EXPERIMENTALLY EXPLORING HOW THE AWARENESS OF EXISTENTIAL FREEDOM INFLUENCES SUPPORT FOR AUTOCRATIC LEADERSHIP STYLES AMONG INDIVIDUALS HIGH AND LOW IN NEUROTICISM

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EXPERIMENTALLY EXPLORING HOW THE AWARENESS OF EXISTENTIAL FREEDOM INFLUENCES SUPPORT FOR AUTOCRATIC LEADERSHIP STYLES AMONG INDIVIDUALS HIGH AND LOW IN NEUROTICISM

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DEDICATION

To my loving family, for your support, guidance, friendship, and encouragement.
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ABSTRACT

The present dissertation builds on classic existential philosophy and psychological theory to suggest that personal freedom can be burdensome to the self and may, ironically, motivate people to displace their freedom to an autocratic (vs. democratic) authority who would make decisions on behalf of such individuals rather than democratically involve them in the decision-making process. The present analysis further suggests that low neurotics are especially likely to actively “escape” their freedom by displacing it, whereas high neurotics instead employ inactive strategies and are unlikely to actively displace their freedom. Three preliminary studies explore and demonstrate these processes. A fourth study then proposes that the process of displacing personal responsibility for one’s freedom is an important part of maintaining psychological equanimity, and offers an experiment designed to test whether displacement to autocratic authority helps reduce anxiety among low neurotics perceiving increased personal freedom. Results of this study did not support the hypothesis: displacement did not relieve explicit anxiety—reported anxiety was greater among low neurotics reminded of freedom whether or not they were first allowed to displace to authority. Instead, the displacement effect emerged when leadership style was measured first (replicating the preliminary studies), yet was eliminated when measured after participants reported on their explicit anxiety. The implications of these findings are considered in terms of alternative explanations, theoretical refinements, and future research efforts.
Perceiving the oppressive control of the humans at Manor Farm, Old Major, the farm’s prize-winning middle white boar, revealed to a congregation in the big barn that, “No animal in England is free. The life of an animal is misery and slavery: this is the plain truth,” (Orwell, 1946, p. 28), and then rallied them to rebellion, continuing, “Is it not crystal clear, then, comrades, that all the evils of this life of ours spring from the tyranny of human beings? Only get rid of Man, and the produce of our labour would be our own. Almost overnight we could become rich and free. What then must we do? Why, work night and day, body and soul, for the overthrow of the human race! That is my message to you: Rebellion!” (p. 30). After eventually giving rout to the farmer and his men, the animals indeed released themselves from the problem of oppression and control, the problem of restricted freedom.

However, in that same fell swoop they produced for themselves a new problem: the problem of unbridled possibility. In all things great and small, their sudden independence forcefully presented questions about who they are, what they should do, and how they should live. Their response to this hard-fought freedom was not simply to splinter off to each enjoy their individual autonomy, free from authority and hierarchy, each pleasantly ruling themselves. Instead, they began to limit and displace their freedom again, pledging to live according to a set of strict laws (“The Seven Commandments”) and supporting the leadership of two charismatic and learned pigs, Snowball and Napoleon. In this way, the farm animals began gradually slinking back toward oppressive autocracy.

George Orwell’s allegory of Animal Farm (1946) thus colorfully illustrates the double-edged nature of human freedom. As philosophers have long noted, when we
perceive our freedoms to be restricted, we push back—asserting ourselves—to regain a sense of personal freedom. But when we find ourselves in the opposite situation, facing personal freedoms and choice, we may just as quickly seek to divest ourselves of that very freedom. Yet, although research has revealed much about the motivational consequences of restricting freedom (e.g., Brehm & Brehm, 1981), we know relatively little about the possible motivational consequences of facing our personal freedom.

The present dissertation, therefore, builds on classic existential philosophy and psychological theory (e.g., Fromm, 1941) suggesting that personal freedom can be burdensome to the self and may, at least under certain conditions, motivate people to cope with that burden by escaping responsibility for their freedom. These perspectives, as well as contemporary empirical work, also suggest that people likely vary in their ability or tendency to effectively cope with such freedom. The present dissertation will first theoretically and empirically consider whether people low in neuroticism effectively cope with abundant freedom by, ironically, displacing their freedom to an autocratic (vs. democratic) authority—a leader who relieves the follower of responsibility for their freedoms by making decisions on their behalf, rather than a leader who shares the responsibility via democratic participation. The dissertation will then examine whether displacing personal responsibility for one’s freedom is an important part of maintaining psychological equanimity, insofar as it helps reduce anxiety among low neurotics perceiving personal freedom.

The problem of freedom

Since the earliest considerations of its consequences, human freedom has been viewed with ambivalence. Political philosophy historically focused on the problems of
restrictions: external restraints upon people’s behaviors. Social contract theories, from Plato’s *Crito* to Thomas Hobbes’ *Leviathan*, among others old and new, argue that political community and civil society necessarily require forfeiting a certain amount of our personal freedoms to an organized social system in exchange for order and security. On that issue, debates rage about the appropriate level of organizational restrictions people could, or should, reasonably tolerate. Existential philosophy offers an expanded view of the ambivalence of freedom by also highlighting the problems of freedom: the problems of independently choosing and pursuing one’s own attitudes, beliefs, and behavioral goals, the freedom to craft an authentic self.

One of the first to address both issues, Kierkegaard (1844, also 1843a, 1843b, 1843c) argued that “becoming” was a task that could not be rejected, lest the self vanish into the oblivion, but also noted it was a task that presented great puzzles and challenging risks. For Kierkegaard, the very experience of anxiety arose, on the one hand, as the product of stifled freedom to assert and express oneself and, on the other hand, due to the challenge of constructing an authentic self and navigating its course through a world of growing possibility. Other existentialists (e.g., Heidegger, 1927; Sartre, 1956) further explored these themes, both the anxiety of too little freedom threatening to eliminate the self and of too much freedom threatening to crush the self under its own potential.

Likewise, Otto Rank (e.g., 1932; 1945), who felt that Freudian views of the ego were too deterministic and overlooked the importance of the will, viewed the individual as forever grappling with problems of creativity and artistry in the construction and expression of a unique self (Menaker, 1982). For Rank, it was the life project of each person to create and assert their self, making free and original choices and broadly
exercising their will. Thus, people would naturally resist external control (a reaction he called the “counter-will”) and could seek to make original self-expressions. However, he also emphasized that creative self-expression was prone to evoking anxiety and guilt as it individuated the self from others and placed squarely in one’s own hands the responsibility for the uncertainties and risks inherent in free choice. In light of that potential anxiety, he conceptualized an opposing force, motivating people to shrink back from free and original expression, merging back into their surrounding milieu. Erich Fromm (1941) also emphasized the motivational challenges of freedom, arguing that people likely cope with the anxieties of freedom by shrinking from the responsibility of free choice and self-expression.

**Restricted freedom.** Much work has explored the motivational importance of restricted freedom. For example, work on reactance theory (Brehm & Brehm, 1981; Wicklund, 1974) shows that individuals are motivated to protect their felt levels of freedom to control their own actions, beliefs, and attitudes from external constraints. Imposing restrictions on individuals’ perceived freedom to act, think, or feel a certain way triggers a motivation to resist the imposing force and protect or restore the lost freedom. From children disobeying a parent’s command to eat their broccoli, to violent rebellions against oppressive political regimes, reactance can help explain a wide range or behaviors in response to restricted freedom. In a similar vein, work on self-determination theory (SDT; Ryan & Deci, 2000) has shown that, compared to conditions that promote choice and autonomy, conditions that restrict freedom by controlling or pressuring individuals toward certain outcomes tend to produce adverse reactions such as reduced interest and engagement, cognitive rigidity and negative emotional tone, and
worse physical and psychological well-being (see Deci & Ryan, 1987). In sum, a large body of evidence has directly explored the psychological consequences of restricted freedom.

**Freedom of choice.** We are aware of little work that has directly explored the motivational consequences of facing opportunities to exercise one’s freedom to choose who to be or what to do. However, in recent years, some emerging challenges to rational-choice theories of economics have begun to question whether the growing amount of choice in the marketplace is desirable (e.g., Schwartz 2004; Schwartz et al., 2002; Salecl, 2010). Such ideas build from existential philosophical perspectives holding that freedom can arouse anxiety, particularly in the current age of opportunity, because it thrusts upon the individual personal responsibility for the choices, uncertainties, and risks inherent in crafting a unique self and navigating a world of enormous possibility (Heidegger, 1927; Sartre, 1956; Yalom, 1980).

Thus, people can steer their lives in one of two courses, “By one course he can progress to ‘positive freedom’; he can relate himself spontaneously to the world in love and work, in the genuine expression of his emotional, sensuous, and intellectual capacities…The other course open to him is to fall back, to give up his freedom…eliminating the gap that has arisen between his individual self and the world” (Fromm, 1941, p. 139; see also Rank, 1932). In this regard, some people can capitalize on their freedom, rising to the challenge of bold and authentic self-determination, perhaps even approaching what Kierkegaard (1843a, 1943b) called the knight of faith or Nietzsche (1885) called the *ubermensch*. But even Kierkegaard and Nietzsche acknowledged—often with great disappointment—that this sort of authentic being is
fairly uncommon. Instead, they and others noted the tendency for most people, when saddled with the burdens of freedom, to fail to become (Heidegger, 1927), to act in what Sartre (1956) called “bad faith”, to seek to escape from their freedom.

In sum, although little to no research has directly explored the psychological consequences of facing one’s freedom, there is theoretical precedent to hypothesize that it can motivate reactions designed to alleviate the anxiety (generated via personal responsibility for uncertainty and risk) it may arouse. We next explore some potential ways people might cope with their freedom.

**Coping with existential freedom**

Tracing historical trends, Erich Fromm (1941) outlined how shifts in Western cultural and political systems following the Reformation largely released individuals from the domineering control of both church and state, simultaneously reducing restrictions and greatly expanding freedom. The dramatically increased ability of some Europeans to craft their own personal identity and social future offered by the latter, Fromm argued, meant increased anxieties due to increased personal responsibility for the uncertainties and risks involved in carving out new identities and foregoing traditional social spheres and customs. From his analysis of the European political landscape up to and including WWII, he suggested that people are generally prone to cope with the burdens of freedom via several “escape mechanisms”: conformity, destruction, and displacement to authority.

One way people can escape the burden of freedom is by conforming to any of various normative or informational cues, whether cultural traditions or etiquette, procedure or law, majority opinions or behaviors, precedent, or no doubt innumerable
others. Although no empirical work has specifically explored how encountering freedom influences conformity, a growing body of work shows that various types of uncertainty can increase people’s reliance on extant worldview beliefs (see van den Bos, 2009) and confidence in presumably previously held attitudes about themselves (e.g., McGregor & Marigold, 2003; McGregor, Zanna, Holmes, & Spencer, 2001). A second way to escape the burdens of freedom is through destruction of choice. Though Fromm referred to violent destruction, Yalom (1980) also summarized a number of more mundane ways of undermining the burden of freedom and choice, for example: developing action plans (implementation intentions); adopting mindless routines (or compulsions); or denying that one’s choices are meaningful, perhaps scripted according to divine providence, historical progress, or scientific determinism. It also stands to reason that individuals might destroy choice through self-handicapping or sabotaging one’s performance to preemptively avoid future opportunities, or by reducing self-awareness via substance use or abuse.

The present work, however, focuses on the third escape mechanism: displacing the burden of freedom to an authority. Although we are again not aware of any empirical work that has specifically investigated the impact of freedom on deferral to authority, we can gain some indirect insights from work related to the intolerance of uncertainty and the displacement of responsibility.

Some work illustrates that people respond to increased uncertainty by deferring to expert opinion or advice, and to leadership. For example, research on escabinato juries, consisting of five lay jury members and one judge member, shows that the lay members consistently switch their opinions to match that of the judge member (Arce, Fariña, Vila,
& Real, 1996), suggesting lay escabinato jury members may often be less than certain about their verdict opinions and, as a result, defer instead to the opinion of the available legal expert. Similarly, when people feel uncertain about complex, confusing, or contradictory health information, many seek answers from trusted government websites and expert health organizations (Ward, Henderson, Coveney, & Meyer, 2011).

Uncertainty also strengthened identification with one’s ideological leadership (political party, Hohman, Hogg, & Bligh, 2010) and increased satisfaction with group-prototypical leaders (Cicero, Pierro, & van Knippenberg, 2010).

Other research has investigated the displacement of responsibility in obedience and moral agency. In the infamous Yale obedience studies (Milgram, 1974; see also Blass 1999, 2009), for example, the initial interaction in the paradigm (and likely of any novel situation) could be seen as involving the problem of freedom; having arrived for the study, the participant must ask “what do I do now?” As Fromm might have predicted, in all cases participants promptly solved the problem by submitting to the experimenter’s instructions to assume the role of teacher. From that point onward, Milgram argued, teachers continued to obey the experimenter’s instructions to shock the learner because they had effectively displaced responsibility for their actions to the experimenter. Obedient teachers expressed less personal responsibility than did their more defiant counterparts (Milgram, 1974, p. 203; also Blass, 1996) and a recent full-scale replication found expressions of personal responsibility, rather than concern for the learner’s well-being, predicted reluctance and disobedience (Burger, Girgis, & Manning, 2011). Thus, teachers in the experiments continued to obey the experimenter’s commands only to the extent they could reasonably displace their personal responsibility for shocking the
learner. Beyond the laboratory, nurses similarly recalled feeling greater personal responsibility when they disobeyed, compared to when they obeyed, an inappropriate treatment order (Krackow & Blass, 1995).

Building on these findings, Bandura (1990, 2002) further argued that the risk of being responsible for morally reprehensible actions may actually motivate individuals to displace responsibility onto others. For example, in a scenario similar to Milgram’s (Tilker, 1970), participants continued administering the experiment unless both a) given feedback that the shocks were causing harm and b) made to feel personally responsible. A related investigation of the “buckpassing phenomenon” (Feldman-Summers, 1977) found that participants rebelled against a threat to their freedom to choose by shifting their preferences away from a confederates’ suggestions (reactance), except when doing so would have made them personally responsible for the negative consequences; in the latter cases, participants shifted their candidate preferences toward confederates’ suggestions, perhaps willingly forfeiting their freedom in order to displace the responsibility for the negative outcome.

Taken together, these findings are consistent with the idea that people may seek to manage the burden of their freedom (responsibility for uncertainty and risk) by displacing it to an authority. Further, certain types of authority may be especially well suited to the displacement of responsibility for freedom; people coping with the burden of freedom should most strongly support representative authorities using autocratic, rather than democratic, leadership styles (Fromm, 1941). Autocratic style leadership and administration offers to shoulder the responsibility of freedom and choice, making decisions on behalf of the follower, whereas democratic style leadership continues to
share responsibility for freedom and choice with the follower. Thus, when faced with freedom, people should tend to increase their support for autocratic (vs. democratic) leadership and administration. However, there is also reason to suspect individual differences in coping with the anxieties of freedom.

