open Science Framework (OSF) webpage at osf.io/jtafx/.

2. Study 1

Study 1 established initial evidence for the link between promotion/prevention focus and subjective authenticity. Specifically, we examined the correlations between these variables in the context of goal-pursuit, which has been widely studied in research on regulatory focus (e.g., Higgins, 2005). We had participants identify important goals and rate them separately on their promotion focus, prevention focus, and authenticity. This allowed us to examine the within-person relationship between regulatory focus and authenticity. If the trait-consistency hypothesis is true, we should observe an interaction between goal-level and trait-level self-regulatory focus predicting goal authenticity. By comparison, we expected, based on the state-content significance hypothesis, that promotion focus (goal- or trait-level) would be associated with goal authenticity regardless of whether trait regulatory focus matches each goal's regulatory focus.

In addition, we explored intrapersonal basic needs satisfaction (i.e., autonomy and competence) as a potential mediator.[6] Basic needs are needs that directly address nurturance and personal growth (Ryan & Deci, 2000). Existing evidence suggests that whereas promotion focus facilitates basic needs satisfaction, prevention focus could undermine satisfaction of basic needs (Vaughn, 2017). Given that basic needs satisfaction is a key component of authentic self-expression (Kernis & Goldman, 2006; Lenton, Bruder, et al., 2013; Ryan & Deci, 2000; Ryan & Ryan, 2018; Sheldon & Elliot, 1998; Slabu et al., 2014), we expected satisfaction of basic needs to mediate the relationship between goal regulatory focus and goal authenticity. We revisit the mediating role of basic psychological needs in Study 4.

2.1. Method

Participants. We recruited 104 undergraduate students (63 females, 40 males, 1 not reporting) at Texas A&M University who participated in the study for course credit. They were predominantly White (78.8%) and non-Hispanic (75%); their ages ranged from 18 to 40 years (M = 19.67, SD = 2.30).

The sample size of Studies 1 through 3 was not determined a priori but was limited by the subject pool and available lab resources. Given that our primary interest was to examine whether goal promotion focus is correlated with subjective authenticity, we conducted analysis via Optimal Design software (Raudenbush, 2011) to examine the statistical power for the current study to detect the predicted effect. The analysis revealed that this sample size has a statistical power close to 1 to detect a medium effect size (δ = 0.50) within a multilevel modeling framework (assuming effect size variability σ^2 = 0.05, proportion of explained variance by the blocking variable as 0).

Procedure and materials. The whole procedure was delivered online. We first asked participants to think about and make a list of five important goals. Then, for each goal, participants rated authenticity, basic needs satisfaction, and regulatory focus. Lastly, participants completed a measure of trait regulatory focus.

Goal regulatory focus. We developed four face-valid items to measure goal promotion and prevention focus. The items we used to measure goal promotion focus were "I strive for this goal to achieve my personal ideals" and "I pursue this goal because it helps me to achieve what I ideally aspire to be." The items we used to measure goal prevention focus were "I strive for this goal to fulfill my obligations" and "I pursue this goal because it helps me to achieve what I ought to be." Participants were asked to indicate their agreement with these statements on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). For each goal, we averaged their responses into a score of goal promotion focus (M = 4.36, SD = 0.64, r = 0.55) and a score of goal prevention focus (M = 4.10, SD = 0.88, r = 0.59).

Goal authenticity. We measured goal authenticity by having participants rate their agreement with five statements on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*). The items were "I feel authentic when I pursue this goal," "I feel distant from who I really am when pursuing this goal" (reversed-coded), "This goal helps me to become true to myself," "This goal is consistent with my true or core self," and "This goal reflects who I really am – the "real me"." Responses for each goal were averaged to create goal authenticity scores (M = 4.08, SD = 0.70, α = 0.74).

Goal basic needs satisfaction. We developed two face-valid items to measure the satisfaction of two basic needs from goal-pursuit: autonomy ("When I pursue this goal, I feel like I am free to decide for myself what to do," M = 4.04, SD = 1.03) and competence ("When I pursue this goal, I feel like a competent person," M = 4.25, SD = 0.81). Participants rated to what extent they agree with the two statements for each goal on a 5-point scale (1 = *strongly disagree*, 5 = *strongly agree*).

Trait regulatory focus. We assessed regulatory focus using the 11-item Regulatory Focus Questionnaire (RFQ, Higgins et al., 2001). This measure consists of two subscales designed to assess trait promotion focus (e.g., "How often have you accomplished things that got you "psyched" to work even harder?") and trait prevention focus (e.g., "How often did you obey rules and regulations that were established by your parents?"). Participants rated how frequently events described in the items occurred in their life on a 5-point scale (1 = *never or seldom*, 5 = *very often*). Responses across each subscale were averaged to produce composite scores for promotion focus (M = 3.55, SD = 0.58, α = 0.60) and prevention focus (M = 3.44, SD = 0.90, α = 0.84).

2.2. Results

Within-person correlations for primary variables. We examined within-person bivariate correlations among goal-level variables. We computed the correlation coefficients for each participant using the within-person deviation scores (Snijders & Bosker, 1999). Table 1 presents the averages of these within-person correlations. Consistent with our prediction, the relationship between goal promotion focus and goal authenticity was stronger than the relationship between goal prevention focus and goal authenticity (r = 0.29 vs. r = 0.08).

Meanwhile, goal promotion focus was correlated with basic needs satisfaction. Basic needs satisfaction was also positively correlated with goal authenticity—this corroborates the existing literature on the role of basic needs satisfaction in authentic experiences (Kernis & Goldman, 2006; Lenton, Bruder, et al., 2013; Ryan & Deci, 2000; Ryan & Ryan, 2018; Sheldon & Elliot, 1998; Slabu et al., 2014).

[6] Investigation of mediation is by nature merely illustrative in the current research, in that a cross-sectional design is not the most appropriate design to address mediation (Maxwell & Cole, 2007; Maxwell, Cole, & Mitchell, 2011). In addition, research on basic needs satisfaction generally assumes three basic psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). The current research only involved mediation of autonomy and competence because they seemed to be the most relevant to the contexts examined.

Table 1
Average within-person correlations among goal-level variables in Study 1.

