Social and Personality Psychology Compass

WILEY

EMPIRICAL ARTICLE

Increasing Extraversion via Intervention: Lay Insights, Person-Activity Fit, and Implications for Well-Being and Persistence

Ramona L. Martinez[1] | Annie Regan[1] | Peter M. Gollwitzer[2,3,4] | Gabriele Oettingen[2,3] | Sonja Lyubomirsky[1]

[1]Department of Psychology, University of California, Riverside, California, USA | [2]Department of Psychology, New York University, New York, New York, USA | [3]Department of Political and Social Sciences, Zeppelin University, Friedrichshafen, Germany | [4]Department of Psychology, University of Konstanz, Konstanz, Germany

Correspondence: Ramona L. Martinez (rmart091@ucr.edu)

Received: 29 March 2024 | **Revised:** 20 January 2025 | **Accepted:** 9 February 2025

Keywords: extraversion | goal pursuit | intervention | motivation | personality | qualitative research | shyness | well-being

ABSTRACT

Research suggests that acting more extraverted (outgoing, assertive, and/or energetic) boosts subjective well-being in the short term for most people; however, some work indicates that acting more extraverted could be aversive for those who are relatively more introverted. To further understand participants' experiences in extraverted behavior interventions, we analyzed free-response data from a study in which undergraduate participants generated ideas on desirable outcomes, anticipated obstacles, and prospective plans in their efforts to act more sociable. Additionally, to understand the potential relationship between components of person-activity fit (how natural, enjoyable, and meaningful a person finds an intervention activity like acting more extraverted), we conducted exploratory correlational analyses between the components of fit, personality traits, desire to change extraversion, and the endorsement of outcomes, challenges, and plans identified from our thematic qualitative analysis. Our results suggest four main takeaways: (a) dispositional and situational shyness are highly prevalent challenges that bear on behavioral efforts to act more sociable; (b) lack of specificity in participant-generated plans to act more sociable and their focus on thoughts and feelings instead of actionable behavior may inhibit desired behavior change; (c) participants' sense that their own personality serves as a barrier to desired change is negatively related to how natural, enjoyable, and meaningful they rate the intervention; and (d) more agreeable participants rate the intervention as more enjoyable and meaningful. We close by offering theoretical and practical recommendations for future research and interventions focused on fostering extraverted behaviors.

1 | Introduction

Extraversion-introversion, as opposite poles of the same personality dimension, refers to individual differences in the tendency to pursue novelty and reward (including social reward; DeYoung 2010, 2013; Smillie 2013). In the Western world, the extraversion pole—or, the tendency to be outgoing, spontaneous, and assertive—enjoys greater social desirability than introversion. For the better part of the 20th century, people have tried to gain insight into *How to Win Friends and Influence People* (Carnegie 1936/2023), and this societal preference for extraversion is not lost on individuals who are relatively more introverted. In one adult Australian sample ($N = 349$; Lawn, Slemp, and Vella-Brodrick 2019), 96% of participants believed extraversion was more valued than introversion in society, and 82% of participants believed it was necessary to display more extraverted traits than introverted traits in daily life. In addition, having extraversion-deficit beliefs (i.e., desires to be more extraverted than one is)

negatively predicted authenticity and well-being among self-identified introverts. Other work also shows that people generally maintain that those who are more introverted feel most like themselves when they are acting introverted, and vice versa for extraverts (Fleeson and Wilt 2010). Importantly, however, being relatively more introverted is just one aspect of a person's personality. Accordingly, research reveals that it is likely the strength of one's *identity* as an introvert (more than one's level of introversion) that moderates the relationship between acting against one's nature and feeling authentic (Bossom and Zelenski 2022). In other words, an individual who is naturally more introverted may only feel uncomfortable when prompted to act more extraverted (i.e., counter-dispositionally) if introversion is central to their identity.

1.1 | Extraverted Behavior Interventions: Well-Being Benefits for all?

Both well-being interventions (also called "positive activity interventions") and social psychological experiments (which do not target well-being per se) have tested the prospective psychological benefits of asking people to act more extraverted—whether in short, 10-min conversations (Fleeson, Malanos, and Achille 2002) or over longer periods such as 1 week (Jacques-Hamilton, Sun, and Smillie 2019; Margolis and Lyubomirsky 2020; van Allen et al. 2021). Generally, this experimental research indicates that people across the extraversion-introversion spectrum enjoy well-being benefits as a result of acting more extraverted in the short term (Fleeson, Malanos, and Achille 2002; Margolis and Lyubomirsky 2020; van Allen et al. 2021), but some work suggests that acting more extraverted could incur greater negative affect, fatigue, and reduced authenticity among those who are more introverted (Jacques-Hamilton, Sun, and Smillie 2019). Replication efforts are needed to further clarify the prospective benefits and costs of acting more extraverted for those who are more extraverted v. those who are more introverted, but available research suggests that acting more extraverted is not *always* happiness-inducing for those who are less socially inclined, and may sometimes be aversive.

In addition to these unresolved questions regarding the benefits of extraverted behavior interventions for people across the extraversion-introversion spectrum, no studies to date have explored the moderating role of shyness (social apprehension) on the well-being impacts of acting more extraverted (e.g., Jacques-Hamilton, Sun, and Smillie 2019; Margolis and Lyubomirsky 2020; van Allen et al. 2021). This is a potentially significant omission, as shyness inherently involves anxiety in social situations and introversion does not. Whereas those who are more introverted may be less inclined to pursue social reward and novelty, they do not necessarily face the same social fears as their shy counterparts. Conceptually, shyness may overlap with introversion, but its characteristically aversive phenomenology also entails important links with trait neuroticism (Briggs 1988; Paulhus and Trapnell 1998), rendering it a distinct construct from introversion alone. Depending on the measurement instruments used, correlations between shyness and trait extraversion-introversion, as well as between shyness and trait neuroticism, tend to range between 0.3 and 0.4, demonstrating that these constructs do not fully overlap. Thus, considering shyness as a moderator may offer additional insight into the boundary conditions of extraversion interventions.

1.2 | What Makes Sociable Behavior "Fit"?: Disposition and Desire to Change

Within the context of positive activity interventions, person-activity fit, or the degree to which a person finds a given well-being-increasing activity to be natural, enjoyable, and meaningful, predicts the degree to which a person might derive well-being benefits from a particular intervention activity (Lyubomirsky 2007; Lyubomirsky and Layous 2013). Person-activity fit is also consequential for intervention success, as it is associated with intervention persistence and completion (Schueller 2010).

Since the first introduction of the person-activity fit diagnostic tool (a questionnaire created to help happiness seekers ascertain which positive activities might be best suited for them; Lyubomirsky 2007), person-activity fit in the well-being space has mainly been treated a unitary construct. However, original elaboration on the concept (Lyubomirsky 2007) clarifies that there is more than one way that an activity may "fit." For example, good activity fit might reflect one's inherent dispositions or strengths, and to that extent, feel relatively more natural and enjoyable. In addition, good activity fit can reflect one's personal aspirations and desires to change, and to that extent, feel relatively more meaningful and enjoyable.