**An ironic aspect of a “healthy” self: Adaptive and neurotic strategies for coping with freedom**

Many of the scholarly examinations of the problem of freedom have explicitly posited individual differences in the way people respond to it and how effective those responses are at managing its potential anxieties (e.g., Heidegger, 1927; Kierkegaard, 1844; May, 1981; Nietzsche, 1885; Rank, 1945; Sartre, 1956; Yalom, 1980), though Fromm (1941) was most clear in outlining a meaningful individual difference. Not only did he specify, in great detail, the problem of freedom and the various escape mechanisms available to effectively manage that problem, but he also argued that whereas the emotionally stable individual avails of such mechanisms to maintain psychological health, the neurotic individual does not. According to Fromm,

“If we differentiate the two concepts of normal and neurotic, we come to the following conclusion: the person who is normal in terms of being well adapted is often less healthy than the neurotic person in terms of human values. Often he is well adapted only at the expense of having given up his self in order to become more or less the person he believes he is expected to be. All genuine individuality and spontaneity may have been lost. On the other hand, the neurotic person can be characterized as somebody who was not ready to surrender completely in the battle for his self. To be sure, his attempt to save his individual self was not
successful, and instead of expressing his self productively he sought salvation through neurotic symptoms and by withdrawing into a phantasy life” (p. 138).

That is, Fromm argued that less neurotic (more emotionally stable) people are, ironically, most inclined to divest themselves of their own individuality and personal responsibility for their freedom. In contrast, he suggested that neurotics employ coping strategies that leave them paralyzed and ultimately fail at managing the potential anxieties of freedom.

If Fromm’s analysis is correct, then compared to low neurotics, high neurotics should feel saddled with responsibility for unpleasant consequences (e.g., blame, guilt, shame), should be more bothered by uncertainty, should tend to use passive coping methods (especially when dealing with choices and decisions), and these coping failures should contribute to greater or more frequent anxiety.

A fair amount of evidence is consistent with these expectations. When dealing with stress, neurotics tend to employ passive and inactive coping strategies, such as withdrawal, passivity/sedation, mental disengagement, behavioral disengagement, denial, wishful thinking, and avoidance (Watson & Hubbard, 1996 for review; also, Costa & McCrae, 1989; Endler & Parker, 1990). One possible reason for these coping failures could be that neurotics have problems appropriately displacing personal responsibility and uncertainty. Indeed, neurotics tend to experience greater levels of guilt (e.g., Einstein & Lanning, 1998) and shame (e.g., Cohen, Wolf, Panter, & Insko, 2011), and tend to ruminate (Lam, Smith, Checkley, Rijsdijk, & Sham, 2003; Roberts, Gilboa, & Gotlib, 1998) and make more attributions of self-blame (Gudjonson, 1984; Shine, 1997), suggesting that they often perceive themselves as more responsible for negative outcomes than do individuals low in neuroticism. Other work shows that neurotics are more
bothered by uncertainty (Sexton, Norton, Walker, & Norton, 2003), and that their increased intolerance of uncertainty in turn accounts for their similarly increased tendency to worry (de Bruin, Rassin, & Muris, 2007; McEvoy & Mahoney, 2013). In that light, it is not surprising that neurotics tend to experience more ambivalence in a variety of decisions (e.g., Gati, et al., 2011; Jackson, Furnham, & Jones, 1999; Pinquart, Stotzka, & Silbereisen, 2008; Steel, 2007). Further, when coping methods were evaluated in terms of whether they solved problems and reduced stress and anxiety, methods most often used by neurotics were the least helpful (McCrae & Costa, 1986). Indeed, neuroticism is related to generalized anxiety (e.g., Mahoney & McEvoy, 2012), mediated by attributions of self-blame (Bolger, 1990), uncertainty and worry (van der Heiden, et al., 2010), and inaction (McEvoy & Mahoney, 2012).

Together, this evidence is consistent with Fromm’s suggestion that less neurotic people maintain healthy functioning by more effectively managing the challenges of freedom (responsibility, uncertainty, risk), whereas neurotics passively balk at their freedom and suffer increased anxiety because they fail to effectively manage its burdens. We thus have reason to expect that low neurotics will “manage” the burden of freedom by more strongly supporting an autocratic (vs. democratic) authority, whereas high neurotics will not, and that doing so would help maintain low neurotics’ relatively low levels of anxiety.
CHAPTER 2

Initial empirical explorations: Three preliminary studies

Before proceeding to investigate whether managing the burden of freedom by displacing it to an autocratic authority helps low neurotics maintain relatively low levels of anxiety, three preliminary studies were first conducted to test whether encountering freedom motivates low neurotics to displace responsibility to an authority.

Preliminary Study 1

The first preliminary study was conducted among US Olympic athletes in the months leading up to the 2008 Beijing Olympic Games. After measuring participants’ levels of neuroticism, the salience of personal freedom was manipulated by randomly assigning participants to one of three conditions. The target condition reminded participants of their own personal freedom, a second condition also made freedom salient but not personal, and a third made salient the experience of being controlled rather than free. Finally, the athletes indicated whether they more strongly preferred their coach to use an autocratic or a democratic style. It was expected that among athletes low, but not high, in neuroticism, the personal freedom prompt would increase their preference that their coach use a more autocratic leadership style.

Method

Participants

Data were collected from 58 athletes (34 male; age M = 25.40, SD = 9.93) residing at the United States Olympic Training Center during the months leading up to the 2008 Olympic Games (August). Regarding sport type: 50 athletes indicated theirs was an individual sport (boxing, gymnastics, shooting, swimming, track cycling, triathlon,
weightlifting, wrestling), seven indicated theirs was a team sport (hockey, soccer, volleyball), and one declined to indicate sport. Regarding competition level: 38 reported participating or medaling in an elite level competition (e.g., Olympics, World Championships, World Cup), 19 reported participating or medaling in a national/continental level competition (e.g., US Nationals, US Open, Pan American Championships), and one declined to report highest competition level. All provided informed consent, were paid $5.00 to participate, and were given a full debriefing.

**Materials and Procedure**

In collaboration with the Olympic Training Center’s Sport Psychology Department and the Housing and Operations Department, advertisements were posted around the training complex. Testing sessions were scheduled with up to 14 athletes at a time, and an experimenter introduced the study’s purpose as two-fold: first, a survey of personality factors that may affect athlete-coach interactions; second, a request for athletes to make recommendations and express their coaching preferences. The cover story emphasized that athlete responses and recommendations would be kept anonymous, and would be used by the Sport Psychology Department to aid the coming selection of Olympic and National team coaches. Materials were completed in the following order.

*Neuroticism.* Embedded in a set of filler items was the neuroticism subscale of the Eysenck Personality Inventory (Eysenck & Eysenck, 1967). The measure consisted of 22 items, such as, “Are you a worrier?” and “Would you call yourself tense or highly strung?” All items used a Yes/No response option; a composite score was computed by summing the number of affirmative responses.
Freedom manipulation. Next, one of three short-answer style questions were presented to manipulate the salience of existential freedom (see Appendix A). The Self Freedom condition prompted athletes to consider that they alone are responsible for their personal freedoms and choices; the Others’ Freedom condition prompted athletes to consider another person, and how that other person is responsible for his/her personal freedoms and choices; and the Controlled condition prompted athletes to consider a situation that directly affected them, but in which they had absolutely no control in the matter. Participants then completed several unrelated distracter tasks for about 5-7 minutes.

Coaching preferences. The dependent measure was taken from the Leadership in Sport Scale (LSS; Chelladurai & Saleh 1980; Zhang, Jensen, & Mann, 2006). Two of the five LSS subscales were included, totaling 16 items; eight items measured preferences for an autocratic coaching style, in which the coach takes full responsibility for the athletes’ career (i.e., training, strategizing, competition schedule, etc.); eight items measured preferences for a democratic coaching style, in which the athlete and coach share responsibility for the athletes’ career. Examples of the democratic style items were, “I prefer my coach to ask for the opinion of the athletes on strategies for specific competition” and “I prefer my coach to ask for the opinion of the athletes on important coaching matters;” examples of the autocratic style items were, “I prefer my coach to plan for the team relatively independent of the athletes” and “I prefer my coach to prescribe methods to be followed.” All items used a 5-point Likert-type scale (1 = Always, 5 = Never). After reverse scoring the democratic preference subscale, a composite score (α = .77) was computed such that low scores indicated a stronger
preference for democratic coaching style and higher scores indicated a stronger preference for autocratic coaching.

Demographic information (i.e., sex, age, sport, highest level of competition) was then collected, and upon completion the experimenter fully debriefed, compensated, and thanked each participant.

Results

Methods prescribed by Aiken and West (1991) were followed to regress coaching style preferences on the Neuroticism (continuous) x 3 (Self Freedom vs. Others’ Freedom vs. Controlled) interaction. Neuroticism was centered about the mean, the three freedom manipulation conditions were dummy coded, and interaction terms were created by calculating the product of the neuroticism and freedom vectors. The first step included main effects; interaction terms were included in the second step.

Coach leadership style preference. There was no main effect of neuroticism ($F < 1$) nor of the freedom prime manipulation ($F[2, 55] = 1.57, p = .22$). However, the predicted interaction emerged, $R^2 = .13$, $F(2, 52) = 4.06, p = .02$ (see Figure 1). Among those with low (-1 SD) neuroticism, Self Freedom increased autocratic coaching preference compared to the Others’ Freedom condition ($\beta = .63, t[38] = 2.93, p = .005$) and the Controlled condition ($\beta = .52, t[37] = 2.73, p = .009$); there was no difference between the Others’ Freedom condition and the Controlled condition ($t[35] < 1$). There were also no differences between the three conditions among those with high (+1 SD) neuroticism, all $|t|s < 1$. Simple slopes analyses revealed that neuroticism was negatively related to autocratic coaching style preference in the Self Freedom condition ($\beta = -.33, t[20] = -1.66, p = .10$) whereas it was positively related to autocratic coaching style
preference in the Others’ Freedom condition ($\beta = .42, t[18] = 1.87, p = .07$) and the Controlled condition ($\beta = .40, t[17] = 1.59, p = .12$).

Discussion

Preliminary Study 1 provides initial support for the hypothesis that freedom motivates low neurotics to displace responsibility to an autocratic authority. Among athletes low, but not high, in neuroticism, the personal freedom prompt increased their preference for their coach to use a more autocratic leadership style—making important decisions (about training, strategizing, competition schedule, etc.) on the athletes’ behalf, rather than sharing that responsibility with them in the decision making process.

The next two studies build on this initial finding by extending the investigation to the political context and exploring whether the effects on authority preferences are due to motivated displacement of responsibility.

Preliminary Study 2

The second preliminary study was conducted among University of Missouri students in the weeks leading up to the 2008 US General Election (November). After measuring participants’ levels of neuroticism, the salience of personal freedom was manipulated by randomly assigning participants to one of two conditions. The target condition prompted participants to consider their own personal freedom and a second condition prompted them to consider the experience of being controlled rather than free. Participants then rated which of the two major Presidential candidates, Senator Obama and Senator McCain, they more strongly supported.

Based on campus activity and the local political culture in Boone County, Missouri (home to University of Missouri, in the city of Columbia), we expected that low
neurotics encountering freedom would be inclined to displace responsibility to Sen. Obama by more strongly supporting his candidacy for President. The national trend was such that the majority of young voters supported Sen. Obama (Keeter, Horowitz, & Tyson, 2008; Von Drehle, 2008), and local Boone County elections (Missouri Office of Secretary of State, March 2008, December 2008) and Columbia City campaign activity (Missouri GOP, 2008; Zeleny, 2008) similarly reflected that trend. Thus, we expected that if students in Boone would increase support toward either candidate, it would be toward Sen. Obama.

However, because a shift in candidate support might not necessarily imply motivation to displace responsibility for the country’s future, per se, we also directly assessed participants’ perceptions of which candidate would take greater responsibility for the nation. If low neurotics faced with freedom become motivated to displace responsibility onto Sen. Obama, for example, then they should more strongly feel that he would bear greater responsibility for the nation’s future. Further, based on the present analysis, if their increased support for Sen. Obama is an expression of efforts to displace responsibility to him, then the effect on responsibility perceptions should mediate the effect on candidate support.

Method

Participants

Data were collected from 51 undergraduates (22 male; age M = 18.51, SD = .68), at University of Missouri, in exchange for partial credit in an introductory psychology course.

Materials and Procedure
Participants arrived at scheduled testing sessions and were greeted by an experimenter who introduced the study as a survey of personality factors and social attitudes. Materials were completed in the following order.

Neuroticism. Neuroticism was assessed using the same measure and scoring rubric as used in preliminary Study 1 (Eysenck & Eysenck, 1967).

Freedom manipulation. Next, one of two short-answer style questions were presented to manipulate the salience of existential freedom (see Appendix B). The Freedom condition prompted participants to consider some of the ways that they are ultimately free in their choices and decisions about their lives; the Controlled condition prompted them to consider some of the ways that they often have absolutely no control, freedom, or choice about things in their lives.

Manipulation checks. Participants next responded to four Likert-type items that served as manipulation checks. The items referred to the situation participants described in reaction to the manipulation prompts, and asked them to indicate whether they perceived themselves as having 1) freedom to choose a course of action in that situation, 2) responsibility for the consequences of that course of action, 3) whether they thought those consequences would be positive or negative, and 4) whether the situation was one that would normally make them feel anxious. Participants then completed several unrelated distracter tasks for about 5-7 minutes.

Voting intentions. Voting intention was recorded in response to the sentence stem: “I will probably vote for…” using a 10-point scale (1 = John McCain, 10 = Barack Obama).
Candidate responsibility. Participants then indicated their perceptions about which candidate would take more responsibility for the nation’s future using a 10-point Likert-type scale in response to the item: “Which candidate do you think will take greater responsibility for this country?” (1 = John McCain, 10 = Barack Obama).

Demographic information (e.g., sex, age) was collected, and upon completion the experimenter fully debriefed and thanked each participant.

Results

As in Study 1, methods prescribed by Aiken and West (1991) were followed to regress voting intentions on the Neuroticism (continuous) x 2 (Freedom vs. Controlled) interaction.

Likert-type manipulation checks. There emerged several main effects of Freedom condition (Table 1). Participants in the Freedom condition reported feeling greater freedom, responsibility for that freedom, and felt the consequences of their freedom would be more positive, compared to those in the Controlled condition. Zero-order correlations showed neuroticism was associated with the perception that the consequences of one’s freedom would be negative, and the perception that the situation would cause anxiety (see Table 2). There was a Neuroticism x Freedom interaction on perceived positive consequences, but not on perceived freedom, responsibility, or anxiety (all Fs < 1).