Variable	1	2	3	4	5
1. Goal promotion focus	–				
2. Goal prevention focus	0.35	–			
3. Goal authenticity	0.29	0.08	–		
4. Goal autonomy	0.32	0.01	0.35	–	
5. Goal competence	0.37	0.27	0.27	0.26	–

Primary analysis. Given that goals were nested within each individual, we used hierarchical linear modeling (HLM, Version 6.02; Raudenbush & Bryk, 2002) to examine within-person relationships between goal authenticity, goal promotion focus, and goal prevention focus. We examined potential cross-level interactions between the goal measures and trait promotion and prevention focus (i.e., testing the trait-consistency hypothesis). The multilevel analyses included two levels with Level 1 representing the goals nested within individuals and Level 2 representing mean differences between individuals. We used restricted maximum likelihood estimation. In order to examine the purely within-person relationships among the variables and to control for the potential bias introduced by between-person differences in mean levels on the predictors of interest (Bryk & Raudenbush, 1992; Fleeson, 2007), all Level 1 predictors were group-mean centered. Level 2 predictors were grand mean centered. The slopes and intercepts were estimated as random effects. These analyses produce betas that can be interpreted in the same manner as the unstandardized betas in conventional regression analyses. To calculate the effect size correlation *r*, we used the obtained *t* and *df* (equation 2.5, Rosenthal, Rosnow, & Rubin, 2000).

The results revealed a significant positive relationship between goal promotion focus and goal authenticity, $b = 0.41$, $SE = 0.07$, $r = 0.47$, $p < .001$. However, goal prevention focus did not significantly predict goal authenticity, $b = 0.11$, $SE = 0.07$, $r = 0.15$, $p = .14$. In a similar vein, trait promotion focus significantly predicted goal authenticity, $b = 0.23$, $SE = 0.08$, $r = 0.26$, $p = .007$, whereas trait prevention focus did not, $b = -0.03$, $SE = 0.05$, $r = 0.05$, $p = .58$. None of the cross-level interactions between goal promotion/prevention focus and trait promotion/prevention focus predicting goal authenticity were significant ($rs < 0.14$, $ps > 0.14$).

To test whether the link between promotion focus and authenticity was stronger than the link between prevention focus and authenticity, we reran the same HLM with full maximum likelihood estimation (as an unconstrained baseline model). Full maximum likelihood estimation allowed us to compare different multilevel models in terms of model fit regardless of whether the models had the same fixed component (Kreft & De Leeuw, 1998). We then estimated another two models using the same method: For one model, we constrained the pathways predicting goal authenticity from goal promotion and prevention focus to equality; for the other model, we constrained the pathways predicting goal authenticity from trait promotion and prevention focus to equality. Finally, one at a time, the constrained models were compared to the unconstrained model in terms of deviance statistics. If the analysis revealed significant differences between the two models (chi square difference $p < .025$, Bonferroni adjusted), this would suggest that the coefficients that were constrained (i.e., between promotion focus and authenticity and between prevention focus and authenticity) are significantly different from each other. Consistent with our expectation, the analyses revealed that unconstrained model differed significantly from the goal-level constrained model, $\Delta\chi^2(1) = 15.01$, $p < .001$, and from the trait-level constrained model, $\Delta\chi^2(1) = 6.81$, $p = .009$. This suggests that the associations between promotion focus and goal authenticity ($b = 0.41$ for goal promotion focus and $b = 0.23$ for trait promotion focus) were stronger than the associations between prevention focus and goal authenticity ($b = 0.11$ for goal prevention focus and $b = -0.03$ for trait prevention focus).

Overall, these findings suggest that relative to prevention focus, promotion focus was more importantly and potently associated with goal authenticity at both goal and trait levels. Furthermore, no evidence for the cross-level interaction effects suggests the link between promotion focus and authenticity remains regardless of whether trait regulatory focus matches or mismatches its goal counterpart.

Mediation of basic needs. Since goal promotion focus was robustly associated with goal authenticity (whereas goal prevention focus was not), we proceeded by examining whether basic needs satisfaction mediated the relationship between goal promotion focus and goal authenticity. We used Hayes and Rockwood's (2017) MLmed Macro (RMEL estimation with 10,000 Monte Carlo Samples) to estimate parameters for a 1–1–1 mediational model. The analyses confirmed our speculation: The within-subject indirect effects of autonomy and competence both emerged as significant, $b = 0.07$, $SE = 0.02$, $z = 3.74$, 95% Confidence Interval (CI) = [0.04, 0.11] for autonomy; $b = 0.03$, $SE = 0.01$, $z = 2.34$, 95% CI = [0.01, 0.06] for competence. The within-subject direct effect of goal promotion focus on goal authenticity also emerged as significant, $b = 0.19$, $SE = 0.05$, $t(413) = 3.86$, 95% CI = [0.09, 0.28]. For between-subject effects, the indirect effects of basic needs were not significant, $b = 0.04$, $SE = 0.07$, $z = 0.52$, 95% CI = [−0.10, 0.18] for autonomy; $b = 0.13$, $SE = 0.08$, $z = 1.57$, 95% CI = [−0.03, 0.28] for competence. Only the direct effect of goal promotion focus was significant, $b = 0.70$, $SE = 0.12$, $t(100) = 6.00$, 95% CI = [0.47, 0.93].

Re-analyses. We also re-ran the HLM and mediation analyses with a reduced version of the goal authenticity scale. The re-analyses intended to address the concern that some of the authenticity scale items (e.g., "This goal helps me to become true to myself") semantically overlap with some of the promotion focus items (e.g., "I pursue this goal because it helps me to achieve what I ideally aspire to be."). In the re-analyses, we dropped any authenticity items that used the word "self" and only used the face valid item "I feel authentic when I pursue this goal" ($M = 4.20$, $SD = 0.84$).

