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Self-Oriented and Socially Prescribed Perfectionists' Responses to Feedback:

Investigating Aspiration Level, Persistence, and Performance

by

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Abstract

Research on perfectionism indicates that self-oriented perfectionism, in which one's motivation to be perfect is internal, can be adaptive. Conversely, socially prescribed perfectionism, in which one's motivation to be perfect is due to external pressure, can be maladaptive. Past research has looked at perfectionism's associations with academic and athletic achievement and motivation in the long-term. Likewise, research has examined different types of perfectionists' affective reactions to feedback. The goal of the current research was to investigate how self-oriented and socially prescribed perfectionists respond to feedback on an initial task in terms of their aspiration levels, persistence, and performance on a subsequent task.

Participants first completed an anagram task and were then randomly assigned to receive either positive or negative feedback. Participants indicated their preferred level of difficulty for a second anagram task as a measure of aspiration level and then completed this task in which five of the 20 anagrams were unsolvable. Persistence was measured by the average amount of time participants spent on the unsolvable anagrams. Performance was measured by the speed with which participants completed the solvable anagrams and by the number of anagrams they solved correctly. Finally, participants completed subscales of the Multidimensional Perfectionism Scale among other demographic questions.

Results indicated that participants who received negative feedback had lower aspiration levels and persistence than participants who received positive feedback. In addition, higher levels of self-oriented perfectionism predicted higher aspiration levels,

persistence, and performance whereas higher socially prescribed perfectionism predicted lower aspiration levels, persistence, and performance. Furthermore, in the positive feedback condition, higher levels of socially prescribed perfectionism predicted lower performance levels. Implications of these findings are discussed.

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Self-Oriented and Socially Prescribed Perfectionists' Responses to Feedback:
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Salvador Dalí is rumored to have said, "Have no fear of perfection, you'll never reach it." Dalí's warning implies that striving for perfection might have unhealthy psychological consequences. Consistent with Dalí's perspective, people often view perfectionism to be maladaptive (Kilbert, Langhinrichsen-Rohling, & Saito, 2005). People may recognize that it is impossible to be perfect, and therefore might assume that it must be unhealthy to strive for something that one cannot attain. However, the psychological consequences of perfectionism are complex, as there are different types of perfectionism that are associated with various adaptive and maladaptive characteristics (Bong, Hwang, Noh, & Kim, 2014; Kilbert et al., 2005; Stoeber, Kempe, & Keogh, 2008). A goal of the current research was to explore the distinct psychological consequences of two different kinds of perfectionism: self-oriented and socially prescribed perfectionism.

On one hand, those high in self-oriented perfectionism have a strong desire to be perfect that is internally motivated. They set high standards for themselves and strictly evaluate the self against those standards. This form of perfectionism is associated with adaptive qualities (Bong et al., 2014; Kilbert et al., 2005; Stoeber, Kempe, et al., 2008), and is positively correlated with academic and athletic motivation and performance in the long-term (Stoeber & Rambow, 2007; Stoll, Lau, & Stoeber, 2008). On the other hand, socially prescribed perfectionists desire to be perfect because they think that others expect them to be. They feel external pressure to reach other people's unrealistic

expectations and feel that they need to be perfect to gain others' approval. This form is linked to maladaptive traits (Bong et al., 2014; Kilbert et al., 2005; Stoeber, Kempe, et al., 2008), and is negatively connected to motivation and negatively or not significantly associated with performance (Stoeber & Rambow, 2007; Stoll et al., 2008). In short, self-oriented and socially prescribed perfectionism are distinct subtypes of perfectionism that differ in their psychological consequences.

As I will describe below, past research has generally investigated the long-term effects of self-oriented and socially prescribed perfectionism on affect, motivation, and performance. Furthermore, some research has explored the ways that self-oriented and socially prescribed perfectionists respond to negative feedback in terms of affective reactions. No research has explored the ways in which feedback impacts self-oriented and socially prescribed perfectionists' short-term willingness to persist on a subsequent task and their performance on a subsequent task. The goal of the current study was to fill those gaps. By uncovering perfectionists' immediate responses to feedback, we can better understand the mechanisms underlying the long-term consequences of perfectionism. Before describing the current study in greater depth, I review relevant literature on perfectionism.

Self-Oriented and Socially Prescribed Perfectionism

Perfectionism is "the practice of demanding of oneself or others a higher quality than is required by the situation" (Hollender, 1965). Overall, perfectionists are characterized as having exceptionally high standards for performance and striving for flawlessness. They can also be exceedingly self-critical (Stoeber, Kempe, et al., 2008).

Early work on perfectionism suggested that it is a personality trait that is learned in childhood, based on attempts to gain parental love (Hollender, 1965). Furthermore, as adults, perfectionists depend on their performance in order to feel accepted. Failures to reach perfectionism result in hopelessness and can lead to depression (Hollender, 1965). Early research on perfectionism emphasized that it can be debilitating. This was based on the idea that perfection is nonexistent, and when people strive for that which does not exist, it causes psychological problems. Perfectionism has been connected to many negative qualities, such as feelings of shame and failure, low self-esteem, guilt, procrastination, and indecisiveness (Hewitt & Flett, 1991b). Past research even found that perfectionism has been associated with various psychopathologies, such as alcoholism, depression, anorexia, personality disorders, and obsessive-compulsive disorder (for reviews see Hewitt & Flett, 1991b; Pacht, 1984). Perfectionists can also have problems in interpersonal relationships because they cannot meet their own perfectionistic standards and expect rejection from others when they do not meet them (Sorotzkin, 1985). These problems stem from the unhealthy cognitive styles that perfectionists tend to have, such as dichotomous thinking. They look at the world as “black or white” (Sorotzkin, 1985). Because perfectionists see their work only in the extremes of either perfect or imperfect, there is no middle ground. Therefore, if they perform even slightly less than perfection, it is considered a failure (Hewitt & Flett, 1991b; Hollender, 1965; Pacht, 1984). In addition, perfectionists often overgeneralize. They make major generalizations from small events, so failing at one task to them means they will fail at everything else (Sorotzkin, 1985). They struggle with overly moralistic

self-evaluation as well, measuring their self-worth through their accomplishments of unrealistic goals (Sorotzkin, 1985). Overall, early research characterized perfectionism—in general—as very negative. This research, however, did not take into account the possibility that there may be important distinctions between different kinds of perfectionism.