These different sources of "fit" become especially salient when considering person-activity fit within the context of trait-relevant behavior change (e.g., intervening to boost sociability), as the disconnect between meaningfulness (desire to change) and naturalness (disposition) may be especially pronounced. Beyond acting more extraverted in the short term as part of a well-being exercise, becoming more extraverted in the long term is one of the most commonly endorsed personality change goals among Western samples (with 35%–87% of samples expressing this desire; E. N. Baranski et al. 2017; Hudson and Roberts 2014; Miller et al. 2019), as increased extraversion could help people achieve broader personal objectives, like advocating for a cause, making new friends, or becoming a leader (Little and Balsari-Palsule 2021; McCabe and Fleeson 2012). Outside of well-being interventions, some interventions targeting personality change (as opposed to well-being benefits per se) suggest that personality can be intentionally changed over 3–4 months (Hudson and Fraley 2015; Hudson et al. 2019; Stieger, Flückiger, and Allemand 2023). Of equal importance, however, other personality research indicates that, in the absence of highly structured interventions, simply having goals to change one's personality does not predict personality changes in desired directions (Asadi, Dehaj, and Robinson 2020; E. Baranski et al. 2020; Robinson et al. 2015), highlighting the difficulty of consistently acting against one's nature—even if one is motivated to do so.

1.3 | Lay (Participant) Insights and Experiences in Extraverted Behavior Interventions

For scientists studying how to change extraverted behavior, little information is currently available about how participants experience interventions focused on boosting sociability. Although it is important to consider the extent to which people find an activity like acting more sociable to be natural, enjoyable, and meaningful, other substantive questions are worth asking as well. For example, "What do people hope to achieve if they are able to act more sociable?" and "What challenges do participants face in their efforts to act more sociable?" Although some research offers lay insight into the self-motivating factors that inspire people to change their personalities and the self-guided the strategies that they have tried to guide themselves (E. N. Baranski et al. 2017), no research to date elaborates on participants' experiences in the context of interventions—that is, when participants are *instructed* to act differently. Preliminary insights connecting self-reported person-activity fit, dispositional traits, motivation to change extraversion, and corresponding desires, difficulties, and planned efforts in people's experiences in social behavior interventions are needed to inform future interventions in this space.

2 | The Current Study

The current paper presents planned secondary analyses of correlational and free-response data from undergraduate students who participated in an extraverted behavior intervention. The primary study aimed to test whether the self-regulation strategy, mental contrasting with implementation intentions (popularized for lay audiences as "WOOP;" Oettingen 2014; Oettingen and Gollwitzer 2010), would boost social behavior and well-being outcomes when added to a previously successful extraversion intervention protocol (Margolis and Lyubomirsky 2020). Our planned secondary analyses address the following questions about people's experiences in extraverted behavior interventions:

1. What desirable outcomes, challenges, and plans do participants cite in their efforts to act more sociable in an extraverted behavior intervention?
2. What are the dispositions and psychological qualities of those who find extraverted behavior interventions natural, enjoyable, and/or meaningful?
3. How does endorsement of fit relate to citing certain outcomes, challenges, and plans in efforts to act more sociable?

By connecting indices of person-activity fit (naturalness, enjoyability, and meaningfulness) with participant disposition, as well as with richer, qualitative data on participants' experiences within extraverted behavior interventions, we hope to identify potential difficulties and opportunities that could be addressed in future studies to facilitate people's social behavior goals. The preregistered study design, coding manual, and analytic plan are available at: https://osf.io/8gzu2/?view_only=17ceade2bf1e4220ae6be0850d94a25b. Data are also available upon reasonable request.

3 | Method

3.1 | Procedure

We conducted a 3-week randomized, controlled intervention in which participants ($N = 267$) were randomly assigned to one of three conditions: (a) to act more extraverted (outgoing, assertive, and/or energetic; "Extraversion Only condition"), (b) to act more extraverted (with the same instructions as those in the first condition) and complete the WOOP goal pursuit strategy ("WOOP condition"), or (c) to write lists of daily activities as part of an active control.

All assessments were administered online via Qualtrics surveys. Data were collected over five timepoints: baseline, weekly (end of Weeks 1 and 2), immediate post-test (end of Week 3), and at a 3-month follow-up. The current paper specifically focuses on data among those in the WOOP condition ($N_{WOOP} = 88$), which include free-response data provided as part of the WOOP exercise at baseline and Weeks 1 and 2; Big 5 personality traits measured at baseline; degree of desire to change extraversion measured at baseline; and person-activity fit measured at post-test.

3.2 | Participants

Participants ($N = 267$; $M_{age} = 19.03$, $SD = 1.45$) were undergraduate students at a large university in Southern California who completed the 3-week intervention for course credit. The sample was 73% female and racial-ethnically diverse: 51% Asian, 32% Hispanic, 21% White, 8% Middle Eastern, and 3% Black/African-American,[1] with 48% of participants identifying as first-generation college students and 5% identifying as international students.

3.3 | Measures

3.3.1 | WOOP (Wish, Outcomes, Obstacles, Plans)

Participants in the WOOP condition completed the WOOP exercise online at baseline, end of Week 1, and end of Week 2. WOOP is a goal pursuit strategy that helps people persist with challenging behaviors (like engaging in healthier eating; Adriaanse et al. 2010), and serves as an acronym for Wish, Outcome, Obstacle, and Plan (woopmylife.org; Oettingen n.d.; Oettingen 2012, 2014) that guides people through goal visualization (mental contrasting) and if-then behavior planning (implementation intentions). Through this weekly written exercise, participants are asked to minimize distraction and reflect freely on:

1. **Wish:** Internalizing a wish to act "more outgoing, more assertive, and/or more energetic" over the next week. Given the nature of the intervention, this first prompt of the WOOP exercise was provided to participants instead of soliciting a free response.
2. **Outcome:** "What would be the *best* Outcome of being more outgoing, assertive, and/or energetic over the next week? Now, take a moment and imagine this best Outcome.

Imagine it as fully as you can. Identify your best outcome and write it down."

3. **Obstacle:** "What is it within you that might hold you back from acting more outgoing, assertive, and/or energetic? It might be an emotion, an irrational belief, or an ingrained habit. Now, take a moment and imagine your main inner Obstacle. Imagine it as fully as you can. Identify your main inner Obstacle and write it down."
4. **Plan:** "What can you do to overcome your inner Obstacle? Identify one effective action you can take or one effective thought you can think to overcome your Obstacle. Make the following plan: If... (obstacle you named), then I will ... (action or thought you named)."

3.3.2 | Big 5 Traits

Participants completed the 30-item Big Five Inventory-2 Short-Form (BFI-2-S; Soto and John 2017) at baseline before intervention instructions. The BFI-2-S measures dispositional extraversion, openness, agreeableness, conscientiousness, and neuroticism with six items each. Sample items include: "I am someone who is outgoing, sociable" (extraversion); "I am someone who is original, comes up with new ideas" (openness); "I am someone who is compassionate, has a soft heart" (agreeableness); "I am someone who keeps things neat and tidy" (conscientiousness); and "I am someone who worries a lot" (neuroticism), rated on 1 (*strongly disagree*) to 5 (*agree strongly*) Likert scales.

3.3.3 | Desire to Change Extraversion

Participants completed the 6-item subscale of the Change Goals Big-Five Inventory (CBFI; Hudson and Roberts 2014) at baseline before intervention instructions. The CBFI includes items such as "I want to be dominant, act like a leader," and "I want to be outgoing, sociable" rated on −2 (*much less than I currently am*) to +2 (*much more than I currently am*) Likert scales with the midpoint, 0, reflecting the sentiment "*I do not want to change this trait*."

3.3.4 | Person-Activity Fit

Participants completed a 3-item measure (Margolis and Lyubomirsky 2020) at post-test (end of Week 3), which asked them to indicate their agreement with three statements about behaving as outgoing, assertive, and/or energetic as possible for the past few weeks. The three items were "This activity felt natural to me," "I enjoyed doing this activity," and "I found this activity meaningful," rated on 1 (*strongly disagree*) to 7 (*strongly agree*) Likert scales.