The average within-subject correlations were very similar for the modified scale as the un-modified scale ($r = 0.27$ vs. $r = 0.05$ for modified scale; $r = 0.29$ vs. $r = 0.08$ for unmodified scale). The HLM results were also very similar. Significant positive relationships again emerged between goal promotion focus and goal authenticity, $b = 0.41$, $SE = 0.09$, $r = 0.42$, $p < .001$. Though trending in the same direction, the relationship between trait promotion focus and goal authenticity was not statistically significant, $b = 0.19$, $SE = 0.10$, $r = 0.18$, $p = .06$. Just as with the original analyses, neither goal prevention focus nor trait prevention focus significantly related to goal authenticity, $b = -0.13$, $SE = 0.08$, $r = 0.17$, $p = .10$ for goal prevention focus; $b = -0.04$, $SE = 0.07$, $r = 0.07$, $p = .50$ for trait prevention focus. Further replicating the other analyses, none of the cross-level interactions between goal promotion/prevention focus and trait promotion/prevention focus were significant, $rs < 0.14$, $ps > 0.17$. The analyses also confirmed that the relationships between promotion focus and goal authenticity were

significantly stronger than the relationships between prevention focus and goal authenticity, $\Delta\chi^2(1) = 13.12$, $p < .001$ for goal promotion/prevention; $\Delta\chi^2(1) = 3.85$, $p = .05$ for trait promotion/prevention focus. Thus, the only thing that changed in these analyses was that the relationship between trait promotion focus and goal authenticity became notably smaller and non-significant, though it was in the same direction ($p = .06$).[7]

2.3. Discussion

The results of Study 1 provide initial evidence for our hypothesis. We found that goal promotion focus was positively associated with how authentic a goal feels. There was also a between-person relationship suggesting that people high in trait promotion focus also reported their goals (in general) to be more authentic. On the contrary, goal prevention focus was not associated with goal authenticity (nor was trait prevention focus). We also found some evidence, albeit limited by the cross-sectional design, that basic needs satisfaction underlies the link between goal promotion focus and goal authenticity. These findings thus fit better with the state-content significance hypothesis of subjective authenticity. Indeed, the relationship between promotion focus and goal authenticity was evident regardless of whether or not goal regulatory focus matched trait regulatory focus, which speaks against the trait-consistency hypothesis.

It is worth noting that there was some semantic overlap in our self-report measures of goal authenticity and promotion focus (e.g., references to who you really are and want to be), but we generally observed the same results even with the most seemingly overlapping items removed from the analyses, suggesting semantic overlap cannot fully account for our results. Nonetheless, semantic overlap may *partially* explain why the link between promotion focus and authenticity is larger than the link between prevention focus and authenticity. We speculate that this semantic overlap is meaningful to the extent that it reflects the fact that that people's beliefs about who they really are (i.e., the true self) likely informs and guides who they want to be (i.e., the ideal self) as opposed to who they ought to be (i.e., the ought self). That is the semantic overlap due to the conceptual link between these variables. This makes sense from a true-self-as guide perspective that suggests that people explicitly endorse a lay theory of decision making that one's true self leads to personally satisfying decisions (e.g., Rivera et al., 2018; Schlegel, Hicks, Davis, Hirsch, & Smith, 2013).

While Study 1 showed the link between subjective authenticity and promotion focus within the goal-pursuit context, it is important to find supporting evidence for this link in other domains. In Study 2, we tested our idea in another common context where authenticity matters—group interaction.

3. Study 2

Study 2 examined whether promotion focus is associated with subjective authenticity when participants engage in a group interaction. We expected that trait promotion focus, compared to trait prevention focus, should be positively correlated with feelings of authenticity.

This study also included a measure of trait behavioral inhibition and behavioral activation (BIS/BAS). According to Gray (1982, 1985; see also Carver & White, 1994), BIS and BAS are two motivational systems: BAS regulates appetitive motives that orient people to approach desirable outcomes, and BIS regulates aversive motives that orient people to avoid undesirable outcomes. Theoretically, BIS/BAS and regulatory focus are orthogonal constructs because both promotion focus and prevention focus each encompass both approach and avoidance motivation (Higgins, 1997, 1998; Scholer & Higgins, 2008). That is, promotion focus involves both approaching gains and avoiding non-gains, and prevention focus involves both approaching non-losses and avoiding losses. The hedonic nature of BIS/BAS further distinguishes it from promotion and prevention focus. Approach is inherently tied to positive affect and avoidance to negative affect, whereas promotion focus and prevention focus are each associated with sensitivity to both positive (gains and non-losses, respectively) and negative (non-gains and losses, respectively) outcomes (Idson, Liberman, & Higgins, 2000). While BIS/BAS and regulatory focus are distinct at a general level, promotion focused individuals do tend to prefer eager strategies that are more approach-oriented, whereas prevention focused individuals tend to prefer vigilant strategies that are more avoidance-oriented (see Scholer & Higgins, 2008, for a discussion of how approach/avoidance relates to promotion/prevention focus at different levels of analysis).

Applying the approach/avoidance distinction to authenticity, we see that people approach situations that allow them to feel authentic and avoid situations that make them feel inauthentic (Lenton, Bruder, et al., 2013; Schmader & Sedikides, 2018). Including a measure of BIS/BAS enabled us to test whether the relationship we observed between promotion focus and subjective authenticity would be evident over and above any general approach or avoidance tendencies. We expected that approach motivation would be positively associated with subjective authenticity, but we also believed that promotion focus would be a unique and distinct correlate of subjective authenticity as it orients people toward satisfying nurturance-related needs closely affiliated with feelings of authenticity.

3.1. Methods

Participants. One hundred and nineteen (75 males, 43 females, 1 not reporting) undergraduate students at Texas A&M University were recruited from introductory psychology courses and received course credit for their participation. They participated in the study in groups of two to four. Participants were told that they were in a study examining "personality traits that may predict thoughts, feelings, and attitudes toward the self." Sessions were scheduled to last up to 90 min. Analysis via Optimal Design software (Raudenbush, 2011) revealed that the size of this sample has a statistical power equal to about 0.85 (assuming effect size variability $\sigma^2 = 0.05$, proportion of explained variance by the blocking variable as 0) to detect a medium effect size ($\delta = 0.50$) within a multilevel modeling framework.

3.2. Procedure and materials

Pre-survey. Prior to the interaction task, participants completed a battery of questionnaires while seated at individual stations. They completed the same measure of trait promotion focus ($M = 3.66$, $SD = 0.56$, $\alpha = 0.64$) and trait prevention focus ($M = 3.22$, $SD = 0.76$, $\alpha = 0.79$) from the RFQ as used in Study 1. They also completed the BIS/BAS scale measuring trait behavioral inhibition and three facets of behavioral activation (Carver & White, 1994; $M = 2.83$, $SD = 0.52$, $\alpha = 0.80$ for BIS; $M = 2.95$, $SD = 0.55$, $\alpha = 0.76$ for BAS fun seeking; $M = 2.90$, $SD = 0.54$, $\alpha = 0.78$ for BAS drive; $M = 3.28$, $SD = 0.39$, $\alpha = 0.75$ for BAS reward responsiveness). The BIS/BAS scales were given on a scale of 1–4 (1 = *strongly disagree*, 4 = *strongly agree*). Sample items were "Criticism or scolding hurts me quite a bit" (BIS), "I will often do things

[7] The mediating effects if autonomy and competence remained significant with the semantically overlapping items of the authenticity scale removed (see Supplemental materials for more details).

for no other reason than they might be fun" (BAS fun seeking), "I go out of my way to get things I want" (BAS Drive), and "When I get something I want, I feel excited and energized" (BAS reward responsiveness).