Voting intentions. There was no main effect of neuroticism (F < 1) nor of the freedom prime manipulation (F[1, 49] = 1.93, p = .17). However, the predicted interaction emerged significant, $R^2 = .12$, $F(1, 47) = 6.84$, $p = .01$ (see Figure 2). Among those with low (-1 SD) neuroticism, Freedom (vs. Controlled) increased intentions to vote
for Obama ($\beta = .56$, $t[49] = 2.94$, $p = .005$). There were no differences between the conditions among those with high (+1 SD) neuroticism, $t < 1$. Simple slopes analyses revealed that neuroticism was negatively related to intentions to vote for Obama in the Freedom condition ($\beta = -.52$, $t[24] = -2.53$, $p = .02$), but was not related to voting preferences in the Controlled condition ($\beta = .19$, $t[25] = 1.07$, $p = .29$).

*Perception of candidate responsibility.* There was no main effect of neuroticism ($F < 1$) nor of the freedom prime manipulation ($F[1, 49] = 1.32$, $p = .26$). Yet, the predicted interaction emerged significant, $R^2 = .20$, $F(1, 47) = 12.41$, $p = .001$ (see Figure 3). Among those with low (-1 SD) neuroticism, Freedom (vs. Controlled) increased perceptions that Obama would take greater responsibility ($\beta = .64$, $t[49] = 3.46$, $p = .001$). There were no differences between the conditions among those with high (+1 SD) neuroticism ($\beta = -.28$, $t[49] = -1.55$, $p = .13$). Simple slopes analyses revealed that neuroticism was negatively related to perceptions that Obama would take greater responsibility in the Freedom condition ($\beta = -.64$, $t[24] = -3.25$, $p = .002$), but was not related to voting preferences in the Controlled condition ($\beta = .27$, $t[25] = 1.62$, $p = .11$).

*Mediation analyses.* Methods prescribed by Baron and Kenney (1986) were employed to test whether increased perceptions that Obama would take greater responsibility accounts for the effect on intentions to vote for Obama. The first step (path c) was demonstrated above, in which the Neuroticism (continuous) x 2 (Freedom vs. Controlled) interaction showed effects on voting intention mentioned ($\beta = -.60$, $t[47] = -2.62$, $p = .01$). The second step (path a), was also demonstrated above, in which the Neuroticism (continuous) x 2 (Freedom vs. Controlled) interaction showed effects on perceptions that Obama would take greater responsibility for the nation ($\beta = -.77$, $t[47] = -
-3.52, \( p = .001 \)). The third step (path b) required testing whether perceptions of responsibility and voting intentions were related after controlling for the Neuroticism x Freedom interaction. To test this relationship, voting intention was simultaneously regressed on the main effects of Neuroticism, Freedom manipulation, the interaction term, and the responsibility perception item. Results indicated that responsibility perceptions and voting intentions remained strongly positively related (\( \beta = .83, t[46] = 3.84, p < .001 \)). The final step (path c') required testing whether the Neuroticism x Freedom interaction on voting intentions remained significant after controlling for responsibility perceptions; the interaction was no longer significant (\( \beta = .04, t[46] = .26, p = .80 \)). A Sobel test of the reduction of the effect of the interaction on voting intentions was significant (\( Z = -3.27, p = .001 \)). In a test of reverse mediation, regressing responsibility perceptions onto the interaction while controlling for voting intentions, the interaction remained significant as reported above (\( \beta = -.32, t[46] = -2.20, p = .03 \)).

Taken together, these findings suggest that the effect on responsibility perceptions mediated the effect on voting intentions (see Figure 4), and not the reverse.

Discussion

Preliminary Study 2 found that freedom motivated low neurotics to displace responsibility to a Presidential candidate. Among participants low, but not high, in neuroticism, the freedom prompt increased a) their intention to vote for Sen. Obama, and b) their perception that he would take greater responsibility for the nation. Mediation analyses also showed that the increased perception that Sen. Obama would take greater responsibility accounted for the increased intention to vote for him, providing evidence
that the reason participants more strongly intended to vote for Sen. Obama was that they felt he would shoulder more of the responsibility for the country.

However, although this pattern supports the idea that participants preferred a President who would take greater responsibility, it does not provide direct evidence that they would prefer to displace their freedom by having the President act on their behalf. Thus, whereas preliminary Study 2 focused on displacement of responsibility to a charismatic Presidential candidate, the next study focuses again on preference for autocratic leadership style.

Preliminary Study 3

Building on preliminary Studies 1 and 2, preliminary Study 3 tested whether low neurotics faced with freedom might also increase their preference for a more autocratic style Presidential administration—taking greater responsibility for the nation on behalf of constituents, rather than sharing that responsibility more democratically with them. The study was conducted among University of Missouri students in the weeks leading up to the 2012 US General Election (November). After measuring participants’ levels of neuroticism, the salience of personal freedom was manipulated by randomly assigning participants to one of three conditions. The target condition prompted participants to consider their own personal freedom and a second condition prompted them to consider the experience of being controlled rather than free. Additionally, we hypothesized that if freedom is a burden, it can be relieved. A third condition was therefore also included to experimentally examine whether reminders of external guides and limitations on freedom would attenuate the effect of freedom reminders on leadership preferences. Specifically, participants were prompted to consider their freedom, but in the context of also thinking
about how their choices are subject to external rules. Participants then rated—regardless
of who got elected—how strongly they would prefer an autocratic style Presidential
administration. Additionally, whereas Preliminary Studies 1 and 2 used somewhat small
sample sizes, preliminary Study 3 also sought to collect data from a larger sample.

Method

Participants

Data were collected from 303 undergraduates (130 male; age M = 18.52, SD = .99, 8 declined to indicate age) at University of Missouri for partial credit in an
introductory psychology course.

Materials and Procedure

Participants arrived at scheduled testing sessions and were greeted by an
experimenter who introduced the study as a survey of personality factors, election
attitudes, and voting preferences. Materials were completed in the following order.

Neuroticism. Neuroticism was assessed using the same measure as used in
Preliminary Study 1 and 2 (Eysenck & Eysenck, 1967), using a 10-point Likert-type
scale (1 = Never, 10 = Always; α = .92).

Freedom manipulation. Next, one of three short-answer style questions were
presented to manipulate the salience of existential freedom (see Appendix B). The
Freedom condition and Controlled condition were the same as those used in Study 2. A
“Guided Freedom” condition was also added, in which participants were primed to think
about their freedom in personal choices and decisions; but they were also instructed to
think about how those choices are often guided by external rules, such as social norms
and etiquette, legal proscriptions, and practicality.
Manipulation checks. Participants next responded to five Likert-type items that served as manipulation checks. As in Study 2, the items referred to the manipulation prompts, and asked participants to indicate whether they perceived themselves as having 1) freedom to choose a course of action in the situation, 2) responsibility for the consequences of that course of action, 3) whether they thought those consequences would be positive or negative, and 4) whether the situation was one that would normally make them feel anxious, and 5) whether they remember feeling anxious while describing the situation. Participants then completed several unrelated distracter tasks for about 5-7 minutes.

Presidential administration leadership style preferences. The dependent measure of autocratic Presidential leadership preference was adapted from the autocratic style preference subscale of the Leadership Scale used in preliminary Study 1 (Appendix C). A sentence stem was first presented, reading, “No matter who gets elected, I would prefer the next President to…” and participants rated their agreement with 10 items completing the sentence; for example, “…set and forcefully pursue an agenda on behalf of the nation” and “…govern irrespective of public opinion.” All items used a 10-point Likert-type scale (1 = Strongly disagree, 10 = Strongly agree; α = .68). A composite score was computed such that higher scores indicated a stronger preference for autocratic Presidential leadership.

Demographic information (e.g., sex, age) was collected, and upon completion the experimenter fully debriefed and thanked each participant.

Results
As in Study 1, methods prescribed by Aiken and West (1991) were followed to regress voting intentions on the Neuroticism (continuous) x 2 (Freedom vs. Guided Freedom vs. No Freedom) interaction.

*Likert-type manipulation checks.* There emerged several main effects of Freedom condition (*Table 3*). Compared to participants in the Controlled condition, those in both the Freedom and Guided Freedom condition reported feeling greater freedom, responsibility for that freedom, felt the consequences of their freedom would be more positive, and reported the situation as one that would and did produce anxiety. Zero-order correlations showed neuroticism was associated with reduced perception of freedom, the perception that the consequences of one’s actions would be negative, and the perception that the situation would and did cause anxiety (see *Table 2*). There was a Neuroticism x Freedom interaction on perceived freedom³, but not on perceived responsibility, positive consequences, or estimated or remembered anxiety (all *Fs* < 1.13, *p* > .32).

*Presidential leadership preference.* There was no main effect of neuroticism (*F*[1, 301] = 1.03, *p* = .31) and only a marginal main effect of the freedom prime manipulation (*F*[2, 300] = 2.51, *p* = .08) such that autocratic Presidential leadership was more strongly preferred in the Freedom condition compared to the Guided Freedom condition (β = .14, *t*[199] = 2.10, *p* = .04) and the Controlled condition (β = .12, *t*[197] = 1.74, *p* = .08); the Guided Freedom and No Freedom condition did not differ (*t*[204] < 1). But more importantly, these were qualified by the predicted interaction, *R*² = .02, *F*(2, 297) = 2.94, *p* = .05 (see *Figure 5*). Among those with low (-1 SD) neuroticism, Freedom increased autocratic Presidential leadership preference compared to the Guided Freedom condition (β = .22, *t*[199] = 2.36, *d* = .33, *p* = .02) and the Controlled condition (β = .27, *t*[197] =
2.89, \( p = .004 \)); there was no difference between the Guided Freedom condition and the Controlled condition (\( t[204] < 1 \)). There were also no differences between the three conditions among those with high (+1 SD) neuroticism, all |\( t \)|s < 1. Simple slopes analyses revealed that neuroticism was negatively related to autocratic Presidential leadership preference in the Freedom condition (\( \beta = -.22, t[96] = -2.30, p = .02 \)) whereas it was not related to autocratic Presidential leadership preference in the Guided Freedom condition (\( t[103] < 1 \)) nor in the Controlled condition (\( \beta = .11, t[101] = 1.14, p = .26 \)).

**Discussion**

Preliminary Study 3 supported the hypothesis that freedom motivates low neurotics to prefer an autocratic authority. Among participants low, but not high, in neuroticism, the personal freedom prompt increased preference for the President to conduct his administration in a more autocratic style—making important decisions on behalf of the nation’s constituents, rather than providing transparency and sharing responsibility with them in a democratic style.

Note, also, that whereas the displacement effect emerged among participants in the Freedom condition, it did not emerge in the Guided Freedom condition—when participants were also reminded of the many external factors responsible for guiding or limiting their choices, such as social norms and etiquette, legal proscriptions, and practicality. This finding is consistent with the idea that—at least among low neurotics—being reminded of external restraints on one’s freedom can eliminate subsequent motivation to displace responsibility to an authority.
CHAPTER 3

An ironic consequence of a healthy self: Supporting autocracy to reduce anxiety from freedom

*It is often safer to be in chains than to be free.*

- Franz Kafka (*The Trial, 1925*)

A fourth study sought to test whether the displacement of responsibility observed in preliminary Studies 1-3 functions as an active way of coping with freedom. If freedom can pose problems (e.g., responsibility, uncertainty, and risk) that arouse anxiety and thus motivate efforts to reduce the problem of freedom, then low neurotics primed with freedom should experience increased anxiety unless they are allowed to actively cope by more strongly supporting autocratic leadership.

After measuring participants’ levels of neuroticism, the salience of personal freedom was manipulated by randomly assigning participants to one of two conditions. The target condition prompted participants to consider their own personal freedom, and a second condition prompted participants to consider the experience of being controlled rather than free. The fourth study also sought to generalize beyond the coaching and political leadership style preferences studied in preliminary Studies 1-3 by measuring autocratic leadership style preferences at the workplace. In the Displacement condition, participants indicated support for an autocratic style work leadership (manager, company) and then they reported on their prospective anxiety (Freeston, Rheaume, Letarte, Dugas, & Ladouceur, 1994; Buhr & Dugas, 2002). In the No Displacement condition, they instead indicated support for autocratic style work leadership after they first reported on their prospective anxiety.
According to the present analysis, if freedom leads to anxiety among low neurotics, but displacing freedom helps reduce that anxiety, then we should expect to see a 3-way Neuroticism x 2 (Freedom vs. Controlled) x 2 (Displacement prior to anxiety assessment vs. No Displacement prior to anxiety assessment) interaction on prospective anxiety; the Freedom condition should cause increased prospective anxiety among low neurotics in the No Displacement condition, but not in the Displacement condition. Additionally, if freedom leads low neurotics to displace their freedom, then we should see a 2-way Neuroticism x Freedom interaction replicating preliminary studies 1-3, in which low neurotics reminded of freedom should increase preference for autocratic work leadership. Lastly, a main effect of neuroticism was expected such that it would be positively related to anxiety, and high neurotics were expected to exhibit high levels of anxiety regardless of whether freedom is made especially salient.

Method

Participants

Data were collected from 216 undergraduates (90 male; age M = 18.52, SD = .84, 1 declined to indicate age) at University of Missouri for partial credit in an introductory psychology course.

Materials and Procedure

Participants arrived at scheduled testing sessions and were greeted by an experimenter who introduced the study as a survey of personality factors and work preferences. Materials were completed in the following order.
Neuroticism. Neuroticism was assessed using the same measure as used in Studies 1-3 (Eysenck & Eysenck, 1967), using a 10-point Likert-type scale (1 = Never, 10 = Always; α = .92).

Freedom manipulation. Next, one of two short-answer style questions were presented to manipulate the salience of existential freedom (see Appendix B). The Freedom condition and Controlled condition were the same as those used in Study 2. Participants then completed several unrelated distracter tasks for about 5-7 minutes.

Displacement opportunity manipulation. To manipulate participants’ opportunity to displace their freedom prior to assessing anxiety, they were randomly assigned to either a Displacement condition or a No Displacement condition. In the Displacement condition, participants were presented with the leadership preferences scale (described below) before they reported on their prospective anxiety, giving them an opportunity to indicate stronger support for autocratic work leadership style prior to reporting on their felt anxiety levels; in the No Displacement condition, they were instead asked to indicate support for autocratic style work leadership after they first reported on their prospective anxiety.

Work leadership style preferences. The dependent measure of autocratic work leadership preference was adapted from the autocratic style preference subscale of the Leadership Scale used in Studies 1-3 (Appendix D). A sentence stem was first presented, reading, “I would prefer my work boss to…” and participants rated their agreement with 10 items completing the sentence; for example, “…set and forcefully pursue an agenda on behalf of the company and employees” and “…conduct business independent of employee opinion.” All items used a 10-point Likert-type scale (1 = Strongly disagree, 10
= Strongly agree; α = .53) and were scored such that higher scores indicated a stronger preference for autocratic work leadership.