3.4 | Analytic Approach

3.4.1 | Qualitative Content Analysis

3.4.1.1 | Data Collection and Preparation. WOOP free response data were gathered at three timepoints, and each of the 88 participants assigned to this condition could provide up to three responses per category (Outcomes, Obstacles, and Plans). Free response data were analyzed using a qualitative content analysis procedure (Schreier 2014). First, data were prepared by removing any non-compliant responses that did not address the prompts (i.e., a filler response that was unrelated to the prompt). Eighty-seven participants provided valid Outcomes responses; 87 participants provided valid Obstacle responses; and 85 participants provided valid Plan responses.

3.4.1.2 | Coding Frame Generation. Next, recurrent themes ("codes") were generated using a data-driven approach in which the data were reviewed iteratively until saturation was reached—that is, when no more unique codes could be identified. Third, data were segmented, and two independent research assistants piloted a coding manual draft on a subset of the data. Each response was coded as "0" if the theme was absent from the response and a "1" if the theme was present. Based on segmentation findings and feedback, the coding manual was finalized, and a main analysis phase was carried out in which the dataset was coded in full. Any coding discrepancies between the two coders were resolved by the first author. Intercoder reliability rates (IRR) were high across categories ($IRR_{Outcomes}$ = 86%; $IRR_{Obstacles}$ = 92%; IRR_{Plans} = 90%). Multiple codes could be present within a single response. Tables 1 to 3 present the frequency (and proportion) with which a participant *ever* cited a particular code across three time periods, as well as examples of participant responses for each code.

Regarding our decisions about how codes were generated, a few points warrant elaboration. With respect to Outcomes codes (Table 1), we opted to differentiate between cited outcomes of "become more extraverted" and "improve social skills," as the former referred to personality outright and the latter referred to specific skills participants sought to develop. Relatedly, "becoming more extraverted" could also be related to the outcome "become less shy/socially fearful." We opted to distinguish these outcomes as well, because we thought it useful to highlight the mention of anxiety in social situations as reflecting the association of shyness with neuroticism/negative emotionality, as distinct from low extraversion (Briggs 1988; Paulhus and Trapnell 1998). Our theory-informed decision to differentiate between shyness and introversion carried through to Obstacles code generation (Table 2). Specifically, we recognized endorsement of shyness/social anxiety as an obstacle distinct from mentions of one's introverted disposition as a barrier to acting more sociably. We intended to highlight the anxiety inherent in shyness, which was not directly referenced when participants mentioned their reserved or introverted personalities.

Another coding decision with respect to cited Obstacles concerned whether a lack of emotional bandwidth might be categorized as "lack of motivation" (e.g., lack of desire to engage in the task) or "lack of time." Importantly, we considered negative affective experience to be distinct from lack of desire to engage in the task, given empirical research pointing to the independent impact that personal motivation (i.e., choosing to engage in a particular activity; Lyubomirsky et al. 2011) and positive affect (i.e., having early positive experiences in an intervention; Cohn and Frederickson 2010) have on persistence and outcomes in well-being interventions. Accordingly, we recognize participants'

TABLE 1 | Outcomes: Codes.

Code	Included themes	Example responses	*n*; (%)
Improve well-being	Being happier, feeling less stressed, feeling accomplished	"I'd be happier;" "Feeling accomplished and satisfied with myself"	$n = 56$; (64%)
Increase social connection and/or integration	More social interaction, more friends, having deeper social connections	"Helps with networking and making connections with new people;" "Build stronger connections with others"	$n = 52$; (60%)
Become more extraverted	Become more sociable or bold in the long-term	"Be an extrovert;" "Not be much of an introvert"	$n = 45$; (52%)
Improve social skills	Make good impressions; be more articulate	"Improving my socializing skills;" "Become better at communication"	$n = 22$; (25%)
Become less shy/socially fearful	Become less shy; overthink in social interactions less; be comfortable in one's own skin	"I will be less shy;" "Getting over social anxiety"	$n = 13$; (15%)

Note: *n* reflects the number of WOOP participants who ever cited this code across three timepoints, and % reflects the proportion of WOOP participants who provided valid Outcome responses ($n = 87$) who ever cited this code.

TABLE 2 | Obstacles: Codes.

Code	Included themes	Example responses	*n*; (%)
Shyness/social anxiety	Nervousness; insecurity; fear of judgment; fear of rejection	"Feeling shy around new people;" "Scared of what other people may think"	$n = 69$; (78%)
Lack of emotional resources	Fatigue, emotional state (moodiness, sadness), stress, mental health	"Being moody;" "Tiredness or stress"	$n = 28$; (32%)
One's introverted personality	Being introverted, being reserved, preferring being alone or one's own company	"My introvertedness;" "Reserved personality"	$n = 20$; (23%)
Lack of motivation	Not motivated or interested in task; already extraverted	"Don't have enough motivation;" "Don't want to talk to others"	$n = 11$; (13%)
Lack of time	Too much work, school, or other obligations	"Overwhelmed with school;" "Too much work"	$n = 10$; (11%)
The pandemic	Being sick; fear of getting sick	"The ongoing pandemic;" "Omicron"	$n = 5$; (6%)

Note: *n* reflects the number of WOOP participants who ever cited this code across three timepoints, and % reflects the proportion of WOOP participants who provided valid Obstacle responses ($n = 87$) who ever cited this code.

TABLE 3 | Plans: Codes.

Code	Included themes	Example responses	*n*; (%)
Interaction preparation	Compliment others; bring a friend; plan to talk to people in certain places	"Go with a friend;" "Interact with people in class"	$n = 37$; (45%)
Keep practicing	Non-specific plans to keep trying	"Just do it;" "Power through it"	$n = 35$; (41%)
Practice positive thinking	Positive self-talk; be optimistic; think of positive past experiences	"Affirm myself with positive thoughts;" "Be my own cheerleader"	$n = 35$; (41%)
Care less about what others think or minimize personal importance of what others think	Ignore or care less about what others think; focus on perceptions of close others	"Reminding myself no one cares;" "Ignore what other people think of me"	$n = 31$; (37%)
Manage stress	Journal; meditate; take breaths	"Take a deep breath;" "I can try meditating"	$n = 22$; (26%)

Note: *n* reflects the number of WOOP participants who ever cited this code across three timepoints, and % reflects the proportion of WOOP participants who provided valid Plan responses ($n = 85$) who ever cited this code.

lack of motivation (desire to change and engage in the task), affective experiences, and the pragmatics of time constraint as three unique obstacles.

Finally, regarding code generation of Plans that participants identified as potential courses of action to take in order to act more sociable, we differentiated between mentions of "positive

thinking" (e.g., using positive self-talk and encouraging oneself) and "caring less about what others think." We deemed it important to acknowledge that the former involves upregulation of positive cognitions and the latter involves downregulation of negative cognitions (Cohen and Sherman 2014).