Interaction task. Participants were asked to sit across from one another at a small folding table in the laboratory. They were assigned to one of four colors (red, blue, green, and yellow) and given a colored placard. After being seated with their assigned color placards, participants were asked by a research assistant to introduce themselves by giving their first names. The research assistant then directed participants to discuss two different topics: an embarrassing moment and a favorite moment or event. Once the conversation ended, participants were told that the interaction task was over and reminded to take note of everyone's assigned color.

Post-interaction survey. After the interaction task, participants returned to their individual stations and completed a number of measures related to the interaction task. First, participants were asked to write an essay reflecting on their experiences during the interaction (e.g., "Focus on the people you have met, interacted with, and what you have said to one another."). The purpose of the task was to give the participants time to reflect on the interaction and how they felt about it.

Upon completion of their essays, participants filled in the measures for subjective authenticity. The measure we used to assess subjective authenticity was the same three-item scale used by Fleeson and Wilt (2010): "I was my true self during the activity," "I felt authentic in the way I acted during the activity," and "I felt like I was really being myself during the activity" ($M = 6.27$, $SD = 0.97$, $\alpha = 0.88$). All items were rated on a 7-point scale (1 = *not at all descriptive*, 7 = *extremely descriptive*), with higher numbers indicating greater subjective authenticity during the interaction.

3.3. Results

Preliminary analyses. Correlation coefficients between regulatory focus, authenticity, and BIS/BAS are presented in Table 2. Whereas prevention focus was not correlated with subjective authenticity, the relationship between promotion focus and subjective authenticity was significant and positive. Analyses based on Lee and Preacher's (2013) online calculator further confirmed that the difference between these two correlation coefficients was significant, $z = 3.06$, $p < .001$. This finding provides direct evidence for our contention that promotion focus, relative to prevention focus, is more closely tied to subjective authenticity. In addition, despite some inconsistencies across subscales, BAS was also correlated with both promotion focus and subjective authenticity.

Primary analyses. We proceeded by using, as in Study 1, HLM to examine relationships between regulatory focus and subjective authenticity while accounting for the nested structure of the data (i.e., individuals within interaction groups). The multilevel analyses included two levels: Level 1 represents individuals, and Level 2 different groups. We used restricted maximum likelihood estimation for all models and included random effects for the intercepts and slopes of promotion and prevention focus (i.e., our focal predictors). Because the primary purpose of this analysis was to account for the fact that the data were nested within group, all predictors were uncentered. Again, we used the obtained t and df (Rosenthal et al., 2000) to calculate the effect size correlation r. The analysis revealed that promotion focus was significantly associated with subjective authenticity, $b = 0.55$, $SE = 0.17$, $r = 0.47$, $p = .002$, whereas prevention focus did not, $b = -0.05$, $SE = 0.13$, $r = 0.07$, $p = .68$. We then followed the same steps as outlined in Study 1 to compare the strength of these two pathways. The analyses revealed significant differences between the constrained model and the unconstrained baseline model, $\Delta\chi^2(1) = 5.62$, $p < .02$, suggesting that the relationship between promotion focus and subjective authenticity was stronger than the relationship between prevention focus and subjective authenticity.

Importantly, the results remained unchanged after we controlled for individual BIS/BAS in Level 1: Promotion focus continued to be linked with subjective authenticity, $b = 0.53$, $SE = 0.18$, $r = 0.43$, $p = .005$, and the relationship between prevention focus and authenticity was again not significant, $b = -0.06$, $SE = 0.14$, $r = 0.07$, $p = .68$. None of the BIS/BAS subscales were significantly linked with subjective authenticity in the model, $b = -0.01$, $SE = 0.18$, $r = 0.003$, $p = .97$ for BIS; $b = 0.55$, $SE = 0.30$, $r = 0.17$, $p = .07$ for BAS reward responsiveness; $b = .-0.08$, $SE = 0.17$, $r = 0.01$, $p = .66$ for BAS fun seeking; $b = -0.10$, $SE = 0.18$, $r = 0.05$, $p = .59$ for BAS drive. Finally, the constrained model with pathways predicting subjective authenticity from promotion and prevention focus significantly differed from the unconstrained baseline model, $\Delta\chi^2(1) = 4.93$, $p < .03$. Thus, even after related constructs such as BIS and BAS were accounted for, promotion focus remained a more potent correlate of subjective authenticity than prevention focus.

3.4. Discussion

Study 2 provided further evidence for our hypothesis. Trait promotion focus was positively associated with subjective authenticity during an interaction activity. In contrast, trait prevention focus was not related to subjective authenticity, and the strength of its relationship with subjective authenticity was significantly weaker than the strength of the relationship between promotion focus and subjective authenticity. The pattern was consistent with the findings in Study 1 and our contention that promotion focus should be more likely to be linked with authentic experiences relative to prevention focus. Moreover, these results remained significant even after BIS/BAS was statistically controlled. This finding further suggests that the link between promotion focus and subjective authenticity is unique and not easily reducible to a matter of approaching desirable experiences or avoiding undesirable experiences.

While the correlational results of Studies 1 and 2 provide suggestive evidence, they cannot establish causation between promotion focus and subjective authenticity. Accordingly, we designed two experiments to test the causal relationship between two constructs.

4. Study 3

In Study 3, we conducted an experiment by using a within-subjects design. Based on previous work (Higgins, 1998), we attempted to manipulate regulatory focus by prompting participants to consider either their ideals (to activate promotion focus) or obligations (to activate prevention focus). Participants then completed a decision-making task and reported how authentic they felt *during* the task. We expected participants to report feeling more authentic when they were under promotion focus than under prevention focus.