**Prospective anxiety.** The Prospective Anxiety subscale was used, selected from the Intolerance of Uncertainty Scale (IUS; Freeston, Rheaume, Letarte, Dugas, & Ladouceur, 1994; English version, Buhr & Dugas, 2002). The IUS is a 27-item measure that assesses anxiety regarding ambiguous circumstances, uncertain implications, and lack of control over one’s future. The prospective anxiety subscale (Appendix E) assesses anxiety in anticipation of uncertain events (e.g., “Uncertainty makes me uneasy, anxious, or stressed” and “I can’t stand being undecided about my future”) using 12 Likert-type items (1 = Strongly disagree, 10 = Strongly agree; α = .92). Extensive previous research has consistently demonstrated the measure to have adequate reliability and validity, and that these anxiety subscales mediate the relationship between neuroticism and generalized anxiety symptoms (e.g., Mahoney & McEvoy, 2012; McEvoy & Mahoney, 2012; van der Heiden, et al., 2010).

**Manipulation checks.** Participants next responded to five Likert-type items that served as manipulation checks. As in Study 2, the items referred to the manipulation prompts, and asked participants to indicate whether they perceived themselves as having 1) freedom to choose a course of action in the situation, 2) responsibility for the consequences of that course of action, 3) whether they thought those consequences would be positive or negative, and 4) whether the situation was one that would normally make them feel anxious, 5) whether they remember feeling anxious while describing the situation, and 6) whether they currently felt anxious. Participants then completed several unrelated distracter tasks for about 5-7 minutes.
Demographic information (e.g., sex, age) was collected, and upon completion the experimenter fully debriefed and thanked each participant.

Results

Methods prescribed by Aiken and West (1991) were followed to regress work leadership preference and explicit prospective anxiety on the 3-way Neuroticism (continuous) x 2 (Freedom vs. No Freedom) x 2 (Displacement [leader preferences prior to anxiety assessment] vs. No Displacement [leader preferences after anxiety assessment]) interaction.

Work leadership preference. There was no main effect of neuroticism or Order conditions (both |t|s < 1); there was a main effect of the freedom prime manipulation ($\beta = .19$, $t[214] = 2.88$, $p < .01$) such that autocratic work leadership preference increased in the Freedom condition compared to the Controlled condition. But more importantly, the predicted Neuroticism x Freedom interaction was not significant, $R^2 < .01$, $F(1, 212) = .35$, $p = .55$. However, unexpectedly, a significant 3-way interaction emerged, $R^2 = .02$, $F(1, 208) = 3.88$, $p = .05$ (see Figure 6).

To further examine the pattern of the 3-way interaction, the Neuroticism x Freedom interactions were analyzed within each order. Among participants who indicated their leadership preferences prior to completing the prospective anxiety measure, the Neuroticism x Freedom interaction was significant ($\beta = -.38$, $t[214] = -2.11$, $p = .04$). Among those with low (-1 SD) neuroticism, Freedom increased autocratic work leadership preference compared to the Controlled condition ($\beta = .47$, $t[214] = 3.36$, $p = .001$); there was no difference between the conditions among those with high (+1 SD) neuroticism, ($\beta = .05$, $t[214] = .37$, $p = .72$). Simple slopes analyses revealed that
neuroticism was negatively related to autocratic work leadership preference in the Freedom condition ($\beta = -.39, \ t[111] = -2.63, \ p = .01$) but was not related to autocratic work leadership preference in the Controlled condition ($\beta = .03, \ t[101] = .19, \ p = .85$).

In contrast, the Neuroticism x Freedom interaction was not significant among participants who indicated their leadership preferences after completing the prospective anxiety measure ($\beta = .11, \ t[214] = .65, \ p = .52$).

We next examined the Neuroticism x Order interactions within the Freedom and Controlled conditions. Among participants in the Freedom condition, the Neuroticism x Order interaction was significant ($\beta = .45, \ t[214] = 2.71, \ p = .01$). Among those with low (-1 SD) neuroticism, autocratic work leadership preferences were greater when assessed prior, compared to after, responding to the prospective anxiety measure ($\beta = .32, \ t[214] = 2.39, \ p = .02$); there was no difference between the order conditions among those with high (+1 SD) neuroticism, ($\beta = -.19, \ t[214] = -1.45, \ p = .15$). Simple slopes analyses revealed that neuroticism was negatively related to autocratic work leadership preference when assessed prior to responding to the prospective anxiety measure ($\beta = -.39, \ t[105] = -2.63, \ p = .01$) whereas it was not related to autocratic work leadership preference when assessed after responding to the prospective anxiety measure ($\beta = .12, \ t[107] = 1.02, \ p = .31$). The Neuroticism x Order interaction was not significant among participants in the Controlled condition ($\beta = -.03, \ t[214] = -.15, \ p = .88$).

Prospective anxiety. There was no main effect of Freedom or Order conditions (both $|t|s \leq 1.09, \ ps \geq .28$), though there was the expected main effect of neuroticism ($\beta = .59, \ t[214] = 10.79, \ p < .001$) such that neuroticism was positively related to prospective
anxiety. More importantly, the predicted 3-way interaction did not emerge ($R^2 < .01, F[1, 208] = 1.46, p = .23$).

However, there did emerge an overall Neuroticism x Freedom interaction, $R^2 = .01, F(1, 212) = 3.62, p = .06$ (see Figure 7). Among those with low (-1 SD) neuroticism, Freedom increased prospective anxiety compared to the Controlled condition ($\beta = .15, t[214] = 1.94, p = .05$); there was no difference between the conditions among those with high (+1 SD) neuroticism, ($\beta = -.06, t[214] = .76, p = .45$). Simple slopes analyses revealed that neuroticism was positively related to prospective anxiety in both the Freedom condition ($\beta = .71, t[111] = 8.70, p < .001$) and the Controlled condition ($\beta = .50, t[101] = 6.67, p < .001$).

Interestingly, prospective anxiety was not related to autocratic work leadership preferences, $r(214) = .06, p = .36$, and controlling for prospective anxiety when regressing work leadership preference on the Neuroticism (continuous) x 2 (Freedom vs. No Freedom) x 2 (leader preferences prior to anxiety assessment vs. leader preferences after anxiety assessment) interaction did not alter the pattern of results from those reported above.

*Likert-type manipulation checks.* There emerged several main effects of Freedom condition (*Table 4*). Compared to participants in the Controlled condition, those in the Freedom condition reported feeling greater freedom, responsibility, and felt the consequences of their actions would be more positive. Zero-order correlations showed neuroticism was associated with reduced perception of freedom, the perception that the consequences of one’s actions would be negative, the perception that the situation would and did cause anxiety, and current anxious feelings (see *Table 2*).
There were no main effects of order, no Freedom x Order (all Fs < 1) or Neuroticism x Order (all Fs < 2.63, p ≥ .11) 2-way interactions, nor were there any Neuroticism x Freedom x Order interactions (all Fs < 1). There were also no Neuroticism x Freedom interactions on perceived freedom, responsibility, positive consequences, or estimated or remembered anxiety (all Fs ≤ 1.51, p ≥ .22).

When regressing the present-anxiety manipulation check item there did emerge an overall marginal Neuroticism x Freedom interaction, $R^2 = .01$, $F(1, 211) = 3.23$, $p = .07$, though it did not resemble the prospective anxiety results reported above. Among those with high (+1 SD) neuroticism, Freedom tended to increase felt anxiety compared to the Controlled condition ($\beta = .15, t[214] = 1.73, p = .09$); there was no difference between conditions among those with low (-1 SD) neuroticism, ($\beta = -.07, t[214] = -.81, p = .42$).

Neuroticism was positively related to felt anxiety in both the Freedom condition ($\beta = .57, t[111] = 6.97, p < .001$) and the Controlled condition ($\beta = .35, t[101] = 3.96, p < .001$).

Discussion

Study 4 provided mixed support for the guiding hypotheses. First, regarding leadership preferences, an overall Neuroticism x Freedom interaction was expected, such that low neurotics reminded of freedom would increase preference for autocratic work leadership. Instead, this interaction only emerged when leadership preferences were assessed before the prospective anxiety measure; not when assessed after. Second, regarding prospective anxiety, a 3-way interaction was expected such that low neurotics reminded of freedom would report greater prospective anxiety before, but not after, being allowed to displace their freedom by indicating greater support for an autocratic style work leadership. Instead, an overall 2-way Neuroticism x Freedom interaction emerged
such that low neurotics reminded of freedom reported greater prospective anxiety. That lack of qualification by order suggests that anxiety increased for low neurotics reminded of freedom regardless of whether they indicated leadership preferences. The reason the results on leadership preferences and anxiety did not more closely match the hypothesized patterns can each be more fully informed by considering data from the preliminary studies, and therefore will be discussed at length in the General Discussion.
CHAPTER 4

General Discussion

Building from a classic existential philosophical position, elaborated by Fromm (1941) and others, the present research examined whether, at least under certain circumstances, low neurotics contemplating their personal freedom would respond by displacing that freedom to an autocratic authority. The three preliminary studies were consistent with that prediction. In Study 1, low neurotic Olympic athletes prompted to contemplate their freedom more strongly preferred an autocratic style coach; freedom reminders also motivated low neurotics to increase voting intentions for, and displace responsibility for the nation to, a particular Presidential candidate (Study 2), and to increase preference for a more autocratic Presidential administration generally (Study 3) and more autocratic work administration (Study 4, with caveats to be discussed).

The fourth study sought to test whether the shift toward a preference for responsibility-taking, autocratic leadership, observed in preliminary Studies 1-3, functions as a way for low neurotics to cope with any anxieties that might be associated with facing their freedom. It was hypothesized that if low neurotics become motivated to displace freedom because it increases anxiety, then when primed with freedom they should report increased anxiety before, but not after, being allowed to indicate preference for more autocratic leadership. Instead, however, low neurotics reminded of freedom reported greater prospective anxiety regardless of whether they reported on it before or after indicating their leadership preferences; further, when reminded of freedom they only increased their preference for more autocratic leadership before, but not after, reporting on their prospective anxiety.
Considering the moderated leadership style preference findings

At first blush, it is not entirely clear why the leadership effect was eliminated by the presentation of an explicit prospective anxiety questionnaire in Study 4, especially given that leadership preferences were not related to reports of prospective anxiety. One possible explanation for the observed moderating effect can be derived from ideas pertaining to the misattribution of arousal. As applied in several theoretical domains, the cause of people’s affective arousal can sometimes be unclear to them and, as a result, contextual cues can lead them to incorrectly attribute their arousal to other sources (Schachter & Singer, 1962; see Payne, Cheng, Govurun, Stewart, 2005 for contemporary application). Research from this tradition has shown that if a psychological process (e.g., attraction, self-esteem maintenance, attitude change) results from an affective state (e.g., anxiety, discomfort, arousal) then increasing the magnitude of that state can strengthen the process (e.g., Cantor, Zillman, & Bryant, 1975; Dutton & Aron, 1974) and providing a misattribution cue can eliminate the process (e.g., Storms & Nisbett, 1970; Zanna & Cooper, 1974).

In Study 4, the prospective anxiety questionnaire asked about anxiety about future events. Thus, if presentation of the prospective anxiety questionnaire functioned as a contextual cue that led participants to incorrectly attribute whatever anxiety they may be experiencing to worries about future events, rather than correctly attributing it to the freedom situation, it could have eliminated subsequent motivation to reduce freedom by supporting autocratic leadership. From this perspective, because low neurotics reminded of freedom in the Displacement condition did not first receive the questionnaire asking if they felt anxious about future events, any negative arousal would have likely been
attributed to the freedom prompts, and their increased support for a more autocratic leader reflects an appropriate way to manage that anxiety by reducing freedom; but in the No Displacement condition they did receive the questionnaire asking if they felt anxious about future events, potentially leading them to misattribute anxious arousal to future worries rather than the freedom prompt, perhaps rendering increased support for a more autocratic leader an inappropriate or irrelevant way to manage that anxiety.

As the misattribution perspective offers a plausible account of the leadership effects in Study 4, it is then important to consider whether it can also inform the data patterns observed in the preliminary studies. That is, preliminary Studies 2 and 3 also assessed autocratic leadership after manipulation check items explicitly asked whether the prompts were anxiety-provoking, yet the interaction effect on autocratic leadership nevertheless emerged in both Study 2 and 3 whereas it did not in Study 4. That inconsistency could be due to chance, in which case the moderating effect observed in Study 4 might simply be spurious; or, it could be due to a meaningful difference between attending to the anxiety-provoking qualities of the freedom prompts (manipulation check items in Studies 2 & 3) vs. attending to one’s uncertainties about the future (i.e., prospective anxiety, Study 4).

Indeed, the (mis)attribution perspective could be taken to predict a meaningful difference between the effects of the manipulation check items used in Studies 2-3 and the prospective anxiety measure used in Study 4. Increasing support for a more autocratic leader reflects an effective way to manage anxiety if anxiety were attributed to freedom, as was presumably the case when manipulation checks explicitly asked about the anxiety-provoking qualities of the prompts (manipulation check items, Studies 2 & 3) and when
no other attribution information was provided (Study 1; the Displacement condition, Study 4). In contrast, supporting autocratic leadership might not be an effective way to manage anxiety if participants were led to misattribute that anxiety to worries about future events, instead of correctly attributing it to the freedom situation, as they perhaps were led to do by the prospective anxiety questionnaire in the No Displacement condition of Study 4.

In short, the data from Study 4 raise the intriguing possibility that the potential abdication of responsibility that stems from considering one’s freedom can be reduced if one is provided with a cue that shifts the perceived source of anxiety to an alternative cause. Of course, this idea assumes that the freedom prompt was indeed increasing anxiety, which—as we will discuss below—merits closer scrutiny.

**Re-considering the role of anxiety**

It was initially theorized that freedom could, at least under certain conditions, arouse anxiety, which would in turn lead low neurotics to regulate that anxiety via one of several escape mechanisms (e.g., conformity, deferral to autocratic leadership). The unexpected results of Study 4, however, suggest the initial perspective was wrong about freedom displacement regulating explicit anxiety, as low neurotics’ displacing to autocratic leadership did not reduce subsequent prospective anxiety. It is appropriate, then, to take stock and re-evaluate the role of anxiety as it appeared in our initial analysis.

For example, despite the prospective anxiety findings of Study 4, the manipulation checks in Study 4 and the preliminary studies generally did not find that freedom aroused anxiety. To further investigate the anxiety eliciting effects of the freedom prompts, a quantitative analysis of the textual content written in response to the
manipulation prompts in Studies 1-4 was conducted to check whether the Freedom condition influenced explicit anxiety-related language. Transcribed text responses were quantified by the Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, & Francis, 2007) analytic software. This software analyzes a text entry and computes the proportion of words appearing in pre-defined dictionary categories (Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007). For the present purposes, we examined the frequency of anxiety-related words; and, to obtain the most stable estimates, the data across the four studies were pooled and analyzed together. The manipulation conditions that appeared in all four studies were the Freedom and Controlled conditions, so data from those two conditions comprised the sample under analysis (see the supplemental analyses, Appendix F, for additional text response analyses for each study). There was no main effect of neuroticism ($r[495] = -.02, p = .59$) or of Freedom prompt ($F[1, 495] = 1.06, p = .30$), nor was there any Neuroticism x Freedom interaction ($F[1, 493] = 1.67, p = .20$) on anxiety-related word use. Thus, explicit use of anxiety related words was not influenced by Freedom condition.