3.4.1.3 | Reflexivity. Qualitative analysis is best practiced as a reflexive exercise in which researchers acknowledge how their perspectives and assumptions influence how they view, interpret, and report their qualitative data (Braun and Clarke 2019). The first author was primarily responsible for identifying codes with input from two undergraduate research assistants (coders) majoring in psychology. Being undergraduates themselves, the coders may have had a deeper understanding of our undergraduate respondents' intended meanings and perspectives. Nevertheless, it is unlikely that we retained perfect meaning of the sentiments expressed. For example, because the first author and the undergraduate coders have relatively more knowledge of psychological constructs, their decisions to distinguish categories like "shyness/social anxiety" and "one's introverted personality" into separate codes might reflect scientific understanding more than lay conceptions that may conflate these categories. Every effort was made, however, to code consistently per a stated rule (i.e., shyness/social anxiety refers to anxiety and apprehension specifically, while reference to introversion and preferred solitude does not). Such a rule was applied when coding across categories for consistency (e.g., determining codes within Outcomes and Obstacles categories).

3.4.2 | Correlational Analysis

On an exploratory basis, we tested whether the components of person-activity fit (naturalness, enjoyability, meaningfulness) for those in our WOOP condition were related to Big 5 personality traits, desire to change extraversion, and endorsement of desirable outcomes, obstacles, and plans in participant efforts to act more sociable by testing bivariate correlations. Importantly, this ancillary correlational analysis is based on a small sample. Given their exploratory nature, patterns of results should be interpreted with appropriate caution and considered on a preliminary basis. Any observed trends in the present study might inspire future research questions, but additional research is needed to replicate these findings—especially with an a priori design.

4 | Results

4.1 | What Desirable Outcomes, Challenges, and Plans Do Participants Cite in their Efforts to Act More Sociable in an Extraverted Behavior Intervention?

With respect to the best outcomes of acting more extraverted (Table 1), a majority of participants (64%) suggested that obtaining greater well-being, including greater feelings of happiness and accomplishment, would be the most desirable outcome. Beyond these broad well-being desires, participants also expressed more specific desirable outcomes of the intervention, including having more or deeper social connections (60%) and becoming more extraverted in the long-term (52%). Finally, a sizable proportion of participants in our WOOP intervention endorsed a practical outcome of improving their social skills (25%) and becoming less shy and socially fearful (15%).

With respect to the obstacles that our participants cited in their efforts to act more sociable (Table 2), a large proportion specified shyness/social anxiety (78%). Relatedly, but meaningfully different, about a quarter of participants (23%) cited their introverted disposition as a barrier to acting more sociably. In addition, nearly a third of participants (32%) anticipated that a lack of emotional resources (e.g., their mood, emotional state, and/or level of stress) would prevent them from acting more sociable. Lastly, as a reflection of the time period during which the intervention was administered (i.e., in January 2022, following the gradual re-introduction of in-person social interactions at businesses, schools, and other public institutions), a handful of participants ($n = 5$; 6%) felt that pandemic-related public health risks prevented them from engaging in desired social interactions.

Finally, when analyzing participant-generated actions in their if-then plans to overcome potential obstacles (Table 3), we found that three kinds of actions were endorsed in almost equal measure. People reported preparing for social interaction (45%; i.e., planning actions to take when interacting with others, like complimenting them or bringing a friend along for support); a non-specific plan to "just keeping practicing" or "power through it" (41%); and practicing positive thinking (41%; e.g., using positive self-talk and encouraging oneself). Related to the last code, participants endorsed another cognitive strategy that did not entail *positive* thinking per se, but involved caring less about what others think or minimizing the personal importance of what others think (37%). Finally, a sizable proportion of participants planned to manage their stress directly (26%; e.g., journal, meditate, breathe).

4.2 | What Are the Dispositions and Psychological Qualities of Those Who Find Extraverted Behavior Interventions Natural, Enjoyable, and/or Meaningful?

Descriptive and pairwise correlations are presented in Table 4. Our correlational analyses revealed that participants who found the sociable behavior intervention to be more natural (Table 5) scored higher in trait extraversion ($r = 0.40$, $p = 0.006$) and lower in trait neuroticism ($r = -0.34$, $p = 0.022$). Participants who rated the extraverted behavior intervention as more enjoyable (Table 6) and meaningful (Table 7) scored higher in trait agreeableness (enjoyable: $r = 0.29$, $p = 0.047$; meaningful: $r = 0.32$, $p = 0.30$).

4.3 | How Does Endorsement of Fit Relate to Citing Certain Outcomes, Challenges, and Plans in Efforts to Act More Sociable?

Participants who were less likely to cite their own personality as an obstacle in the intervention found the intervention to be more natural ($r = -0.34$, 0.022), enjoyable ($r = -0.33$, $p = 0.024$),

TABLE 4 | Correlation table.

Variable	α	*M*	SD	1	2	3	4	5	6	7	8	9
1. Goal: E	0.67	0.77	0.52	—								
2. Trait E.	0.74	2.94	0.79	−0.07	—							
3. Trait A.	0.63	3.76	0.61	−0.05	0.30**	—						
4. Trait C.	0.73	3.35	0.79	−0.00	0.48***	0.25*	—					
5. Trait O.	0.68	3.49	0.67	0.17	0.25*	0.12	0.15	—				
6. Trait N.	0.82	3.16	0.87	0.11	−0.44***	−0.32**	−0.60***	−0.03	—			
7. Natural	—	4.24	1.32	0.03	0.40**	0.17	0.30	0.09	−0.34*	—		
8. Enjoy	—	5.11	0.95	0.17	0.14	0.30*	0.25	0.18	−0.24	0.44**	—	
9. Meaning	—	5.43	1.05	0.14	−0.07	0.32*	0.04	0.24	−0.21	0.30*	0.56***	—

Abbreviations: Enjoy = enjoyability (person-activity fit dimension), Goal: E = Desire to change extraversion, Meaning = meaningfulness (person-activity fit dimension), Natural = naturalness (person-activity fit dimension), Trait A. = trait agreeableness. Trait C. = trait conscientiousness, Trait E. = trait extraversion, Trait N. = trait neuroticism. Trait O. = trait openness.
*$p < 0.05$.
**$p < 0.01$.
***$p < 0.001$.

TABLE 5 | Correlations between naturalness (person-activity fit dimension) and other variables.

Variable	*r*	*p*
Goal: Extraversion change	0.03	0.838
Trait agreeableness	0.17	0.264
Trait conscientiousness	0.19	0.194
Trait extraversion	**0.40**	**0.006**
Trait neuroticism	**−0.34**	**0.022**
Trait agreeableness	0.17	0.264
Obstacle: Emotions	0.27	0.066
Obstacle: Lack time	0.15	0.320
Obstacle: Motivation	0.09	0.544
Obstacle: Not motivated	—	—
Obstacle: Other	0.09	0.568
Obstacle: Pandemic	0.12	0.411
Obstacle: Personality	**−0.34**	**0.022**
Obstacle: Shyness	−0.08	0.609
Outcome: Be less shy	−0.26	0.082
Outcome: Become more extraverted	−0.24	0.111
Outcome: Cheer up others	—	—
Outcome: Increase well-being	0.00	0.984
Outcome: Social connection	0.00	0.984
Outcome: Social skills	−0.24	0.115
Outcome: Other	0.13	0.380
Plan: Interaction preparation	−0.02	0.871
Plan: Keep practicing	−0.06	0.693
Plan: Manage expectations	−0.17	0.245
Plan: Manage stress	−0.05	0.747
Plan: Positive thinking	0.03	0.829
Plan: Other	—	—

Note: Significant correlations ($p < 0$ 0.05) are bolded. Dash (—) indicates no correlation was computed because of lack observations.

TABLE 6 | Correlations between enjoyability (person-activity fit dimension) and other variables.