4.1. Method

Participants. One hundred individuals (54 females, 46 males) from the United States, predominantly White (75%) and non-Hispanic (88%), were recruited through Amazon's Mechanical Turk platform and were compensated with $1.00 for their participation.

Table 2
Bivariate correlations among variables in Study 2.

Variable	1	2	3	4	5	6	7
1. Promotion focus	–						
2. Prevention focus	0.16	–					
3. Subjective authenticity	0.37**	0.02	–				
4. BAS drive	0.25**	−0.11	0.15	–			
5. BAS fun seeking	0.27**	−0.11	0.18*	0.36**	–		
6. BAS reward responsiveness	0.15	−0.04	0.20*	0.58**	0.45**	–	
7. BIS	−0.28**	0.08	−0.08	0.12	−0.04	0.36**	–

* $p < .05$ (2-tailed).
** $p < .01$ (2-tailed).

Their ages ranged from 20 to 69 years ($M = 34.07$, $SD = 11.26$). This sample size has a power equal to 0.99 to detect a medium effect size ($d = 0.50$) at an alpha level of 0.05 (two-tailed).

Procedure and materials. Participants first completed two occupational choice tasks under different instructions in random order. After each task, participants completed manipulation check items and measures of subjective authenticity.

Occupational choice task. Participants were presented with pairs of occupational alternatives (e.g., chemist vs. dancer) drawn from 51 occupation-related stimuli words adapted from previous studies (Nakao et al., 2010; Schlegel et al., 2013). There were a total of 30 trials of occupational choices for each task (60 trials in total), across which the occupations were randomly selected and could reappear. For example, a participant might encounter an occupational choice between *artist* and *social worker* in one trial and an occupational choice between *artist* and *politician* in another. In each trial, participants were asked to decide on their preferred occupational option (i.e., "Please choose one career option you would like to do more").

Manipulation of regulatory focus. We manipulated regulatory focus within-subjects by administering particular instructions before each occupational choice task. The instructions for the promotion focus inducing task asked participants to think about their current hopes and aspirations when making the occupational choices. The instructions for the prevention focus inducing task asked participants to think about their current duties and obligations when making the occupational choices. Order of the regulatory focus instructions was counterbalanced (see footnote 8 for the order effect).

Manipulation check. As a manipulation check, participants responded to two items that assessed aspects of how they made their decisions during the task on a 7-point scale (1 = *not at all*, 7 = *extremely*) after completing each of the promotion and prevention focus inducing tasks. The first item assessed promotion focus: "On average, how much did you think about your current hopes and aspirations when making the career choices?". The second assessed prevention focus: "On average, how much did you think about your current duties and obligations when making the career choices?".

Subjective authenticity. We developed five items based on the Authenticity Scale (Wood, Linley, Maltby, Baliousis, & Joseph, 2008) to measure subjective authenticity when making the occupational choices. The items were answered on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) and included: "When I was choosing between career options, I was true to myself," "When I was choosing between career options, I felt very authentic," "I felt that my choices were aligned with my true-self," "When I was choosing between career options, I felt out of touch with the 'real me'" (reverse scored), and "When I was choosing between career options, I felt alienated from myself" (reverse scored). Internal consistency for the subjective authenticity items was satisfactory for both tasks ($\alpha = 0.70$ for promotion focus task; $\alpha = 0.86$ for prevention focus task).

4.2. Results

Manipulation check. We conducted a series of within-subjects *t*-tests to examine whether we successfully manipulated promotion/prevention focus. As displayed in Table 3, participants reported being more promotion focused under the promotion focus instruction than under the prevention focus instruction and being more prevention focused under the prevention focus instruction than under the promotion focus instruction. These results suggest that the instructional manipulation was successful in producing a more promotion focused or prevention focused mindset during the occupational choice tasks.

Subjective authenticity. We again performed within-subjects *t*-tests to test our hypothesis that people should feel more authentic in the promotion focus mindset than prevention focus mindset. As shown in Table 3, participants reported feeling more authentic in making occupational choices under the promotion focus instruction than under the prevention focus instruction.[8]

4.3. Discussion

As in Studies 1 and 2, the findings of Study 3 supported our hypothesis. People reported being more authentic under promotion focus than under prevention focus. Nonetheless, it remains unclear whether the effect is driven mostly by promotion focus enhancing feelings of authenticity, by prevention focus suppressing feelings of authenticity, or by both. To address this issue, we conducted a final study to compare people's subjective authenticity under promotion/prevention focus with their subjective authenticity when they are not instructed to use a particular regulatory focus (i.e., a baseline condition).

5. Study 4

Study 4 was a within-subjects experiment similar to Study 3. Participants completed the same occupational choice task three different times. On the first block, they did not receive any instructions on how to make their decisions (baseline condition). In the second and the third block, we asked participants to either consider their ideals (to activate promotion focus) or obligations (to activate prevention focus) when completing the task. The presentation order of the promotion focus and prevention focus instructions was randomized. We expected that people would report

[8] We found that this effect was pronounced particularly when participants completed the promotion focus task first ($n = 51$; $M_{promotion} = 5.80$, $SD = 0.90$ vs. $M_{prevention} = 5.80$, $SD = 0.90$; $F(1, 98) = 22.09$, $p < .001$) rather than the prevention focus task first ($n = 49$; $M_{promotion} = 5.75$, $SD = 0.80$ vs. $M_{prevention} = 5.51$, $SD = 1.20$; $F(1, 98) = 1.35$, $p = .247$), $F(1, 98) = 6.05$, $p = .016$, $\eta_p^2 = 0.06$. This may suggest that the effect size is smaller when people factor prevention focus first and promotion focus later into their judgments of subjective authenticity, thus requiring a larger sample size for detecting the proposed effect in this condition. However, we did not find order effects for self-report promotion focus, $F(1, 98) = 0.93$, $p = .34$, $\eta_p^2 = 0.01$, and self-report prevention focus, $F(1, 98) = 0.66$, $p = .42$, $\eta_p^2 = 0.01$.

Table 3
Comparison between promotion focus and prevention focus conditions in Study 3.