With this additional data in hand, we can now more fully consider whether, for those low in neuroticism, reminders of freedom increase anxiety. Taken together, across the 11 different assessments of anxiety (4 text, 6 manipulation check items, and 1 prospective anxiety measure) the most consistent finding was that explicit anxiety-related language use and anxiety self-report was not affected by the Freedom manipulation or Neuroticism x Freedom interactions. The only observed main effects of Freedom showed that participants actually self-reported less anxiety in the Freedom condition, and of the two Neuroticism x Freedom interactions observed (manipulation check item, Study 4;
prospective anxiety, Study 4) neither resembled each other and only the prospective
anxiety interaction resembled the interactions on leadership preferences observed in
Studies 1-3 and 4 (displacement condition). In sum, the effects of Freedom on explicit
anxiety were few and inconsistent, generally failing to support the idea that freedom
arouses expressed anxiety.

Thus, although observed evidence provided strong support for our initial analysis
of the influence of freedom on leadership style preferences, the general lack of effects on
explicit anxiety and the lack of relationship between prospective anxiety and leadership
preferences suggest that we reconsider whether it is appropriate to continue to view
freedom as being—at least under certain conditions—an aversive self-relevant burden
capable of arousing anxiety.

The present research tested, in several ways, the theoretical suggestion that
freedom can be a self-relevant burden. First, in Study 1 we tested the importance of self-
relevance by comparing an experimental condition that prompted participants to consider
their own personal freedom against a condition that prompted them to consider another
person’s freedom. The Others’ Freedom condition did not produce leadership effects
similar to the target Self Freedom condition, pointing to the importance of the salience of
one’s own personal freedom. Second, in Study 3 we hypothesized that if freedom is a
burden, the burden can be mitigated by reminding people that they do not actually
shoulder its full weight. That idea was tested by comparing an experimental condition
that focused on one’s own freedom (Freedom condition) against a condition that similarly
focused on one’s own freedom but also noted many external factors that guide or limit
one’s choices, such as social norms and etiquette, legal proscriptions, and practicality
(Guided Freedom condition, Study 3). Low neurotics increased preference for autocratic Presidential leadership in the Freedom condition, but not in the Guided Freedom condition, suggesting that external guides can mitigate the effect (i.e., displacement to autocratic leadership preferences) that unbridled freedom produces.

Together, these findings appear to justify the idea that freedom motivates support for autocratic leadership because it is a self-relevant (vs. other-relevant) burden (that can be eased). However, as noted in the above sections, there were inconsistent effects of freedom on anxiety. Explicit anxiety-related language use and self-reported anxiety was either unaffected or lower in the Freedom prime conditions, whereas prospective anxiety was increased.

The lack of consistent effects on explicit anxiety raises the possibility that freedom is simply not anxiety-provoking. It might be that the Freedom conditions led participants to support a more autocratic leader because they simply felt themselves released from the control of any authority. This perspective, however, would be hard-pressed to explain why the effect of freedom should be moderated by neuroticism, or why individuals feeling free/released should be more willing to support autocratic than democratic style leadership—the latter in which they could more freely exert their influence, participate, and help make decisions.

Another possibility is that participants simply may not have been consciously aware of the anxieties aroused by the freedom prompts—which would explain why they did not explicitly write about or report anxieties. Thus, recognizing that the present findings lead to more questions than answers, we can build on the various considerations above to offer some revisions to our original analysis of the motivational profile of
freedom. In doing so, we can hopefully gain a more comprehensive explanation of the present findings and generate interesting directions for future research.

**A revised perspective on the motivational profile of freedom.**

A more comprehensive understanding of the motivational profile of freedom might therefore be gained by considering dual processing frameworks. Much evidence supports the distinction between deliberate (explicit, conscious, controlled) and automatic (implicit, non-conscious, impulsive) processing (e.g., Chaiken & Trope, 1999; Sloman, 1996; Strack & Deutsch, 2004). Deliberate processing is intentional, controllable, guided by explicit awareness, and depends on attentional resources, whereas automatic processing is unintentional, uncontrollable, operates outside conscious awareness, and is initiated by simple sensory input which in turn activate knowledge structures and/or psychological functions that do not draw cognitive resources (see Bargh, 1994). Building on this basic dual process distinction, we can identify two possible ways that freedom might lead to implicit, rather than explicit, anxiety (see Egloff, Wilhelm, Neubauer, Mauss, & Gross, 2010)—aversive tension outside of conscious awareness or control.

First, it could be possible that participants simply did not attend to or were not aware of the anxiety-provoking qualities of freedom. If this were the case, they could have explicitly perceived freedom, interpreted it according to explicit beliefs (e.g., freedom is a boon), and simply remained unaware of the anxieties and worries that it might have implicitly triggered.

Second, there may be more active mental work going on to remove freedom related anxieties from conscious awareness. The theory of ironic processes of mental control (Wegner, 1994) argues that attempts to control unpleasant or unwanted thoughts and experiences can backfire in subtle yet powerful ways. According to this view,
successful control depends on two processes: a deliberate operating process and an automatic monitoring process. When a person tries to exert mental control, for example by trying not to be anxious, the operating process exerts effort to achieve the desired state (calm relaxation) whereas the monitoring process searches for failures to achieve the desired state (feelings of anxiety). When the monitoring process detects an unwanted thought, it signals the operating process to down-regulate the experience. However, the operating process depends on the availability of cognitive resources. If cognitive resources become exhausted or otherwise limited, the operating process will not be able to consciously regulate an unwanted thought or experience detected by the monitoring process, meaning the unwanted thoughts or experiences will—ironically—become more accessible. For example, when participants completed tasks in which they needed to suppress certain thoughts (target words, such as house; word meanings in a stroop task), were instructed to try to feel certain emotions, or intentionally tried to relax, they were generally successful unless they were under time pressure (Wegner & Erber, 1992) or under cognitive load (Wegner, Broome, & Blumberg, 1997; Wegner, Erber, & Zanakos, 1993)—each of which undermined the operating process by limiting deliberative mental capacity. When capacity was limited in these ways, the opposite of the intended mental control occurred—participants used to-be-suppressed words more frequently, experienced the opposite emotions (e.g., sad when trying to feel happy), and showed increased physiological stress.

Building on these insights, we can offer a revised theoretical perspective to account for the present research (see Figure 8 for an illustration assuming ironic processing). First, if freedom is a self-relevant burden, encountering it may instigate
mental control efforts. Indeed, experimental control conditions were consistent with the self-relevant burden interpretation, yet anxiety was typically either unaffected or reduced in the Freedom prime conditions and participants appraised their freedom situation as more positive than negative. Second, building on ironic processing theory, if the mental capacity necessary for a controlled reaction to freedom is limited in some way—e.g., during distraction, cognitive load, or if it were exhausted during a delay period—then the conscious operating process will fail and the monitoring process will increase the implicit accessibility of anxious thoughts or feelings. Such a proposition would of course need to be directly tested in future research, but each of the four present studies used methodological procedures consistent with that view: Studies 1-4 measured neuroticism, manipulated freedom, and then included a set of filler items (and sometimes also manipulation check items) as a roughly 5-7 minute delay/distraction task before measuring dependent variables.

If the delay/distraction task undermined the conscious operating process, then participants in the Freedom condition would have then been dealing with increased *implicit* anxiety (rather than explicit anxiety; Egloff et al., 2010). Whereas explicit awareness of freedom and its ambiguities might instigate deliberate regulatory efforts designed to prevent or reduce felt anxiety, implicit anxiety might not instigate those same deliberate and logically straightforward strategies. Instead, those who actively cope with anxiety (low neurotics) might deal with increased implicit anxiety by automatically engaging in an available escape mechanism, such as deferring to an autocratic leader.

With this basic view in hand, it again becomes important to consider possible attributions for implicit anxiety. When no other attribution information is provided (e.g.,
Study 1; the Displacement condition, Study 4), or when manipulation checks explicitly link anxiety to the manipulation prompts (Studies 2 & 3), then the only available explanation for any implicit anxiety would be the Freedom condition prompt—motivating low neurotics to escape their freedom by increasing support for a more autocratic leader (the terminal diamond at bottom of Figure 8). But if presented with a prospective anxiety questionnaire (Study 4) explicitly linking anxiety to worry about future events, participants could misattribute any increased implicit anxiety to that alternate source instead of correctly attributing it to the freedom situation—eliminating the motivation to escape freedom (terminal oval at right of Figure 8). Indeed, low neurotics reminded of freedom increased support for autocratic leadership in Studies 1-3 and before, but not after, the prospective anxiety measure in Study 4. Further, from this view low neurotics reminded of freedom could have been led to misattribute their heightened implicit anxiety to worry about future events (prospective anxiety) regardless of whether they first indicated leadership preferences as a leadership preference questionnaire would have done nothing to contradict that misattribution. Thus, although this revised view requires future research, it can account for the present findings.

Other issues

At least three lingering issues remain. First, given that the present analysis predicted, and found, that low neurotics reminded of freedom were motivated to increase support for autocratic leadership, one might ask whether they did so because they perceived freedom differently than did high neurotics. Generally, they did not. In analyzing participants’ responses to the freedom prompts, numerous linguistic categories (e.g., self-focus, affect, tense, cognitive mechanics, negations, freedom-related words) were coded. Over the 22 text categories assessed in each of Studies 1-4 (88 total), there
were only nine observed Neuroticism x Freedom 2-way interactions (see supplemental analyses, Appendix F) none of which were replicated. Similarly, of the 15 manipulation check items included across Studies 2-4, there were only two observed Neuroticism x Freedom 2-way interactions (see footnotes 2 and 3) and again they neither replicated each other nor resembled the observed interactions on leadership preferences. This lack of consistent interaction patterns suggests that low neurotics generally did not perceive the freedom condition differently than did high neurotics.

Second, future research should attempt to pinpoint the mechanism that distinguishes how high and low neurotics manage (or fail to manage) their freedom. For example, neurotics are known to feel greater responsibility for unpleasant consequences (e.g., blame, guilt, shame), are more bothered by uncertainty, and tend to use passive coping methods (especially when dealing with choices and decisions), whereas emotionally stable (low neurotic) individuals are known to employ more active coping styles, feel more comfortable with uncertainty, and do not feel overly responsible for negative outcomes. Future work could experimentally control these various mechanisms to determine which are responsible for the differences in how high and low neurotics respond to freedom.
CHAPTER 5
Coda

The present research tested theory suggesting that personal freedom can be burdensome to the self and that low neurotics—who employ active coping strategies—would cope with that burden by displacing their freedom to an autocratic authority. Three preliminary studies supported that basic idea. A fourth study was designed to test the hypothesis that displacement to autocratic authority helps reduce anxiety. However, results of that study showed that displacement did not relieve explicit anxiety—low neurotics reminded of freedom reported greater prospective anxiety whether or not they were first allowed to displace to authority. Further, the displacement effect only emerged when leadership style preference was measured before, but not after, participants reported prospective anxiety. These unexpected findings prompted a re-evaluation of the role of anxiety in the present analysis, consideration of alternative perspectives, and theoretical revisions leading to a dual process model perspective on the motivational profile of freedom. That model can adequately describe the presently obtained data, but is largely untested and will require investigation by future research. In sum, the present dissertation generally confirmed that low neurotics respond to their freedom by supporting autocratic leadership, and generated new questions about the mechanisms underlying that process.
END NOTES

1. The autocratic and democratic coaching style preference subscales were also analyzed separately; the results of both paralleled the reported results using the composite measure.

2. There emerged an interaction on perceived positive consequences ($R^2 = .06$, $F[1, 47] = 3.85, p = .06$). Among those with high (+1 SD) neuroticism, the Freedom condition increased perceived positive consequences compared to the Controlled condition ($\beta = .51, t[49] = 2.87, p = .01$); there was no difference between the conditions among those with low (-1 SD) neuroticism, $|t| < 1$. Simple slopes analyses revealed that neuroticism was negatively related to perceived positive consequences in the Controlled condition ($\beta = -.57, t[24] = -3.39, p = .001$) whereas it was unrelated in the Freedom condition ($|t| < 1$).

3. There emerged an interaction on perceived freedom ($R^2 = .03$, $F[2, 297] = 4.80, p = .01$). Among those with low (-1 SD) neuroticism, perceived freedom was greater in both the Freedom condition ($\beta = .53, t[197] = 6.52, p < .001$) and the Guided Freedom condition ($\beta = .54, t[204] = 6.19, p < .001$) compared to the Controlled condition; there was no difference between the Freedom condition and the Guided Freedom condition ($t[199] < 1$). Similarly, among those with high (+1 SD) neuroticism, perceived freedom was greater in both the Freedom condition ($\beta = .19, t[197] = 2.29, p = .02$) and the Guided Freedom condition ($\beta = .45, t[204] = 5.52, p < .001$) compared to the Controlled condition; also, perceived freedom was greater in the Guided Freedom condition than the Freedom condition ($\beta = .26, t[199] = 3.07, p < .01$). Simple slopes analyses revealed that neuroticism was
negatively related to perceived freedom in the Freedom condition ($\beta = -.30, t[94] = -3.51, p = .001$) whereas it was unrelated in the Guided Freedom or Controlled condition ($|t|s < 1$).
REFERENCES


APPENDIX A

Freedom manipulation used in Study 1.

Own Freedom condition:
Please think of a current personal matter you are concerned about (or imagine a future personal matter) which will significantly impact your future. Please choose a situation where the outcome of this matter will affect you personally (and perhaps others) and the decision is entirely in your hands, as such you bear full responsibility for the outcome. For example, the issue may involve making a school or potential employment decision where you will be making a decision that will alter the course of your life. Please select an issue that could have significant consequences, but has not yet been resolved. The problem should be important and have personal impact and should take the form of “What if I decide to _____ or decide something else.

Part A: Please briefly describe how the responsibility for the outcome of this situation is entirely yours, and no one else’s.

Part B: With regard to the above issue, please take a few minutes to list possible immediate and long-term consequences, both positive and negative, of YOU choosing one path over the other (remembering the outcome is completely your responsibility).

Part C: With regard to the above issue, please take a few minutes to list possible immediate and long-term consequences, both positive and negative, of YOU choosing the opposite path considered above (remembering the outcome is completely your responsibility).