Variable	*r*	*p*
Goal: Extraversion change	0.17	0.253
Trait agreeableness	**0.29**	**0.047**
Trait conscientiousness	0.24	0.101
Trait extraversion	0.14	0.344
Trait neuroticism	−0.24	0.102
Trait agreeableness	0.18	0.244
Obstacle: Emotions	0.10	0.494
Obstacle: Lack time	0.03	0.823
Obstacle: Motivation	0.01	0.958
Obstacle: Not motivated	—	—
Obstacle: Other	0.06	0.676
Obstacle: Pandemic	0.09	0.557
Obstacle: Personality	**−0.33**	**0.024**
Obstacle: Shyness	0.11	0.452
Outcome: Be less shy	0.00	0.978
Outcome: Become more extraverted	−0.26	0.090
Outcome: Cheer up others	—	—
Outcome: Increase well-being	−0.04	0.779
Outcome: Social connection	−0.04	0.779
Outcome: Social skills	0.05	0.742
Outcome: Other	−0.07	0.665
Plan: Interaction preparation	0.06	0.670
Plan: Keep practicing	0.04	0.799
Plan: Manage expectations	−0.04	0.788
Plan: Manage stress	−0.08	0.613
Plan: Positive thinking	0.03	0.826
Plan: Other	—	—

Note: Significant correlations ($p < 0$ 0.05) are bolded. Dash (—) indicates no correlation was computed because of lack observations.

TABLE 7 | Correlations between meaningfulness (person-activity fit dimension) and other variables.

Variable	*r*	*p*
Goal: Extraversion change	0.14	0.353
Trait agreeableness	**0.32**	**0.030**
Trait conscientiousness	0.04	0.799
Trait extraversion	−0.07	0.653
Trait neuroticism	−0.21	0.160
Trait agreeableness	0.24	0.114
Obstacle: Emotions	−0.19	0.203
Obstacle: Lack time	0.06	0.713
Obstacle: Motivation	−0.14	0.363
Obstacle: Not motivated	—	—
Obstacle: Other	0.14	0.339
Obstacle: Pandemic	−0.09	0.554
Obstacle: Personality	**−0.30**	**0.045**
Obstacle: Shyness	0.10	0.507
Outcome: Be less shy	0.13	0.400
Outcome: Become more extraverted	−0.07	0.635
Outcome: Cheer up others	—	—
Outcome: Increase well-being	−0.11	0.453
Outcome: Social connection	−0.11	0.453
Outcome: Social skills	0.09	0.548
Outcome: Other	−0.16	0.309
Plan: Interaction preparation	0.07	0.664
Plan: Keep practicing	0.01	0.932
Plan: Manage expectations	0.07	0.644
Plan: Manage stress	−0.10	0.529
Plan: Positive thinking	−0.13	0.382
Plan: Other	—	—

Note: Significant correlations ($p < 0$ 0.05) are bolded. Dash (—) indicates no correlation was computed because of lack observations.

and meaningful ($r = -0.30$, $p = 0.045$). No other significant correlations between the components of fit and the citation of certain outcomes, challenges, and plans emerged.

5 | Discussion and Implications

Research offers mixed evidence on the psychological benefits of asking those who are more introverted (v. those who are more extraverted) to act more sociable. To address this question, our study probed the previously unexplored lived experiences of undergraduate participants taking part in such interventions. We believe our qualitative content analysis sheds light on the challenges and psychosocial resources that may influence both the affective experiences and the success of enacting social behaviors. Beyond the emergence of consistent themes in our participants' experiences, we found four notable patterns: (a) the cited prevalence of shyness—both dispositional and situational—and the extent to which its cognitive-affective challenges (e.g., overthinking social performance and anxiety in social situations) impede behavioral efforts to act more sociable; (b) the lack of specificity revealed in our participants' planned actions and their focus on targeting thoughts and feelings instead of actionable behavior; (c) judging one's own personality as a barrier to engaging in social behavior is negatively related to all three components of person-activity fit (naturalness, enjoyment, and meaningfulness); and finally, (d) participants high in trait agreeableness are more likely to find the intervention enjoyable and meaningful.

5.1 | Considering Shyness: Dispositional and Situational

Overcoming shyness emerged as a recurring theme among the best possible outcomes cited as a result of the intervention, and while it was the least commonly endorsed desirable outcome of the themes that emerged (15%), it was overwhelmingly the most commonly cited potential obstacle (78%) in participants' efforts to act more extraverted. Plausibly, when participants are asked about the "best possible" outcome of the intervention, they are less inclined to endorse what might be considered a more "modest" outcome like overcoming shyness unless shyness is an especially pervasive problem for them. Participants may have been more likely to imagine or aspire to have outcomes of flourishing (like greater well-being or more friendships) than outcomes focused on abating discomfort. The fact that participants cited shyness more frequently as an obstacle to acting more sociable, however, may reflect the prevalence of self-reported dispositional shyness, with U.S. adult estimates ranging from 40% to 58% (Henderson, Gilbert, and Zimbardo 2014). Moreover, the 15% of our sample who endorsed overcoming shyness as the best possible outcome of the intervention may reflect the 12% estimated prevalence of *clinical* levels of shyness or social phobia: social anxiety disorder (in which social anxiety becomes so severe as to cause significant life impairment; Henderson, Gilbert, and Zimbardo 2014).

That people overwhelmingly cite shyness as a barrier to overcome when trying to act more sociable is not surprising in light of research indicating that the human brain is adapted to prioritize and attend to and process *social* information (Klein, Shepherd, and Platt 2009). With the need to belong as a basic human need (Baumeister and Leary 1995) and the challenge of balancing getting ahead with getting along with others as a persistent delicate dance of human experience (Hogan 1982), it follows that taking social risks and facing social rejection are top-of-mind concerns when asking people to be as "outgoing, assertive, and energetic" as they can be. Empirical studies confirm the prevalence of social apprehension and indicate that people chronically underestimate how much they are liked by others (Boothby et al. 2018), how enjoyable longer conversations can be (Kardas, Schroeder, and O'Brien 2022), and how rewarding deeper (vs. shallower) conversations can be (Kardas, Kumar, and Epley 2022).

Our findings invite future intervention efforts to consider the potential importance of shyness and its abatement as potential challenges and desirable outcomes of acting more sociable. To date, such interventions have focused on the moderating effects

of dispositional introversion on the relationship between extraverted behavior and well-being (Jacques-Hamilton, Sun, and Smillie 2019; Margolis and Lyubomirsky 2020; van Allen et al. 2021), but shyness, which is qualitatively distinct from introversion, has been neglected.

Shyness, as a dispositional barrier for some and a situational barrier for many, may require additional interventional supports. For example, a related well-being intervention found that almost 20% of participants reported backfiring effects (i.e., reduced well-being) as a result of performing kind acts for strangers for 1 week, with qualitative free responses about these participants' experiences indicating that these participants were introverted or shy (Pressman, Kraft, and Cross 2015). Although introversion and shyness were not considered a priori or treated as discriminant constructs in this study, the results point to the potential roles played by these constructs in social behavior intervention outcomes. Further considering introversion and shyness as candidate moderators in future interventions may be warranted to further tease out the boundary effects of extraversion-increasing interventions—both in the short term as part of well-being interventions and in the long term as part of personality change interventions.