Variable	Promotion focus *M* (*SD*)	Prevention focus *M* (*SD*)	*t*	*p*	*d*
Promotion focus	5.78 (1.23)	4.48 (1.89)	5.86	<.001	0.76
Prevention focus	4.44 (1.79)	5.78 (1.24)	−6.31	<.001	−0.54
Subjective authenticity	5.77 (0.85)	5.18 (1.35)	4.07	<.001	0.54

feeling more authentic in the promotion focus condition relative to the prevention focus condition, replicating the findings of Study 3. While we did not have a confirmatory hypothesis regarding how promotion/prevention focus condition would differ from the baseline condition, given that self-report prevention focus and subjective authenticity were not related in Studies 1 and 2, we expected variations in subjective authenticity to be driven more by promotion focus than prevention focus.

As in Study 1, we also examined whether basic needs satisfaction mediates the link between regulatory focus and subjective authenticity. To this end, we had participants report their satisfaction of autonomy and competence after each task. We expected that variations in these ratings mediate the effect of regulatory focus manipulation on subjective authenticity.

5.1. Method

Participants. Two hundred and two undergraduate students (162 females, 40 males, 1 not reporting; age: $M = 19.22$, $SD = 1.54$) at Texas A&M University participated in the study in exchange for extra course credit toward their research participation requirements. Participants were predominantly white (76.8%) and non-Hispanic (74.9%). A priori power analysis with G*Power software (Faul, Erdfelder, Buchner, & Lang, 2009) yielded a minimum sample size of 47 to achieve a power equal to 0.95 to detect the specified effect size ($d = 0.54$, observed in Study 3) at an alpha level of 0.05 (two-tailed), and given that we had the secondary goals to explore differences between regulatory focus and the baseline condition and the mediating role of basic needs satisfaction, we aimed to collect a minimum of 200 participants.

Procedure and materials. The procedure of Study 4 was generally the same as that of Study 3 with the addition of an initial baseline condition. For the first block, we introduced participants to the general structure of their tasks (i.e., "You will be presented with two career options for each trial. When you see the two career choices, please select the option that you would prefer"). Participants completed 20 trials of the occupational choice task and subsequently rated themselves on scales of subjective authenticity, basic needs satisfaction, and manipulation check. The same process was repeated for the remaining two tasks (i.e., promotion focus and prevention focus tasks).[9]

The materials for manipulation check and subjective authenticity were the same as in Study 3. Internal consistency for the subjective authenticity scale was satisfactory for each task ($\alpha = 0.77$ for baseline condition; $\alpha = 0.87$ for promotion focus condition; $\alpha = 0.93$ for prevention focus condition).

To measure basic needs satisfaction for autonomy and competence, we adapted the Basic Need Satisfaction in Relationships Scale (La Guardia, Ryan, Couchman, & Deci, 2000). Each basic need was measured by two items on a 7-point scale (1 = *not at all*, 7 = *extremely*). The items we used to measure autonomy were: "During the occupational choice task, I felt controlled and pressured to choose certain career options" (reverse-coded) and "During the occupational choice task, I felt like I was free to decide for myself what to do." The items we used to measure competence were: "During the occupational choice task, I felt very capable" and "During the occupational choice task, I felt like a competent person." The items were significantly correlated for both autonomy ($r = 0.69$ for baseline condition; $r = 0.64$ for promotion focus condition; $r = 0.73$ for prevention focus condition) and competence ($r = 0.78$ for baseline condition; $r = 0.79$ for promotion focus condition; $r = 0.85$ for prevention focus condition). Accordingly, responses to the items were averaged into a composite of autonomy and another composite of competence.

5.2. Results

Manipulation check. We first conducted repeated-measures ANOVAs to examine the manipulation check items across condition (baseline, promotion focus, and prevention focus). As presented in Table 4, there was a significant main effect of manipulation on the promotion focus item. Bonferroni adjusted pairwise comparisons revealed that participants reported more promotion focus under promotion focus than under baseline and prevention focus. Compared to the baseline, participants also reported less promotion focus under prevention focus condition. Similarly, the main effect of our manipulation was also significant for the prevention focus items. Participants under prevention focus reported significantly more prevention focus than when they were under baseline and under promotion focus. The difference between promotion focus and baseline condition, however, was not significant. Taken together, these results provided support for validity of our manipulation. It is worth noting that relative to promotion focus manipulation, the effect of prevention focus manipulation was not clean as it seemingly affected both promotion and prevention focus when compared to the baseline. We return to this observation in the discussion.

Basic needs satisfaction and subjective authenticity. We performed the same procedure to examine whether and how regulatory focus influenced basic needs satisfaction and subjective authenticity. As shown in Table 4, the main effect of the regulatory focus manipulation was again significant. Bonferroni-adjusted pairwise comparisons revealed that participants under prevention focus reported significantly less satisfaction of autonomy and competence relative to the baseline and promotion focus conditions. Moreover, they also reported feeling significantly less authentic under prevention focus than the other two conditions. Differences between promotion focus condition and baseline, however, were not significant.[10] This suggests that differences in subjective authenticity (relative to baseline) seemed driven by prevention focus.

[9] We also had participants complete the RFQ again after the three occupational choice tasks. We originally included the measure to explore whether individual differences in trait regulatory focus moderate the link between promotion/prevention focus and subjective authenticity. However, data showed that the manipulations had carryover effects on people's ratings on the scale. Given the evidence against the validity of the measure, we dropped moderation analysis. Interested readers are encouraged to contact the authors for more details (also can be found at the provided OSF webpage).

[10] We also examined whether the order of conditions influenced the results. Condition order had no impact on the manipulation checks or subjective authenticity. It did, however, affect autonomy and competence ratings. Specifically, when the last task of the three was promotion focus task, the main effect of regulatory focus was more pronounced: Participants reported much less autonomy and competence in prevention focus condition compared to the remaining two conditions. Interested readers are encouraged to contact the authors for more details (also can be found at the provided OSF webpage).

Table 4
Descriptive statistics of promotion/prevention focus and subjective authenticity across three conditions in Study 4.

Outcome variable	Baseline *M* (*SD*)	Promotion focus *M* (*SD*)	Prevention focus *M* (*SD*)	*F*	*df*	*p*	η_p^2
Promotion focus	5.80 (1.28)[a]	6.14 (0.99)[b]	4.99 (1.47)[c]	58.85	(1.83, 367.61)	<.001	0.23
Prevention focus	4.93 (1.70)[a]	4.83 (1.73)[a]	5.40 (1.53)[b]	10.91	(2, 402)	<.001	0.05
Autonomy	4.28 (0.84)[a]	5.35(1.38)[b]	4.58 (1.58)[a]	41.28	(2, 402)	<.001	0.17
Competence	5.47 (1.15)[a]	5.57 (1.10)[a]	5.17 (1.26)[b]	17.80	(1.86, 373.65)	<.001	0.08
Subjective authenticity	5.78 (1.02)[a]	5.72 (0.98)[a]	5.05 (1.41)[b]	44.65	(1.26, 253.86)	<.001	0.18

Note. Values in the same row with different superscripts are significantly different ($p < .05$, Bonferroni adjusted).