Others’ Freedom condition:
Please think of a current personal matter that a friend might be concerned about (or imagine a future matter) which will significantly impact their future. Please choose a situation where the outcome of this matter will affect them personally (and perhaps others) and the decision is entirely in their hands, and as such they bear full responsibility for the outcome. For example, the issue may involve making a school or potential employment decision that could have significant consequences for your friend. Please select an issue that could have significant consequences, but has not yet been resolved. The problem should be important and have personal impact and should take the form of “What if he or she decides to _____ or decides something else?”

Part A: Please briefly describe how the outcome of this situation depends entirely upon your friend, and no one else (including yourself).

Part B: With regard to the above issue, please take a few minutes to list possible immediate and long-term consequences, both positive and negative, of your friend choosing one path over the other (remembering that the outcome is completely their responsibility).
Part C: With regard to the above issue, please take a few minutes to list possible immediate and long-term consequences, both positive and negative, of your friend choosing the opposite path considered above (remembering that the outcome is completely their responsibility).

No Freedom condition:
Please think of a current personal matter you are concerned about (or imagine a future personal matter) which will significantly impact your future. Please choose a situation where the outcome of this matter will affect you personally (and perhaps others) but no action you take can influence the final result. For example, the issue may involve making a school or potential employment decision where someone else will be making a decision that may alter the course of your life. Please select an issue that could have significant consequences, but has not yet been resolved. The problem should be important and have personal impact and should take the form of “What if _____ happens or not?”

Part A: Please briefly describe how even though you are directly affected by this situation, you can have absolutely no effect on the situation.

Part B: With regard to the above issue, please take a few minutes to list possible immediate and long-term consequences, both positive and negative, of things turning out the way you hope them to (remembering however, that the outcome is beyond your control).

Part C: With regard to the above issue, please take a few minutes to list possible immediate and long-term consequences, both positive and negative, of things NOT turning out the way you hope them to (remembering however, that the outcome is beyond your control).
APPENDIX B

Freedom manipulation used in Studies 2–4 are presented below. Note that the ‘Freedom’ condition and ‘No Freedom’ conditions were used in Studies 2-4, and the ‘Freedom Displacement’ condition was also used in Study 3.

*Freedom condition:*

Personality Assessment

What if…

Think about the future course of your life. What are some of the things that you would want to do?

Now consider the fact that you are ultimately free to make the decisions that may or may not take you down this life path. Only you have the freedom to determine how you are going to behave and what decisions you will make.

The freedom to choose the course of your life rests entirely on your shoulders.

Please take a few minutes to write down some ways in which you are completely free to make one decision or another.

*No Freedom condition:*

Personality Assessment

What if…

Think about the future course of your life. What are some of the things that you would want to do?

Now consider the fact that frequently, you have no freedom to make the decisions that may or may not take you down this life path. Oftentimes, these decisions will be controlled by an employer, a professor, a government agency, or even the simple reality of a limited availability of options.

Ultimately, there are many things that can constrict your freedom to choose the course of your life.

Please take a few minutes to write down some ways in which you are NOT free to make one decision or another.
**Freedom Displacement condition:**

Personality Assessment

What if…

Think of a current or future situation that requires you to make a decision(s) that will significantly alter the course of your life.

Keep in mind that the world is full of rules. There are social norms, expectancies, and etiquette to be followed. Legally, there are things you can and can’t do; practically, your decision will affect other future situations and present you with new sets of decisions; and ethically, there is right and wrong.

Use the space provided to describe what you might do in this situation, keeping in mind that you are responsible both for your actions and for the consequences of those actions.
APPENDIX C

Presidential Leadership Preferences

Please indicate your reaction to each statement by writing in the appropriate number in the space provided for each statement from the scale below.

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**No matter who gets elected, I prefer the next President to...**

_____ 1. ...encourage Americans to abide by the laws and regulations of the administration.
_____ 2. ...stand strong and refuse to compromise with opponents.
_____ 3. ...advance domestic policy relatively independent of public opinion.
_____ 4. ...pass laws and regulate businesses to prevent serious personal or economic mistakes.
_____ 5. ...set and forcefully pursue an agenda on behalf of the nation.
_____ 6. ...govern irrespective of public opinion.
_____ 7. ...conduct foreign affairs relatively independent of public opinion.
_____ 8. ...advance legislation that push Americans to fill specific professions.
_____ 9. ...retain a certain level of secrecy; many things should not be shared.
_____ 10. ...refrain from explaining every action or decision.
APPENDIX D

Work Leadership Preferences

Please indicate your reaction to each statement by writing in the appropriate number in the space provided for each statement from the scale below.

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**I would prefer my work boss to...**

____ 1. …encourage employees to abide by the policies and bylaws of the company.
____ 2. …stand strong and refuse to compromise or negotiate with business competitors.
____ 3. …advance company policy relatively independent of employee opinion.
____ 4. …enact policies and bylaws to prevent serious personal or financial mistakes.
____ 5. …set and forcefully pursue an agenda on behalf of the company and employees.
____ 6. …lead irrespective of employee opinion.
____ 7. …conduct business relatively independent of employee opinion.
____ 8. …advance policies that push employees to perform specific tasks.
____ 9. …retain a certain level of secrecy; many things should not be shared.
____ 10. …refrain from explaining every action or decision.
APPENDIX E

Prospective Anxiety subscale, selected from Intolerance of Uncertainty Scale (IUS)

Below are a number of statements that people often use to describe themselves. Please indicate your current experience by marking the appropriate number next to each statement using the scale below.

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1. _____ It’s unfair not having any guarantees in life.
2. _____ My mind can’t be relaxed if I don’t know what will happen tomorrow.
3. _____ Uncertainty makes me uneasy, anxious, or stressed.
4. _____ Unforeseen events upset me greatly.
5. _____ It frustrates me not having all the information I need.
6. _____ One should always look ahead so as to avoid surprises.
7. _____ A small unforeseen event can spoil everything, even with the best of planning.
8. _____ I always want to know what the future has in store for me.
9. _____ I can’t stand being taken by surprise.
10. _____ I should be able to organize everything in advance.
11. _____ The ambiguities in life stress me.
12. _____ I can’t stand being undecided about my future.
APPENDIX F

Supplemental quantitative text analyses.

Additional quantitative analysis of the textual content written in response to the manipulation prompts in Studies 1-4 was conducted to check a) whether the freedom manipulation conditions influenced responses as intended, and b) whether high and low neurotics use similar or different language when thinking about and responding to the manipulation prompts. Specifically, the Freedom condition should have raised self-focus and reduced other-focus compared to the Freedom of Other condition (Study 1) and Controlled conditions (Study 1-4). Similar to the Likert-type manipulation check, we also examined whether the Freedom condition involved more or less positive and negative emotional language, including explicitly anxiety-related language. And finally, we examined whether the manipulations influenced language about future (vs. past or present) concerns, decision making, assents and negations, and explicit freedom-related language (mentions of being free or controlled).

Method

Transcribed text responses were quantified by the Linguistic Inquiry and Word Count (LIWC; Pennebaker, Booth, & Francis, 2007) analytic software. This software analyzes a text entry and computes the proportion of words appearing in pre-defined dictionary categories (Pennebaker, Chung, Ireland, Gonzales, & Booth, 2007). For the present purposes, the categories examined were: self-focused and other-focused words; emotion/affect words, including anxiety-related words; past, present, and future tense words; negations and assents; and cognitive mechanics words conceptually related to decisional processes, such as understanding of causation, uncertainty, and discrepancies (alternatives); additional categories were developed to specifically catalog the appearance of freedom-related words: freedom (255+ word stems, e.g., free, choose, allowed) and freedom-controlled (326+ word stems, e.g., pressure, obligation, constraint) words.

Results

Study 1. There emerged several main effects of Freedom condition (Table 5). Participants in the Self Freedom condition used more self-focused and fewer other-focused language than those in the Controlled condition; and more self-focused, future tense, positive emotion, and inhibition related words than those in the Others’ Freedom condition. Also, compared to the Controlled condition, the proportion of freedom-controlled words was higher in both the Self and Others’ Freedom conditions. Zero-order correlations showed a single main effect of neuroticism, such that it was marginally positively related to assents, but was otherwise not related to any of the other LIWC categories (see Table 6). There were Neuroticism x Freedom interactions on assents and anger, but not on any of the other LIWC categories (all Fs < 1).

There emerged an interaction on assents ($R^2 = .15, F[2, 51] = 5.10, p = .01$). Among those with high (+1 SD) neuroticism, the Controlled condition increased assents compared to the Self Freedom condition ($\beta = .79, t[37] = 3.49, p = .001$) and the Others’ Freedom condition ($\beta = .71, t[37] = 3.16, p = .003$); there was no difference between the Self Freedom condition and the Others’ Freedom condition ($t[34] < 1$). There were also no differences between the three conditions among those with low (-1 SD) neuroticism, all $|t|s < 1$. Simple slopes analyses revealed that neuroticism was positively related to
assents in the Controlled condition ($\beta = .92, t[19] = 3.84, p < .01$) whereas it was unrelated to assents in the Self and Others’ Freedom conditions (both $|t|s < 1$).

There also emerged an interaction on anger ($R^2 = .10, F[2, 51] = 3.12, p = .05$). Among those with low (-1 SD) neuroticism, the Self Freedom condition increased anger compared to the Others’ Freedom condition ($\beta = .30, t[37] = 1.53, p = .13$); there was no difference between the Others’ Freedom condition and the Controlled condition ($\beta = .24, t[37] = 1.14, p = .26$). There were no differences between the three conditions among those with high (+1 SD) neuroticism, all $|t|s < 1.49, p’s > .14$. Simple slopes analyses revealed that neuroticism was positively related to assents in the Others’ Freedom condition ($\beta = .63, t[16] = 2.67, p = .01$) whereas it was unrelated to assents in the Self and Others’ Freedom conditions (both $|t|s < 1$).

**Study 2.** There emerged several main effects of Freedom condition (*Table 7*). Compared to those in the Controlled condition, participants in the Freedom condition used more self-focused, future tense language and more frequently used language related to decisional discrepancies and uncertainty; importantly, they also used fewer negations and controlled words and more freedom-related words. Zero-order correlations showed neuroticism was not significantly related to any of the LIWC categories (*Table 6*). There were Neuroticism x Freedom interactions on self-focused and anger words, but not on any of the other LIWC categories (all $Fs < 1$).

There emerged an interaction on self-focused language ($R^2 = .06, F[1, 47] = 3.48, p = .07$). Among those with high (+1 SD) neuroticism, the Freedom condition increased self-focused language compared to the Controlled condition ($\beta = .64, t[49] = 3.49, p = .001$); there was no difference between the conditions among those with low (-1 SD) neuroticism, $|t| < 1$. Simple slopes analyses revealed that neuroticism was positively related to self-focus in the Freedom condition ($\beta = .38, t[23] = 1.93, p = .06$) whereas it was unrelated in the Controlled condition ($|t| < 1$).

There emerged an interaction on anger language ($R^2 = .10, F[1, 47] = 5.46, p = .02$). Among those with low (-1 SD) neuroticism, the Freedom condition decreased anger language compared to the Controlled condition ($\beta = -.38, t[49] = -1.91, p = .06$); there was no difference between the conditions among those with high (+1 SD) neuroticism ($\beta = .28, t[49] = 1.43, p = .16$). Simple slopes analyses revealed that neuroticism was negatively related to anger language in the Controlled condition ($\beta = -.34, t[24] = -1.89, p = .07$) whereas it was unrelated in the Freedom condition ($\beta = .31, t[23] = 1.46, p = .15$).

**Study 3.** There emerged several main effects of Freedom condition (*Table 8*). Compared to those in the Controlled condition, participants in the Freedom condition used more positive and fewer negative emotion words; used more future tense language, more decisional discrepancies and tentativeness, fewer insight and causation words; and, importantly, they used fewer negations and controlled words. Zero-order correlations showed neuroticism was negatively related to decisional discrepancy language, but was otherwise not significantly related to any of the other LIWC categories (*Table 6*). There was a Neuroticism x Freedom interaction on anxiety words (that did not resemble the target interactions on leadership preferences), but not on any of the other LIWC categories (all $Fs < 1$).

There emerged an interaction on anxiety language ($R^2 = .06, F[1, 47] = 3.48, p = .07$). Among those with low (-1 SD) neuroticism, there were more anxiety words in the
Controlled condition compared to the Freedom condition (β = .26, t[191] = 2.79, p = .01) and the Guided Freedom condition (β = .26, t[198] = 2.67, p = .01); there was no difference between the Freedom condition and the Guided Freedom condition (t[197] < 1). There were also no differences between the three conditions among those with high (+1 SD) neuroticism, all |t|s < 1. Simple slopes analyses revealed that neuroticism was negatively related to anxiety language in the Controlled condition (β = -19, t[95] = -1.87, p = .06) whereas it was unrelated in the Freedom condition (β = .15, t[94] = 1.52, p = .13) nor in the Guided Freedom condition (t[101] < 1).

Study 4. There emerged several main effects of Freedom condition (Table 9). Compared to those in the Controlled condition, participants in the Freedom condition used more positive and fewer negative emotion words; used more future tense language, more decisional discrepancies and tentativeness, fewer insight and causation words; importantly, they used fewer negations and controlled words. Zero-order correlations showed neuroticism was positively related to tentativeness and inhibition language, but was otherwise not significantly related to any of the other LIWC categories (Table 6). There was a Neuroticism x Freedom interaction on anger, tentativeness, inhibition, and freedom words, but not on any of the other LIWC categories (all Fs < 1, p > .16).

When regressing anger language there did emerge an overall Neuroticism x Freedom 2-way interaction, R² = .02, F(1, 210) = 4.31, p = .04, though it did not resemble the leader style or prospective anxiety results. Among those with high (+1 SD) neuroticism, the Controlled condition increased anger words compared to the Freedom condition (β = .22, t[212] = 2.23, p = .03); there was no difference between the conditions among those with low (-1 SD) neuroticism, (|t| < 1). Neuroticism was positively related to anger words in the Controlled condition (β = .23, t[99] = 2.22, p = .03) but not the Freedom condition (|t| < 1).

When regressing tentative language there did emerge an overall Neuroticism x Freedom 2-way interaction, R² = .02, F(1, 210) = 4.73, p = .03, though it did not resemble the leader style or prospective anxiety results. Among those with low (-1 SD) neuroticism, the Freedom condition decreased tentative words compared to the Controlled condition (β = -.25, t[212] = 2.65, p = .01); there was no difference between the conditions among those with high (+1 SD) neuroticism, (|t| < 1). Neuroticism was positively related to tentative words in the Freedom condition (β = .28, t[111] = 3.10, p < .01) but not the Controlled condition (|t| < 1).