5.2 | Planning for Success: Specificity and Targeting Thoughts, Feelings, and Behavior

Strikingly, almost half of participants (41%) endorsed nonspecific planned actions to just keep trying instead of identifying specific strategies to carry out. Ideally, planned actions in if/then plans (implementation intentions) should be specific to be efficacious. Other personality change interventions find that, when left to their own devices, participants tend to make vague, unactionable plans about how to change their own behavior, but that the invitation to create implementation intentions promotes desired behavior change (Hudson and Fraley 2015). Even so, a qualitative content analysis of our own data suggests participants could use additional scaffolding to create more specific actions in their if-then plans.

Notably, of the categories of planned actions generated by our participants, one was affective (manage stress) and two were cognitive (practice positive thinking and ignore what others think). In the context of overcoming barriers to social interaction, targeting aversive affective experiences and cognitions alone may not be productive or sufficient in encouraging more social behavior. Indeed, the hallmark treatment of clinical social anxiety (Acarturk 2009; Hofmann and Smits, 2008; Kindred, Bates, and McBride 2022) and non-clinical shyness alike (Jones, Schulkin, and Schmidt 2014) calls for repeated social engagement to overcome one's fears (beyond working on unhelpful thoughts).

Future research might consider how to support repeated social behavior in the context of positive-activity interventions, which are intended for more general, nonclinical populations. Excellent popular press publications translate the value of applied cognitive-behavioral strategies in overcoming social anxiety (e.g., Hendriksen 2018), but additional work is needed to translate insights about enduring behavior change in an actionable program for general populations—and in a way that is aligned with the positive orientation of well-being interventions (i.e., focusing on the promotion of beneficial outcomes and not just the amelioration of negative outcomes).

5.3 | The Dimensionality of Person-Activity Fit: Disposition and Desire to Change

As described earlier, the initial introduction of the person-activity fit concept (Lyubomirsky 2007) acknowledges that there is more than one kind of "fit" between a person and a well-being-increasing activity. Naturalness capitalizes on one's dispositional strengths, while enjoyment and meaningfulness may involve intrinsic behaviors and alignment with one's personal aspirations and desire to change. In the context of extraverted behavior interventions, we find, on a preliminary basis, that people who rate the intervention as more natural are also more dispositionally extraverted and less neurotic. What makes acting sociable more enjoyable or more meaningful, however, seems to extend beyond alignment with the most salient trait (extraversion).

Our exploratory analyses revealed that participants who are more agreeable were more likely to find acting more sociable both enjoyable and meaningful. A superficial interpretation of this pattern might entail viewing more agreeable participants as more inclined to present themselves as "good participants;" notably, however, evidence suggests that trait agreeableness and demand compliance are unrelated (e.g., Ingendahl, Woitzel, and Alves 2024). Furthermore, because agreeableness was not related to endorsement of the activity as natural, we suspect that being agreeable plays a greater role than being a "good participant" per se. It is plausible that being agreeable (or being caring and valuing positive relations with others) may reflect the opposite of the self-preoccupation inherent in shyness (Cheek and Buss 1981). Experimental research indicates, for example, that socially anxious people instructed to be less self-focused during a 5-min interaction have more positive thoughts about the interaction compared to those who are instructed to be highly self-focused (Gaydukevych and Kocovski 2012). Accordingly, developing a deeper concern for others (as inherent in dispositional agreeableness) might be one trainable approach to assist those who are shy find more meaning and joy in social interactions. More empirical research is needed to replicate the association between agreeableness and finding meaning and enjoyment in increased social behavior.

Finally, it is worth noting that endorsing one's personality as an obstacle to acting more sociable was negatively related to all three components of person activity fit (naturalness, enjoyment, and meaningfulness). In addition, only self-reported trait extraversion and neuroticism were related to the fit component of naturalness. Empirical studies reveal mixed findings regarding whether having optimistic or growth-oriented beliefs that personality can be changed is essential to facilitating actual change. In one study (Hudson et al. 2020), belief in the malleability of personality did not predict actual change in Big 5 personality traits over time. By contrast, a series of studies focused on shyness suggested that

those who endorsed beliefs that shyness can be changed were more likely to view social situations as learning opportunities and also engaged in less social avoidance compared to those with fixed beliefs about their shyness (Beer 2002). The qualitative responses of the present study do not reveal the specific fears that our participants held about how their personalities may hold them back, but future research could intentionally unpack such fears, allowing scientists to directly test whether beliefs about the malleability of traits (or some other aspect of lay personality beliefs) bear on behavior change success and well-being outcomes.

6 | Limitations

Key limitations of the present paper fall under two main constraints: (a) researcher positionality in the interpretation and analysis of qualitative responses; and (b) measurement limitations of person-activity fit.

First, as previously acknowledged, it is important to recognize that our perspectives as scientists and personal backgrounds influenced the ways that we identified, organized, and distilled what we saw as central themes in the free response data. With reflexivity in mind, we maintain that our qualitative analysis of participant experiences in a social behavior experiment offers an initial starting point in understanding lay experiences in these kinds of interventions beyond what scale measures can convey. Even so, we acknowledge that attempts to organize qualitative data into digestible categories in table form could be considered reductionist (at worst) and compromises the richness of perspectives provided (Cloutier and Ravasi 2021).

Second, we acknowledge limitations in the measurement of person-activity fit. Although person-activity fit is a commonly considered construct in designing interventions and hypothesis-building (e.g., when identifying candidate moderators), no psychometrically validated measures of person-activity fit, to our knowledge, have been developed. Our use of a 3-item measure with one item per component of activity fit was adapted from Margolis and Lyubomirsky (2020), and we acknowledge that single-item measures have limited validity and reliability (Allen, Iliescu, and Greiff 2022). Additionally, although the concept of person-activity fit as defined in the present paper is commonly used in the area of positive activity interventions, we also recognize the existence of other conceptions of "fit" or congruence (e.g., person-environment fit, intrapersonal behavioral consistency over time, congruence between needs and need satisfaction, etc., as summarized by Humberg, Nestler, and Back 2019).

7 | Summary

In the present paper, we leveraged qualitative data and exploratory correlational analyses to generate preliminary insights on the day-to-day aspirations, challenges, and behavioral plans of participants engaged in an extraverted behavior intervention. Our study built on theory and research exploring two ideas—first, that intervening to boost sociability could backfire for participants who are more introverted, and, second, that person-activity fit (endorsing an activity as natural, enjoyable, and/or meaningful) bears on intervention success. To these ends, we aimed here to elaborate on potential challenges and offer potential solutions that may aid people engage in more social behavior.

We close in acknowledging that being more extraverted is only one way to be and flourish in this world (Cain 2012) and helping people to become more extraverted makes most sense when it holds personal value for them. After all, well-being interventions yield greater desirable outcomes when people self-select into participating (Lyubomirsky et al. 2011). For individuals who find meaning in acting and becoming more extraverted but meet resistance in doing so, we present several conceptual and practical developments that can be leveraged to support their worthwhile efforts of self-becoming.

Acknowledgments

We would like to thank research assistants Raelin Martin and Chelsea Huang for their invaluable help with coding the qualitative data.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Endnotes

[1] Race-ethnicity identification does not sum to 100%, as those of Hispanic ethnicity could endorse racial category separately (e.g., those of Afro-Latino descent).

References

Acarturk, C., P. Cuijpers, A. van Straten, and R. de Graaf. 2009. "Psychological Treatment of Social Anxiety Disorder: A Meta-Analysis." *Psychological Medicine* 39, no. 2: 241–254. https://doi.org/10.1017/S0033291708003590.

Adriaanse, M. A., G. Oettingen, P. M. Gollwitzer, E. P. Hennes, D. T. D. De Ridder, and J. B. F. De Wit. 2010. "When Planning Is Not Enough: Fighting Unhealthy Snacking Habits by Mental Contrasting With Implementation Intentions (MCII)." *European Journal of Social Psychology* 40, no. 7: 1277–1293. https://doi.org/10.1002/ejsp.730.