Still, as mentioned earlier, analyses of the manipulation checks revealed that the prevention focus manipulation not only increased prevention focus, but also *decreased* promotion focus. In contrast, the promotion focus manipulation only increased promotion focus. Given that the prevention focus manipulation actually suppressed people's promotion focus, it is possible that the loss in promotion focus explains why people reported much less authenticity in this condition. To test this possibility, we conducted a supplementary analysis to examine simple correlations between manipulation check items (i.e., self-report regulatory focus) and subjective authenticity within each condition by using Lee and Preacher's (2013) online calculator. The results found that subjective authenticity's relationship with self-report promotion focus was generally stronger than its relationship with self-report prevention focus ($r = 0.24$ vs. $r = -0.03$, $z = 3.49$, $p < .001$ for baseline condition; $r = 0.35$ vs. $r = 0.11$, $z = 2.90$, $p = .004$ for promotion focus condition; $r = 0.59$ vs. $r = 0.28$, $z = 4.38$, $p < .001$ for prevention focus condition). This finding speaks against the account that reduced subjective authenticity was solely driven by suppressing effects of increased prevention focus (the correlation was even positive in the prevention focus condition) but rather supports the possibility that reduced subjective authenticity in the prevention condition was more driven by decreased promotion focus.

Mediation of basic needs. Given that regulatory focus influenced both satisfaction of basic needs and subjective authenticity, we proceeded to examine whether variations in basic needs satisfaction mediated variations in subjective authenticity between the promotion and prevention focus conditions by using the SPSS Macro MEMORE (Montoya & Hayes, 2017). Within regulatory focus condition was dummy coded (1 = promotion focus, 0 = prevention focus) and entered as the independent variable predicting subjective authenticity with autonomy and competence being entered as mediators. We generated 95% of CI for the indirect effects from 5,000 bootstrap samples. The analysis revealed significant indirect effects of condition predicting authenticity through both autonomy ($b = 0.34$, $SE = 0.07$, 95% CI = [0.22, 0.49]) and competence ($b = 0.16$, $SE = 0.05$, 95% CI = [0.08, 0.27]). The direct effect of regulatory focus condition was also significant ($b = 0.16$, $SE = 0.07$, 95% CI = [0.02, 0.31]).

We also ran the identical mediation analyses for the comparison between promotion focus and baseline conditions and between prevention focus and baseline conditions. As in prior analyses, mediations in the difference between prevention focus and baseline conditions found that both of the indirect effects emerged significant, $b = -0.07$, $SE = 0.03$, 95% CI = [−0.13, −0.01] for autonomy; $b = 0.11$, $SE = 0.04$, 95% CI = [0.03, 0.20] for competence. The direct effect of regulatory focus condition was also significant, $b = 0.68$, $SE = 0.08$, 95% CI = [0.51, 0.85]. However, for the difference between promotion focus and baseline conditions, neither of the basic needs significantly mediated the difference between the conditions, $b = -0.04$, $SE = 0.04$, 95% CI = [−0.12, 0.03] for autonomy; $b = -0.01$, $SE = 0.01$, 95% CI = [−0.03, 0.00] for competence, while only the direct effect of regulatory focus condition was significant, $b = 0.11$, $SE = 0.05$, 95% CI = [0.01, 0.21].

5.3. Discussion

To summarize, the results of Study 4 provide further support for our hypotheses. Consistent with Study 3, participants under promotion focus reported feeling more authentic than their counterparts under prevention focus. This difference was, as we expected, mediated by satisfaction of autonomy and competence needs. Interestingly, the effect seemed driven predominantly by prevention focus, as indicated by the fact that baseline and promotion focus did not differ in terms of authenticity. This seems inconsistent with what we observed in Studies 1 and 2. Nevertheless, analyses of manipulation checks revealed that our manipulation of prevention focus unexpectedly affected people's promotion focus. The supplementary analysis further confirmed that the loss in perceived promotion focus partially drives the observed difference in subjective authenticity between promotion and prevention focus condition as correlations between authenticity and promotion focus were stronger than those between authenticity and prevention focus. Together, these findings are in line with Studies 1 through 3, suggesting that promotion focus plays a unique role on subjective authenticity.

6. General discussion

Across four studies of various designs, we found consistent support for the idea that promotion focus (relative to prevention focus) facilitates subjective authenticity. Specifically, in Study 1, goal and trait promotion focus (rather than prevention focus) was positively associated with goal authenticity. In Study 2, trait promotion focus was positively linked with subjective authenticity during a group interaction, whereas chronic prevention focus was not—this link was evident even when people's dispositional orientation to approach (avoid) desirable (undesirable) stimuli was statistically controlled for. Furthermore, compared to experimentally induced prevention focus, experimentally induced promotion focus engendered more feelings of authenticity while participants were making personally relevant decisions in Studies 3 and 4. Study 4 further found that the manipulation of prevention focus had the most pronounced effect on subjective authenticity—though this effect may have been partially due to the loss in perceived promotion focus. Finally, we also found some evidence (albeit inherently limited by the cross-sectional design of Studies 1 and 4) that basic needs satisfaction mediated the relationship between promotion focus and subjective authenticity.

Together, our results contribute to an emerging literature that identifies specific psychological mechanisms predicting subjective authenticity across individuals (Fleeson & Wilt, 2010; Kifer et al, 2013; Kraus et al., 2011; Lenton, Slabu, et al., 2013). While folk notions of authenticity suggest that authenticity is achieved by acting in ways consistent with one's self-concept, our evidence (especially Study 1) is more in line with the state-content significance hypothesis, suggesting that some psychological constructs (e.g., promotion focus) are more naturally tied to feelings of authenticity than others.