When regressing inhibition language there did emerge an overall Neuroticism x Freedom 2-way interaction, R² = .01, F(1, 210) = 2.81, p = .10, though it did not resemble the leader style or prospective anxiety results. Among those with high (+1 SD) neuroticism, the Controlled condition increased inhibition words compared to the Freedom condition (β = .20, t[212] = 2.08, p = .04); there was no difference between the conditions among those with low (-1 SD) neuroticism, (|t| < 1). Neuroticism was positively related to inhibition words in the Controlled condition (β = .28, t[99] = 2.73, p < .01) but not the Freedom condition (|t| < 1).

When regressing freedom language there did emerge an overall Neuroticism x Freedom 2-way interaction, R² = .02, F(1, 210) = 5.26, p = .02, though it did not resemble the leader style or prospective anxiety results. Among those with high (+1 SD) neuroticism, the Freedom condition increased freedom words compared to the Controlled condition (β = .26, t[212] = 2.72, p < .01); there was no difference between the conditions
among those with low (-1 SD) neuroticism, (|β| < 1). Neuroticism was positively related to freedom words in the Freedom condition (β = .23, t[111] = 2.48, p = .01) but not the Controlled condition (|β| < 1).

4-study composite. The data across the four studies was also pooled and analyzed together. The only manipulation conditions that appeared in all four studies were the freedom and controlled conditions, so data from those two conditions comprised the composite. There emerged several main effects of Freedom condition (Table 10). Compared to those in the Controlled condition, participants in the Freedom condition used more self-focused and fewer other-focused words: more positive and fewer negative emotion words; more future tense and discrepancy words, and fewer causation, negation, and freedom-controlled words. Zero-order correlations showed neuroticism was positively related to inhibition and freedom language, but was otherwise not significantly related to any of the other LIWC categories (Table 10). There were Neuroticism x Freedom interactions on assent and certainty words, but not on any of the other LIWC categories (all F[1, 493] < 1.98, p > .16).

When regressing assent language there did emerge an overall Neuroticism x Freedom 2-way interaction, $R^2 = .01, F(1, 493) = 3.48, p = .06$. Among those with high (+1 SD) neuroticism, the Controlled condition increased assent words compared to the Freedom condition (β = .10, t[495] = 1.62, p = .10); there was no difference between the conditions among those with low (-1 SD) neuroticism, (β = .06, t[495] = 1.01, p = .31). Neuroticism was positively related to assent in the Controlled condition (β = .11, t[495] = 1.63, p = .10) but not the Freedom condition (|β| < 1).

When regressing certainty language there did emerge an overall Neuroticism x Freedom 2-way interaction, $R^2 = .01, F(1, 493) = 2.68, p = .10$. There was no difference between the conditions among those with high (+1SD) or low (-1 SD) neuroticism, (both $β < .09, t[495] < 1.46, ps > .15$). Neuroticism was negatively related to certainty words in the Freedom condition (β = -.12, t[495] = 2.01, p = .05) but not the Controlled condition (|β| < 1).

Discussion

Quantitative analysis of the textual content written in response to the manipulation prompts in Studies 1-4 generally found that the freedom manipulation conditions influenced responses as intended. Participants in the Freedom condition tended to use more self-focused and less other-focused language (Studies 1, 2, and pooled data); more language about the future, but not past or present (Studies 1-4 and pooled data); language reflecting free and open options in decision making, such as less insight (Study 3, 4) and causation words (Study 3, 4, and pooled data), more discrepancy (Study 2, 3, 4, and pooled data), tentativeness (Study 3, 4), uncertainty (Study 2), and inhibition (Study 1) words; less negating language (Study 2, 3, 4, and pooled data); and explicit mentions of being free or controlled (Studies 1-4 and pooled data). Mimicking the Likert-type responses, those in the Freedom condition also tended to use more positive and fewer negative emotion words (Studies 1, 3, 4, and pooled data).

Quantitative text analyses also examined the explicit use of anxiety language but found no main effects of Freedom manipulation nor Neuroticism x Freedom interactions on the proportion of anxiety words in Studies 1, 2, and 4; and the Neuroticism x Freedom interaction pattern in Study 3 was such that the proportion of anxiety language was greater among low neurotics in the Controlled condition compared to the Freedom and
Displaced Freedom conditions. Analysis of the pooled data also failed to find a main effect of Freedom nor the Neuroticism x Freedom interaction on anxiety language use.
Figure 1. In Study 1, the freedom reminder increased autocratic coaching preference among athletes with low, but not high, neuroticism.
Figure 2. In Study 2, the freedom reminder increased intentions to vote for Obama among those with low, but not high, neuroticism.
Figure 3. In Study 2, the freedom reminder increased perceptions that Obama would take greater responsibility for the nation among those with low, but not high, neuroticism.
Figure 4. The effect of the Neuroticism x Freedom interaction on voting intentions was mediated by perceptions that the candidate would take greater responsibility for the nation (Study 2).

Note. * $p \leq .01$
Figure 5. In Study 3, the freedom reminder increased autocratic presidential administration style preferences among participants with low, but not high, neuroticism.
Figure 6. In Study 4, when leadership style was assessed first the freedom reminder increased autocratic work leadership style preferences among participants with low, but not high, neuroticism. However, when participants were first asked to report on prospective anxiety the effect was eliminated.
Figure 7. In Study 4, the freedom reminder increased prospective anxiety among participants with low, but not high, neuroticism.
Figure 8. A preliminary, heuristic illustration of a dual process model perspective on freedom regulation.
Table 1. Likert-type manipulation checks used in Study 2.

<table>
<thead>
<tr>
<th>Item</th>
<th>Freedom manipulation</th>
<th>Controlled manipulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much do you perceive yourself as having the freedom to choose a course of action?***</td>
<td>8.44&lt;sup&gt;a&lt;/sup&gt; 1.00</td>
<td>7.15&lt;sup&gt;b&lt;/sup&gt; 1.29</td>
</tr>
<tr>
<td>2. How much do you perceive yourself as being responsible for the consequences of this course of action?***</td>
<td>8.92&lt;sup&gt;a&lt;/sup&gt; 1.12</td>
<td>7.96&lt;sup&gt;b&lt;/sup&gt; 1.93</td>
</tr>
<tr>
<td>3. Do you think this situation’s outcome will be positive or negative?**</td>
<td>8.16&lt;sup&gt;a&lt;/sup&gt; 1.28</td>
<td>7.42&lt;sup&gt;b&lt;/sup&gt; 1.75</td>
</tr>
<tr>
<td>4. How anxious do you feel about this situation?</td>
<td>5.80 2.61</td>
<td>5.23 2.25</td>
</tr>
</tbody>
</table>

Note. Means with different superscript letters were statistically different at * p < .10, ** p < .05.
Table 2. Zero-order correlations between neuroticism and manipulation checks used in Studies 2-4.

<table>
<thead>
<tr>
<th>Item</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much did you perceive yourself as having the freedom to choose a course of action?</td>
<td>-.10</td>
<td>-.10*</td>
<td>-.24**</td>
</tr>
<tr>
<td>2. How much did you perceive yourself as responsible for the consequences of this course of action?</td>
<td>.01</td>
<td>-.01</td>
<td>-.06</td>
</tr>
<tr>
<td>3. Do you think the situation you described would have positive or negative consequences?</td>
<td>-.33**</td>
<td>-.15**</td>
<td>-.15**</td>
</tr>
<tr>
<td>4. Is the situation you described one that would make you feel anxious or uncomfortable? (How anxious do you feel about this situation?)</td>
<td>.31**</td>
<td>.24**</td>
<td>.45**</td>
</tr>
<tr>
<td>5. When thinking and writing about the situation a few minutes ago, did you feel anxious or uncomfortable?</td>
<td>---</td>
<td>.28**</td>
<td>.38**</td>
</tr>
<tr>
<td>6. How much tension or anxiety do you feel right now?</td>
<td>---</td>
<td>---</td>
<td>.47**</td>
</tr>
</tbody>
</table>

Note. * p < .10, ** p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisk.
### Table 3. Likert-type manipulation checks used in Study 3.

<table>
<thead>
<tr>
<th>Item</th>
<th>Freedom</th>
<th>Guided Freedom</th>
<th>Controlled</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much did you perceive yourself as having the freedom to choose a course of action?***</td>
<td>7.45a</td>
<td>8.09b</td>
<td>5.34c</td>
</tr>
<tr>
<td>2. How much did you perceive yourself as responsible for the consequences of this course of action?***</td>
<td>7.96a</td>
<td>8.97b</td>
<td>6.84c</td>
</tr>
<tr>
<td>3. Do you think the situation you described would have positive or negative consequences?***</td>
<td>6.93a</td>
<td>7.77b</td>
<td>5.92c</td>
</tr>
<tr>
<td>4. Is the situation you described one that would make you feel anxious or uncomfortable?*</td>
<td>4.49a</td>
<td>5.93b</td>
<td>6.57c</td>
</tr>
<tr>
<td>5. When thinking and writing about the situation a few minutes ago, did you feel anxious or uncomfortable?***</td>
<td>3.65a</td>
<td>3.95a</td>
<td>4.38b</td>
</tr>
</tbody>
</table>

Note. Means with different superscript letters were statistically different at * p < .11, ** p < .06.
Table 4. Likert-type manipulation checks used in Study 4.

<table>
<thead>
<tr>
<th>Item</th>
<th>Freedom manipulation</th>
<th></th>
<th></th>
<th>Controlled manipulation</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>1. How much did you perceive yourself as having the freedom to choose a course of action?***</td>
<td>7.66a</td>
<td>1.80</td>
<td>6.89b</td>
<td>1.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How much did you perceive yourself as responsible for the consequences of this course of action?***</td>
<td>8.27a</td>
<td>1.81</td>
<td>7.74b</td>
<td>1.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Do you think the situation you described would have positive or negative consequences?***</td>
<td>7.78a</td>
<td>2.09</td>
<td>6.24b</td>
<td>2.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Is the situation you described one that would make you feel anxious or uncomfortable?</td>
<td>4.41</td>
<td>2.41</td>
<td>4.85</td>
<td>2.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. When thinking and writing about the situation a few minutes ago, did you feel anxious or uncomfortable?</td>
<td>3.67</td>
<td>2.42</td>
<td>4.10</td>
<td>2.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. How much tension or anxiety do you feel right now?</td>
<td>4.23</td>
<td>2.45</td>
<td>3.96</td>
<td>1.99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Means with different superscript letters were statistically different at * p < .10, ** p < .05.
Table 5. Proportions of LIWC category content written in response to the manipulation prompts used in Study 1.

<table>
<thead>
<tr>
<th>LIWC Category</th>
<th>Freedom of self M</th>
<th>SD</th>
<th>Freedom of other M</th>
<th>SD</th>
<th>Controlled M</th>
<th>SD</th>
<th>Content examples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self focus*</td>
<td>9.46(^a)</td>
<td>4.94</td>
<td>6.44(^b)</td>
<td>5.70</td>
<td>1.58(^c)</td>
<td>5.87</td>
<td>I, me, mine</td>
</tr>
<tr>
<td>Other focus**</td>
<td>5.66(^a)</td>
<td>4.70</td>
<td>4.21(^a)</td>
<td>4.25</td>
<td>10.08(^b)</td>
<td>7.30</td>
<td>He, she, them</td>
</tr>
<tr>
<td>Affect**</td>
<td>7.51(^a)</td>
<td>3.95</td>
<td>4.22(^b)</td>
<td>4.60</td>
<td>8.13(^a)</td>
<td>6.58</td>
<td>Happy, anxious, sad</td>
</tr>
<tr>
<td>Positive emotion*</td>
<td>5.25(^a)</td>
<td>3.64</td>
<td>3.12(^b)</td>
<td>3.84</td>
<td>5.57(^a)</td>
<td>4.61</td>
<td>Amuse, happy, pleasant</td>
</tr>
<tr>
<td>Negative emotion</td>
<td>2.29</td>
<td>2.54</td>
<td>1.15</td>
<td>2.09</td>
<td>2.41</td>
<td>3.21</td>
<td>Afraid, angry, sad</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.69</td>
<td>1.17</td>
<td>.08</td>
<td>.35</td>
<td>.86</td>
<td>2.37</td>
<td>Afraid, anxious, stress</td>
</tr>
<tr>
<td>Anger</td>
<td>.19</td>
<td>.53</td>
<td>.08</td>
<td>.34</td>
<td>0.0</td>
<td>0.0</td>
<td>Angry, furious, mad</td>
</tr>
<tr>
<td>Sadness</td>
<td>.95</td>
<td>.99</td>
<td>.98</td>
<td>1.97</td>
<td>1.17</td>
<td>1.43</td>
<td>Gloomy, sad, tragic</td>
</tr>
<tr>
<td>Past</td>
<td>.88</td>
<td>1.26</td>
<td>.33</td>
<td>.79</td>
<td>.41</td>
<td>1.22</td>
<td>Had, told, was</td>
</tr>
<tr>
<td>Present</td>
<td>7.29</td>
<td>3.01</td>
<td>8.93</td>
<td>7.08</td>
<td>9.59</td>
<td>11.17</td>
<td>Are, does, is</td>
</tr>
<tr>
<td>Future*</td>
<td>3.52(^a)</td>
<td>3.41</td>
<td>1.48(^b)</td>
<td>2.21</td>
<td>2.33(^ab)</td>
<td>2.69</td>
<td>Might, shall, will</td>
</tr>
<tr>
<td>Cognitive mechanics</td>
<td>19.83</td>
<td>6.48</td>
<td>15.78</td>
<td>12.73</td>
<td>16.41</td>
<td>9.85</td>
<td>Understand, consequence, maybe</td>
</tr>
<tr>
<td>Insight</td>
<td>1.61</td>
<td>1.55</td>
<td>2.61</td>
<td>3.69</td>
<td>1.60</td>
<td>1.61</td>
<td>Aware, reconsider, understand</td>
</tr>
<tr>
<td>Causation</td>
<td>2.13</td>
<td>2.08</td>
<td>2.63</td>
<td>3.64</td>
<td>1.60</td>
<td>2.17</td>
<td>Because, consequence, react</td>
</tr>
<tr>
<td>Discrepancy</td>
<td>3.10</td>
<td>3.97</td>
<td>2.02</td>
<td>2.11</td>
<td>2.70</td>
<td>2.56</td>
<td>Besides, prefer, unwanted</td>
</tr>
<tr>
<td>Tentativeness</td>
<td>4.35</td>
<td>3.21</td>
<td>4.57</td>
<td>4.39</td>
<td>3.38</td>
<td>3.31</td>
<td>Almost, depending, maybe</td>
</tr>
<tr>
<td>Certainty</td>
<td>2.30</td>
<td>2.33</td>
<td>1.69</td>
<td>2.23</td>
<td>1.62</td>
<td>1.93</td>
<td>Certain, definite, sure</td>
</tr>
<tr>
<td>Inhibition*</td>
<td>.46(^a)</td>
<td>1.0</td>
<td>.04(^b)</td>
<td>.18</td>
<td>.18(^ab)</td>
<td>.58</td>
<td>Avoid, limit, stop</td>
</tr>
<tr>
<td>Assent</td>
<td>0.0</td>
<td>0.0</td>
<td>.04</td>
<td>.18</td>
<td>.25</td>
<td>1.10</td>
<td>Agree, ok, yes</td>
</tr>
<tr>
<td>Negate</td>
<td>4.21</td>
<td>3.35</td>
<td>4.50</td>
<td>4.35</td>
<td>4.44</td>
<td>5.99</td>
<td>Can’t, no, not</td>
</tr>
<tr>
<td>Freedom</td>
<td>5.21</td>
<td>3.44</td>
<td>4.27</td>
<td>3.96</td>
<td>6.43</td>
<td>4.09</td>
<td>Allowed, choose, free</td>
</tr>
<tr>
<td>Controlled**</td>
<td>2.70(^a)</td>
<td>2.04</td>
<td>2.20(^a)</td>
<td>2.92</td>
<td>.91(^b)</td>
<td>1.24</td>
<td>Constraint, obligation, pressure</td>
</tr>
</tbody>
</table>

Note. *p < .10, **p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisk.
Table 6. Zero-order correlations between neuroticism and LIWC category content in Studies 1-4.