Allen, M. S., D. Iliescu, and S. Greiff. 2022. "Single Item Measures in Psychological Science." *European Journal of Psychological Assessment* 38, no. 1: 1–5. https://doi.org/10.1027/1015-5759/a000699.

Asadi, S., H. M. Dehaj, and O. Robinson. 2020. "Personality Change Goals and Plans as Predictors of Longitudinal Trait Change in Young Adults: A Replication With an Iranian Sample." *Journal of Research in Personality* 85: 103912. https://doi.org/10.1016/j.jrp.2020.103912.

Baranski, E., J. Gray, P. Morse, and W. Dunlop. 2020. "From Desire to Development? A Multi-Sample, Idiographic Examination of Volitional Personality Change." *Journal of Research in Personality* 85: 103910. https://doi.org/10.1016/j.jrp.2019.103910.

Baranski, E. N., P. J. Morse, and W. L. Dunlop. 2017. "Lay Conceptions of Volitional Personality Change: From Strategies Pursued to Stories Told." *Journal of Personality* 85, no. 3: 285–299. https://doi.org/10.1111/jopy.12240.

Baumeister, R. F., and M. R. Leary. 1995. "The Need to Belong: Desire for Interpersonal Attachments as a Fundamental Human Motivation."

Psychological Bulletin 117, no. 3: 497–529. https://doi.org/10.1037/0033-2909.117.3.497.

Beer, J. S. 2002. "Implicit Self-Theories of Shyness." *Journal of Personality and Social Psychology* 83, no. 4: 1009–1024. https://doi.org/10.1037/0022-3514.83.4.1009.

Boothby, E. J., G. Cooney, G. M. Sandstrom, and M. S. Clark. 2018. "The Liking Gap in Conversations: Do People like Us More Than We Think?" *Psychological Science* 29, no. 11: 1742–1756. https://doi.org/10.1177/0956797618783714.

Bossom, I. R., and J. M. Zelenski. 2022. "The Impact of Trait Introversion-Extraversion and Identity on State Authenticity: Debating the Benefits of Extraversion." *Journal of Research in Personality* 97: 104208. https://doi.org/10.1016/j.jrp.2022.104208.

Braun, V., and V. Clarke. 2019. "Reflecting on Reflexive Thematic Analysis." *Qualitative Research in Sport, Exercise and Health* 11, no. 4: 589–597. https://doi.org/10.1080/2159676X.2019.1628806.

Briggs, S. R. 1988. "Shyness: Introversion or Neuroticism?" *Journal of Research in Personality* 22, no. 3: 290–307. https://doi.org/10.1016/0092-6566(88)90031-1.

Cain, S. 2012. *Quiet: The Power of Introverts in a World that Can't Stop Talking*. Crown Publishers/Random House.

Carnegie, D. 2023. *How to Win Friends and Influence People*. Good Press: (Original work published 1936).

Cheek, J. M., and A. H. Buss. 1981. "Shyness and Sociability." *Journal of Personality and Social Psychology* 41, no. 2: 330–339. https://doi.org/10.1037/0022-3514.41.2.330.

Cloutier, C., and D. Ravasi. 2021. "Using Tables to Enhance Trustworthiness in Qualitative Research." *Strategic Organization* 19, no. 1: 113–133. https://doi.org/10.1177/147612702097932.

Cohen, G. L., and D. K. Sherman. 2014. "The Psychology of Change: Self-Affirmation and Social Psychological Intervention." *Annual Review of Psychology* 65, no. 1: 333–371. https://doi.org/10.1146/annurev-psych-010213-115137.

Cohn, M. A., and B. L. Fredrickson. 2010. "In Search of Durable Positive Psychology Interventions: Predictors and Consequences of Long-Term Positive Behavior Change." *Journal of Positive Psychology* 5, no. 5: 355–366. https://doi.org/10.1080/17439760.2010.508883.

DeYoung, C. G. 2010. "Personality Neuroscience and the Biology of Traits." *Social and Personality Psychology Compass* 4, no. 12: 1165–1180. https://doi.org/10.1111/j.1751-9004.2010.00327.x.

DeYoung, C. G. 2013. "The Neuromodulator of Exploration: A Unifying Theory of the Role of Dopamine in Personality." *Frontiers in Human Neuroscience* 7: 762. https://doi.org/10.3389/fnhum.2013.00762.

Fleeson, W., A. B. Malanos, and N. M. Achille. 2002. "An Intraindividual Process Approach to the Relationship Between Extraversion and Positive Affect: Is Acting Extraverted as 'Good' as Being Extraverted?" *Journal of Personality and Social Psychology* 83, no. 6: 1409–1422. https://doi.org/10.1037/0022-3514.83.6.1409.

Fleeson, W., and J. Wilt. 2010. "The Relevance of Big Five Trait Content in Behavior to Subjective Authenticity: Do High Levels of Within-Person Behavioral Variability Undermine or Enable Authenticity Achievement?" *Journal of Personality* 78, no. 4: 1353–1382. https://doi.org/10.1111/j.1467-6494.2010.00653.x.

Gaydukevych, D., and N. L. Kocovski. 2012. "Effect of Self-Focused Attention on Post-event Processing in Social Anxiety." *Behaviour Research and Therapy* 50, no. 1: 47–55. https://doi.org/10.1016/j.brat.2011.10.010.

Henderson, L., P. Gilbert, and P. Zimbardo. 2014. "Shyness, Social Anxiety, and Social Phobia." In *Social Anxiety: Clinical, Developmental, and Social Perspectives*, edited by S. G. Hofmann and P. M. DiBartolo, 3rd ed., 95–115. Elsevier Academic Press. https://doi.org/10.1016/B978-0-12-394427-6.00004-2.

Hendriksen, E. 2018. *How to Be Yourself: Quiet Your Inner Critic and Rise above Social Anxiety*. St. Martin's Press.

Hofmann, S. G., and J. A. J. Smits. 2008. "Cognitive-Behavioral Therapy for Adult Anxiety Disorders." *The Journal of Clinical Psychiatry* 69, no. 4: 621–632. https://doi.org/10.4088/jcp.v69n0415.

Hogan, R. 1982. "A Socioanalytic Theory of Personality." In *Nebraska Symposium on Motivation*, 55–89.

Hudson, N. W., D. A. Briley, W. J. Chopik, and J. Derringer. 2019. "You Have to Follow Through: Attaining Behavioral Change Goals Predicts Volitional Personality Change." *Journal of Personality and Social Psychology* 117, no. 4: 839–857. https://doi.org/10.1037/pspp0000221.

Hudson, N. W., and R. C. Fraley. 2015. "Volitional Personality Trait Change: Can People Choose to Change Their Personality Traits?" *Journal of Personality and Social Psychology* 109, no. 3: 490–507. https://doi.org/10.1037/pspp0000021.

Hudson, N. W., R. C. Fraley, D. A. Briley, and W. J. Chopik. 2020. "Your Personality Does Not Care Whether You Believe It Can Change: Beliefs About Whether Personality Can Change Do Not Predict Trait Change Among Emerging Adults." *European Journal of Personality* 35, no. 3: 340–357. https://doi.org/10.1002/per.2289.