It is worth noting that we found less support for what Fleeson and Wilt (2010) referred to as the trait-consistency hypothesis. The trait-consistency hypothesis would predict significant cross-level interactions between trait promotion (prevention) focus and goal promotion (prevention focus) in Study 1. However, this was not the case. The lack of significant findings for the trait-consistency hypothesis is somewhat puzzling, especially given existing work on the importance of trait-behavior consistency (e.g., Tamir, 2005) and regulatory fit (e.g., Higgins, 2005) on performance and psychological functioning. While the findings of Study 1 may be attributed to a lack of statistical power for detecting the effect for trait-behavior consistency, it is consistent with previous work suggesting that trait-behavior consistency may not be particularly important to subjective judgement of state authenticity (e.g., Cooper, Sherman, Rauthmann, Serfass, & Brown, 2018). Although there is evidence that people might retrospectively consider themselves most authentic when they have acted in ways that are consistent with dispositional traits, consistency between one's behavior and trait does not seem to be an integral component of authentic experiences in the moment (Fleeson & Wilt, 2010). Along with a body of research demonstrating that there are certain contents that are naturally tied to subjective authenticity (e.g., extraversion, Fleeson & Wilt, 2010; morality, Christy, Seto, Schlegel, Vess, & Hicks, 2016; positive mood; Lenton, Slabu, et al., 2013), the current research presents another case study supporting the state-content significance hypothesis. While it is still possible that consistency between some individual characteristics and corresponding behavior (e.g., political attitudes and action) could be important to subjective authenticity in the moment, we observed that subjective authenticity is facilitated by similar experiences (i.e., promotion focus) across individuals regardless of whether the experiences being consistent with their idiosyncratic traits.

Moreover, the pattern of our results is accountable within the literature attributing subjective authenticity to personal growth and self-improvement (e.g., Sedikides & Strube, 1997; Waterman, 1984, 1990). Since promotion focus is linked to people's beliefs about their ideal self and nurturance (Higgins, 1998), it should naturally direct people to the pursuit of their potentialities (e.g., aptitudes and talents) and ultimately authenticity. In contrast, prevention focus is oriented towards security and survival (Higgins, 1998). These concerns can make people vulnerable to pressure and external control, which deviate people from being authentic into mere conformity (Deci & Ryan, 2000). Indeed, recent research suggested that people were more likely to feel their basic needs for personal growth satisfied under promotion focus than under prevention focus (Vaughn, 2017). The current research conceptually replicated the previous work in terms of basic needs satisfaction. Our findings further suggest that this robust relationship between regulatory focus and basic needs satisfaction could have downstream consequences on subjective authenticity. Presumably due to basic needs satisfaction, people with promotion focus (compared to those with prevention focus) feel truer of themselves, thereby experiencing an elevated sense of authenticity. This may also explain why we found very little support for the trait-consistency hypothesis.

6.1. Limitations and future directions

The current work has several limitations to consider. First, although Studies 1 and 4 provided some evidence for basic needs satisfaction as the mediating mechanism, the cross-sectional nature of the designs can generate biased estimates (Maxwell & Cole, 2007; Maxwell et al., 2011). Future research should make use of longitudinal designs to better test these relationships. Second, our samples were predominantly from a Western population, and this may limit the generalizability of our findings. People from non-Western cultures can construe their selves more in terms of the social roles they play or through their interdependence with others (Markus & Kitayama, 1991). Their sense of true selves might therefore incorporate obligations to some social relationships (e.g., family) and ultimately be more in line with prevention focus. If this is the case, prevention focus might positively predict subjective authenticity among collectivistic populations, perhaps more so than promotion focus.

It is also important to examine goals as potential boundary conditions of the relationship between promotion/prevention focus and subjective authenticity. Individuals could differ substantially in the goals they pursue. Some goals are more likely attained under prevention focus, especially when goal-pursuits involve resisting temptation and distraction (Freitas, Liberman & Higgins, 2002). Examples of these goals include long-term career goals or goals involving social and moral obligations. Attainment of these goals (and therefore prevention focus) could be important for prolonged experiences of authenticity. Regarding the relationship between long-term goal and prevention focus, one intriguing possibility is that people may retrospectively view their pursuit of long-term goals under prevention focus as more authentic.[11] Furthermore, some personal goals are pursued for their own sake, while others (e.g., wealth, fame, and physical attractiveness) are pursued as mere means to some other desirable ends. Goals of the second type are termed as "extrinsic" and could have negative implications for psychological well-being and authenticity (Kasser & Ryan, 1993). To the extent people pursue extrinsic goals (e.g., being promotion focused toward financial success), the link between promotion focus and subjective authenticity could be weakened. Future research should address the content of goals and examine, for example, whether investments in extrinsic goals moderate the relationship between promotion focus and subjective authenticity and whether people retrospectively view their pursuit of those long-term goals primarily guided by prevention focus as more authentic.

Future research should also aim to improve the manipulation of regulatory focus used in Studies 3 and 4. As previously discussed, the prevention focus induction effectively increased prevention focus, but also decreased promotion focus. Research using a manipulation that uniquely influences prevention focus could more specifically characterize the effects of prevention focus in this context. Similarly, researchers should consider the extent to which these manipulations may unintentionally elicit a focus on the present versus the future. While both manipulations ask participants to consider their "*current*" feelings and beliefs, participants' current hopes and aspirations (promotion focus) may be inherently more forward-looking and future-oriented than their current duties and obligations (prevention focus). Finally, it is important to conduct research with much larger samples recruited to explore a potential association between prevention focus and subjective authenticity. Our sample size was large enough to detect the medium effect size for the association between promotion focus and subjective authenticity relative to prevention focus (e.g., Study 3), while it lacked statistical power to detect the potentially small effect size for the association between prevention focus and subjective authenticity with promotion focus accounted for (e.g., Study 1). Future research should address these issues to further explore the nuances of the relationship between regulatory focus and subjective authenticity.

6.2. Conclusion

The current studies converge with growing literature suggesting that authenticity may be best understood from the state-

[11] We thank an anonymous reviewer for addressing this possibility.

content significance perspective. We identify regulatory focus, specifically promotion focus, as another "content" preceding subjective authenticity that seems consistent across individuals. Given feelings of authenticity are crucial to well-being (e.g., Harter, 2002; Rivera et al., 2018), it is our hope that the current research can shed light on the understanding of this murky but important construct.

Declarations of interest

None.

Acknowledgement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The authors are fully responsible for the management of the project.

Appendix A. Supplementary material

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jrp.2018.12.001.

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