<table>
<thead>
<tr>
<th>LIWC Category</th>
<th>Study 1</th>
<th>Study 2</th>
<th>Study 3</th>
<th>Study 4</th>
<th>Content examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self focus</td>
<td>.06</td>
<td>.13</td>
<td>.04</td>
<td>-.01</td>
<td>I, me, mine</td>
</tr>
<tr>
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<td>.06</td>
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</tr>
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<tr>
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<td>-.02</td>
<td>Amuse, happy, pleasant</td>
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<tr>
<td>Negative emotion</td>
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<td>-.08</td>
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<td></td>
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<td>Afraid, anxious, stress</td>
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<tr>
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<td>-.01</td>
<td>.07</td>
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</tr>
<tr>
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<td>.12</td>
<td>.03</td>
<td>-.08</td>
<td>Gloomy, sad, tragic</td>
</tr>
<tr>
<td>Past</td>
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<td>.06</td>
<td>-.03</td>
<td>.03</td>
<td>Had, told, was</td>
</tr>
<tr>
<td>Present</td>
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<td>.11</td>
<td>-.06</td>
<td>-.04</td>
<td>Are, does, is</td>
</tr>
<tr>
<td>Future</td>
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<td>.03</td>
<td>-.07</td>
<td>.03</td>
<td>Might, shall, will</td>
</tr>
<tr>
<td>Cognitive mechanics</td>
<td>.07</td>
<td>.03</td>
<td>-.06</td>
<td>-.04</td>
<td>Understand, consequence, maybe</td>
</tr>
<tr>
<td>Insight</td>
<td>.19</td>
<td>-.10</td>
<td>.05</td>
<td>.01</td>
<td>Aware, reconsider, understand</td>
</tr>
<tr>
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<td>-.05</td>
<td>-.01</td>
<td>-.07</td>
<td>Because, consequence, react</td>
</tr>
<tr>
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<td>.06</td>
<td>-.10*</td>
<td>-.02</td>
<td>Besides, prefer, unwanted</td>
</tr>
<tr>
<td>Tentativeness</td>
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<td>.11</td>
<td>-.08</td>
<td>.15**</td>
<td>Almost, depending, maybe</td>
</tr>
<tr>
<td>Certainty</td>
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<td>.00</td>
<td>-.04</td>
<td>-.09</td>
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<tr>
<td>Inhibition</td>
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<td>-.06</td>
<td>.03</td>
<td>.15**</td>
<td>Avoid, limit, stop</td>
</tr>
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<td>-.13</td>
<td>.02</td>
<td>-.09</td>
<td>Agree, ok, yes</td>
</tr>
<tr>
<td>Negate</td>
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<td>.05</td>
<td>-.01</td>
<td>-.06</td>
<td>Can’t, no, not</td>
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<tr>
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<td>.03</td>
<td>.09</td>
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<tr>
<td>Controlled</td>
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<td>-.05</td>
<td>-.01</td>
<td>-.04</td>
<td>Constraint, obligation, pressure</td>
</tr>
</tbody>
</table>

Note. * p < .10, ** p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisk. In Study 2, anxiety words did not appear frequently enough to compute a correlation.
Table 7. Proportions of LIWC category content written in response to the manipulation prompts used in Study 2.

<table>
<thead>
<tr>
<th>LIWC Category</th>
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<th>Controlled</th>
<th></th>
<th>Content examples</th>
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<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
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<td>8.87b</td>
<td>6.42</td>
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</tr>
<tr>
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<td>4.83</td>
<td>7.33</td>
<td>5.21</td>
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<td>4.45</td>
<td>3.45</td>
<td>Happy, anxious, sad</td>
</tr>
<tr>
<td>Positive emotion</td>
<td>5.31</td>
<td>4.60</td>
<td>4.21</td>
<td>3.46</td>
<td>Amuse, happy, pleasant</td>
</tr>
<tr>
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<td>.67</td>
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<td>.58</td>
<td>Afraid, angry, sad</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>Afraid, anxious, stress</td>
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<tr>
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<td>.08</td>
<td>.39</td>
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<tr>
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<td>0.0</td>
<td>.06</td>
<td>.29</td>
<td>Gloomy, sad, tragic</td>
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<tr>
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<td>.84</td>
<td>.64</td>
<td>1.87</td>
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</tr>
<tr>
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<td>12.26</td>
<td>5.52</td>
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</tr>
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<td>1.74b</td>
<td>1.63</td>
<td>Might, shall, will</td>
</tr>
<tr>
<td>Cognitive mechanics</td>
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<td>8.81</td>
<td>18.73</td>
<td>8.73</td>
<td>Understand, consequence, maybe</td>
</tr>
<tr>
<td>Insight</td>
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<td>2.73</td>
<td>2.29</td>
<td>2.60</td>
<td>Aware, reconsider, understand</td>
</tr>
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<td>2.94</td>
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<td>Because, consequence, react</td>
</tr>
<tr>
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<td>3.98</td>
<td>2.22b</td>
<td>2.39</td>
<td>Besides, prefer, unwanted</td>
</tr>
<tr>
<td>Tentativeness**</td>
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<td>3.85</td>
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<td>Almost, depending, maybe</td>
</tr>
<tr>
<td>Certainty*</td>
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<td>1.92b</td>
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<td>Certain, definite, sure</td>
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<tr>
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<td>.61</td>
<td>.35</td>
<td>.86</td>
<td>Avoid, limit, stop</td>
</tr>
<tr>
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<td>.14</td>
<td>.49</td>
<td>.14</td>
<td>.52</td>
<td>Agree, ok, yes</td>
</tr>
<tr>
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<td>3.49b</td>
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<td>6.62b</td>
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<td>1.35</td>
<td>3.24b</td>
<td>5.22</td>
<td>Constraint, obligation, pressure</td>
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</table>

Note. * p < .10, ** p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisk.
Table 8. Proportions of LIWC category content written in response to the manipulation prompts used in Study 3.

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<tr>
<th>LIWC Category</th>
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<th>Freedom SD</th>
<th>Guided M</th>
<th>Guided SD</th>
<th>Controlled M</th>
<th>Controlled SD</th>
<th>Content examples</th>
</tr>
</thead>
<tbody>
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<td>Self focus</td>
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<td>4.23</td>
<td>11.61</td>
<td>3.60</td>
<td>11.44</td>
<td>4.46</td>
<td>I, me, mine</td>
</tr>
<tr>
<td>Other focus*</td>
<td>5.81*</td>
<td>3.84</td>
<td>6.76b</td>
<td>3.99</td>
<td>6.39ab</td>
<td>3.81</td>
<td>He, she, them</td>
</tr>
<tr>
<td>Affect**</td>
<td>5.07a</td>
<td>3.82</td>
<td>4.20b</td>
<td>2.95</td>
<td>3.93b</td>
<td>3.31</td>
<td>Happy, anxious, sad</td>
</tr>
<tr>
<td>Positive emotion**</td>
<td>4.48a</td>
<td>3.78</td>
<td>3.23b</td>
<td>2.75</td>
<td>2.35c</td>
<td>2.90</td>
<td>Amuse, happy, pleasant</td>
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<tr>
<td>Negative emotion**</td>
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<td>1.03a</td>
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<td>1.71b</td>
<td>2.25</td>
<td>Afraid, angry, sad</td>
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<tr>
<td>Anxiety**</td>
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<td>.97</td>
<td>.24a</td>
<td>.59</td>
<td>.49b</td>
<td>1.15</td>
<td>Afraid, anxious, stress</td>
</tr>
<tr>
<td>Anger+</td>
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<td>.17a</td>
<td>.54</td>
<td>.38b</td>
<td>1.31</td>
<td>Angry, furious, mad</td>
</tr>
<tr>
<td>Sadness**</td>
<td>.11a</td>
<td>.55</td>
<td>.24a</td>
<td>.74</td>
<td>.63b</td>
<td>1.18</td>
<td>Gloomy, sad, tragic</td>
</tr>
<tr>
<td>Past**</td>
<td>2.40a</td>
<td>2.99</td>
<td>1.15b</td>
<td>1.57</td>
<td>2.13a</td>
<td>2.88</td>
<td>Had, told, was</td>
</tr>
<tr>
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<td>4.34</td>
<td>9.83</td>
<td>3.95</td>
<td>9.25</td>
<td>4.66</td>
<td>Are, does, is</td>
</tr>
<tr>
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<td>4.28a</td>
<td>2.70</td>
<td>3.32b</td>
<td>2.68</td>
<td>Might, shall, will</td>
</tr>
<tr>
<td>Cognitive mechanics**</td>
<td>23.39a</td>
<td>6.78</td>
<td>22.63a</td>
<td>7.14</td>
<td>19.11b</td>
<td>6.52</td>
<td>Understand, consequence, maybe</td>
</tr>
<tr>
<td>Insight**</td>
<td>1.36a</td>
<td>1.65</td>
<td>3.25b</td>
<td>2.22</td>
<td>2.08c</td>
<td>2.05</td>
<td>Aware, reconsider, understand</td>
</tr>
<tr>
<td>Causation**</td>
<td>2.21a</td>
<td>2.42</td>
<td>3.28b</td>
<td>3.09</td>
<td>2.69b</td>
<td>2.28</td>
<td>Because, consequence, react</td>
</tr>
<tr>
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<td>4.89b</td>
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<td>4.72b</td>
<td>3.76</td>
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</tr>
<tr>
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<td>4.25</td>
<td>3.99b</td>
<td>2.84</td>
<td>4.06b</td>
<td>3.69</td>
<td>Almost, depending, maybe</td>
</tr>
<tr>
<td>Certainty</td>
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<td>1.76</td>
<td>1.49</td>
<td>1.98</td>
<td>1.10</td>
<td>1.58</td>
<td>Certain, definite, sure</td>
</tr>
<tr>
<td>Inhibition</td>
<td>.44</td>
<td>1.01</td>
<td>.25</td>
<td>.67</td>
<td>.27</td>
<td>1.26</td>
<td>Avoid, limit, stop</td>
</tr>
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<td>Assent</td>
<td>.05</td>
<td>.33</td>
<td>.02</td>
<td>.16</td>
<td>.05</td>
<td>.33</td>
<td>Agree, ok, yes</td>
</tr>
<tr>
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<td>1.61a</td>
<td>1.88</td>
<td>2.50b</td>
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<tr>
<td>Freedom</td>
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<td>7.61</td>
<td>4.13</td>
<td>7.19</td>
<td>4.73</td>
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</tr>
<tr>
<td>Controlled**</td>
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<td>1.27a</td>
<td>1.43</td>
<td>1.78b</td>
<td>1.95</td>
<td>Constraint, obligation, pressure</td>
</tr>
</tbody>
</table>

Note. * p < .10, ** p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisk.
| LIWC Category          | Freedom | | | Controlled | | | Content examples | |
|------------------------|---------|---|---|-----------|---|---|-----------------| |
|                        | M       | SD | M  | SD       |   |   |                 | |
| Self focus**           | 13.12a  | 6.42 | 9.66b | 6.79 | I, me, mine | |
| Other focus            | 5.74    | 4.51 | 6.42 | 5.42 | He, she, them | |
| Affect                 | 4.11    | 2.84 | 4.36 | 3.60 | Happy, anxious, sad | |
| Positive emotion       | 3.92    | 2.89 | 3.80 | 3.45 | Amuse, happy, pleasant | |
| Negative emotion       | .38     | .98  | .63  | 1.43 | Afraid, angry, sad | |
| Anxiety                | .13     | .56  | .11  | .67  | Afraid, anxious, stress | |
| Anger                  | .04     | .31  | .13  | .87  | Angry, furious, mad | |
| Sadness                | .10     | .44  | .15  | .62  | Gloomy, sad, tragic | |
| Past*                  | .39a    | 1.05 | .73b | 2.02 | Had, told, was | |
| Present                | 13.48   | 5.73 | 13.12 | 6.51 | Are, does, is | |
| Future                 | 1.68    | 2.20 | 1.50 | 2.27 | Might, shall, will | |
| Cognitive mechanics    | 19.48   | 6.78 | 19.61 | 6.64 | Understand, consequence, maybe | |
| Insight                | 2.80    | 4.40 | 2.11 | 2.44 | Aware, reconsider, understand | |
| Causation              | 2.51    | 2.49 | 2.98 | 2.96 | Because, consequence, react | |
| Discrepancy            | 3.87    | 3.21 | 3.37 | 3.59 | Besides, prefer, unwanted | |
| Tentativeness          | 3.26    | 3.18 | 3.97 | 3.98 | Almost, depending, maybe | |
| Certainty              | 1.16    | 1.72 | 1.29 | 2.12 | Certain, definite, sure | |
| Inhibition             | .21     | .68  | .38  | 1.37 | Avoid, limit, stop | |
| Assent*                | .03a    | .18  | .00b | .00  | Agree, ok, yes | |
| Negate**               | 1.54a   | 2.55 | 4.20b | 3.63 | Can’t, no, not | |
| Freedom*               | 7.49a   | 4.95 | 6.42b | 4.94 | Allowed, choose, free | |
| Controlled**           | 1.04a   | 1.69 | 2.54b | 3.35 | Constraint, obligation, pressure | |

Note. * p < .12, ** p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisk.
Table 10. Proportions of LIWC category content written, and zero-order correlations between LIWC content and neuroticism, across Studies 1-4.

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</tr>
<tr>
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<td>.41b</td>
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Note. * p < .10, ** p < .05. Means with different superscript letters were statistically different at the level indicated by the asterisks next to category names.
Kenneth Vail was born and raised in Covina, CA; a son to Norma and Kenny Vail, and brother to Lauren Vail. Among Kenneth’s many interests have been soccer, skeet shooting, music, and visual and performing arts. He earned his B.A. from University of Colorado at Colorado Springs, and his M.A. from University of Missouri.