Hudson, N. W., and B. W. Roberts. 2014. "Goals to Change Personality Traits: Concurrent Links Between Personality Traits, Daily Behavior, and Goals to Change Oneself." *Journal of Research in Personality* 53: 68–83. https://doi.org/10.1016/j.jrp.2014.08.008.

Humberg, S., S. Nestler, and M. D. Back. 2019. "Response Surface Analysis in Personality and Social Psychology: Checklist and Clarifications for the Case of Congruence Hypotheses." *Social Psychological and Personality Science* 10, no. 3: 409–419. https://doi.org/10.1177/1948550618757600.

Ingendahl, M., J. Woitzel, and H. Alves. 2024. "Just Playing the Role of Good Study Participants? Evaluative Conditioning, Demand Compliance, and Agreeableness." *Social Psychological and Personality Science* 15, no. 6: 728–740. https://doi.org/10.1177/19485506231198653.

Jacques-Hamilton, R., J. Sun, and L. D. Smillie. 2019. "Costs and Benefits of Acting Extraverted: A Randomized Controlled Trial." *Journal of Experimental Psychology: General* 148, no. 9: 1538–1556. https://doi.org/10.1037/xge0000516.

Jones, K. M., J. Schulkin, and L. A. Schmidt. 2014. "Shyness: Subtypes, Psychosocial Correlates, and Treatment Interventions." *Psychology* 5, no. 3: 244–254. https://doi.org/10.4236/psych.2014.53035.

Kardas, M., A. Kumar, and N. Epley. 2022. "Overly Shallow?: Miscalibrated Expectations Create a Barrier to Deeper Conversation." *Journal of Personality and Social Psychology* 122, no. 3: 367–398. https://doi.org/10.1037/pspa0000281.

Kardas, M., J. Schroeder, and E. O'Brien. 2022. "Keep Talking: (Mis)understanding the Hedonic Trajectory of Conversation." *Journal of Personality and Social Psychology* 123, no. 4: 717–740. https://doi.org/10.1037/pspi0000379.

Kindred, R., G. W. Bates, and N. L. McBride. 2022. "Long-Term Outcomes of Cognitive Behavioural Therapy for Social Anxiety Disorder: A Meta-Analysis of Randomised Controlled Trials." *Journal of Anxiety Disorders* 92: 102640. https://doi.org/10.1016/j.janxdis.2022.102640.

Klein, J. T., S. V. Shepherd, and M. L. Platt. 2009. "Social Attention and the Brain." *Current Biology* 19, no. 20: 958–962. https://doi.org/10.1016/j.cub.2009.08.010.

Lawn, R. B., G. R. Slemp, and D. A. Vella-Brodrick. 2019. "Quiet Flourishing: The Authenticity and Well-Being of Trait Introverts Living in the West Depends on Extraversion-Deficit Beliefs." *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being* 20, no. 7: 2055–2075. https://doi.org/10.1007/s10902-018-0037-5.

Little, B. R., and S. Balsari-Palsule. 2021. "Fates beyond Traits: The Dynamics and Impacts of Personal Project Pursuit." In *The Handbook of Personality Dynamics and Processes*, edited by J. F. Rauthmann, 323–344. Academic Press. https://doi.org/10.1016/B978-0-12-813995-0.00013-3.

Lyubomirsky, S. 2007. *The How of Happiness: A Scientific Approach to Getting the Life You Want*. Penguin Press.

Lyubomirsky, S., R. Dickerhoof, J. K. Boehm, and K. M. Sheldon. 2011. "Becoming Happier Takes Both a Will and a Proper Way: An Experimental Longitudinal Intervention to Boost Well-Being." *Emotion* 11, no. 2: 391–402. https://doi.org/10.1037/a0022575.

Lyubomirsky, S., and K. Layous. 2013. "How Do Simple Positive Activities Increase Well-Being?" *Current Directions in Psychological Science* 22, no. 1: 57–62. https://doi.org/10.1177/0963721412469809.

Margolis, S., and S. Lyubomirsky. 2020. "Experimental Manipulation of Extraverted and Introverted Behavior and its Effects on Well-Being." *Journal of Experimental Psychology: General* 149, no. 4: 719–731. https://doi.org/10.1037/xge0000668.

McCabe, K. O., and W. Fleeson. 2012. "What Is Extraversion for? Integrating Trait and Motivational Perspectives and Identifying the Purpose of Extraversion." *Psychological Science* 23, no. 12: 1498–1505. https://doi.org/10.1177/0956797612444904.

Miller, T. J., E. N. Baranski, W. L. Dunlop, and D. J. Ozer. 2019. "Striving for Change: The Prevalence and Correlates of Personality Change Goals." *Journal of Research in Personality* 80: 10–16. https://doi.org/10.1016/j.jrp.2019.03.010.

Oettingen, G. n.d. WOOP My Life. https://woopmylife.org.

Oettingen, G. 2012. "Future Thought and Behaviour Change." *European Review of Social Psychology* 23, no. 1: 1–63. https://doi.org/10.1080/10463283.2011.643698.

Oettingen, G. 2014. *Rethinking Positive Thinking: Inside the New Science of Motivation*. Current.

Oettingen, G., and P. M. Gollwitzer. 2010. "Strategies of Setting and Implementing Goals: Mental Contrasting and Implementation Intentions." In *Social Psychological Foundations of Clinical Psychology*, edited by J. E. Maddux and J. P. Tangney, 114–135. Guilford Press.

Paulhus, D. L., and P. D. Trapnell. 1998. "Typological Measures of Shyness: Additive, Interactive, and Categorical." *Journal of Research in Personality* 32, no. 2: 183–201. https://doi.org/10.1006/jrpe.1998.2215.

Pressman, S. D., T. L. Kraft, and M. P. Cross. 2015. "It's Good to Do Good and Receive Good: The Impact of a 'Pay it Forward' Style Kindness Intervention on Giver and Receiver Well-Being." *Journal of Positive Psychology* 10, no. 4: 293–302. https://doi.org/10.1080/17439760.2014.965269.

Robinson, O. C., E. E. Noftle, J. Guo, S. Asadi, and X. Zhang. 2015. "Goals and Plans for Big Five Personality Trait Change in Young Adults." *Journal of Research in Personality* 59: 31–43. https://doi.org/10.1016/j.jrp.2015.08.002.

Schreier, M. 2014. "Qualitative Content Analysis." In *The Sage Handbook of Qualitative Data Analysis*, edited by U. Flick, 170–183. Sage Publications.

Schueller, S. M. 2010. "Preferences for Positive Psychology Exercises." *Journal of Positive Psychology* 5, no. 3: 192–203. https://doi.org/10.1080/17439761003790948.

Smillie, L. D. 2013. "Extraversion and Reward Processing." *Current Directions in Psychological Science* 22, no. 3: 167–172. https://doi.org/10.1177/0963721412470133.

Soto, C. J., and O. P. John. 2017. "Short and Extra-short Forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS." *Journal of Research in Personality* 68: 69–81. https://doi.org/10.1016/j.jrp.2017.02.004.

Stieger, M., C. Flückiger, and M. Allemand. 2023. "One Year Later: Longer-term Maintenance Effects of a Digital Intervention to Change Personality Traits." *Journal of Personality* 92, no. 5: 1424–1437. https://doi.org/10.1111/jopy.12898.

van Allen, Z. M., D. L. Walker, T. Streiner, and J. M. Zelenski. 2021. "Enacted Extraversion as a Well-Weing Enhancing Strategy in Everyday Life: Testing Across Three, Week-Long Interventions." *Collabra: Psychology* 7, no. 1. https://doi.org/10.1525/collabra.29931.