Early perfectionism research used a unidimensional approach, focusing on self-directed perfectionistic thoughts only. However, Hewitt & Flett (1991b) asserted that perfectionism also has important interpersonal aspects. They used a multidimensional approach in developing the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991b), and explored distinctions between people whose motivation to be perfect is internal versus those whose motivation is external. This scale includes three subscales: self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism. Specifically, participants indicate their level of agreement with statements corresponding to self-oriented perfectionism (e.g., “I demand nothing less than perfection of myself,” “I strive to be the best at everything I do,” “I must work to my full potential at all times”), socially prescribed perfectionism (e.g., “People expect nothing less than perfection from me,” “Anything that I do that is less than excellent will be seen as poor work by those around me,” “My family expects me to be perfect”), and other-oriented perfectionism (e.g., “I have high expectations for the people who are important to me,” “Everything that others do must be of top-notch quality”, “If I ask someone to do something, I expect it to be done flawlessly”; Hewitt & Flett, 1991b). Because other-oriented perfectionism is other rather than self-focused (i.e., it directs the perfectionistic

behavior outward and includes unrealistic standards for others' performance), it is not the focus of the current research.

When considering the positive and negative impacts of perfectionism, research has documented important differences between self-oriented perfectionists and socially prescribed perfectionists. Self-oriented perfectionism is characterized as having high expectations for oneself that lead to motivation to be perfect (Bong et al., 2014; Kilbert et al., 2005; Stoeber & Childs, 2010). This form of perfectionism is characterized by two facets: perfectionistic striving and importance of being perfect (Stoeber & Childs, 2010; Stoeber, Kempe, et al., 2008).¹ A self-oriented perfectionist is high in perfectionistic striving; he or she sets high standards and makes substantial efforts to be perfect and also has the mindset that it is very important to reach perfection. Research on the Big Five personality traits also consistently demonstrates that self-oriented perfectionism is positively correlated with conscientiousness, a tendency to be organized, dependable, and ambitious (Hill, McIntire, & Bacharach, 1997; John & Srivastava, 1999; Rice, Ashby, & Slaney, 2007). Self-oriented perfectionism develops through social learning, as parents model their own self-oriented perfectionism (Damian, Stoeber, Negru, & Băban, 2013). As I will discuss in greater detail below, perfectionistic striving is typically adaptive, motivational, and healthy (Kilbert et al., 2005; Stoeber & Rambow, 2007).

¹ When the MPS was originally created, it did not have the individual facets of self-oriented and socially-prescribed perfectionism built into it. It simply included the three subscales of self-oriented, socially prescribed, and other-oriented perfectionism. However, other researchers have attempted to impose the facets into the items of the already created scale to measure the role that they play (Stoeber, Kempe, & Keogh, 2008).

On the other hand, socially prescribed perfectionism stems from external motivation to be perfect. Socially prescribed perfectionism is also characterized by two facets: others' high standards and conditional acceptance (Stoeber & Childs, 2010; Stoeber, Kempe, et al., 2008). Socially prescribed perfectionists focus on others' standards and believe that other people hold them to high standards. Socially prescribed perfectionists also believe in conditional acceptance; that is, they believe that others' acceptance is based on whether or not they meet others' high expectations (Stoeber & Childs, 2010; Stoeber, Kempe, et al., 2008). Furthermore, socially prescribed perfectionism is also associated with maladaptive evaluative concerns, which involve self-criticism and negative reactions to mistakes (Kilbert et al., 2005; Stoeber & Rambow, 2007). When it comes to personality variables, socially prescribed perfectionism is positively correlated with neuroticism, a tendency to be emotionally unstable, tense, and insecure (Hill et al., 1997; John & Srivastava, 1999; Rice et al., 2007). This form of perfectionism develops through social expectation, as parents express their high expectations (Damian et al., 2013).

It is important to note that these types of perfectionism do not necessarily exist separately from one another. Some people might not be solely self-oriented perfectionists or solely socially prescribed perfectionists. People may have different combinations of these kinds of perfectionism and could, for example be high in both self-oriented and socially prescribed perfectionism (Kilbert et al., 2005). In sum, there are different kinds of perfectionism and additional research has indicated that these types have different consequences—a topic I turn to next.

Affective Consequences

Although people (including, apparently, Salvador Dalí) often believe that perfectionism is psychologically maladaptive, self-oriented and socially prescribed perfectionism differ in their effects on psychological health. Self-oriented perfectionism tends to be psychologically positive (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Kilbert et al., 2005). This form of perfectionism, for example, is connected with positive affect. The self-oriented perfectionism subscale of the MPS is not correlated with self-reported depression or the negative affect items of the Positive and Negative Affect Scale (PANAS). However, it is correlated with the positive affect items (Frost et al., 1993). Likewise, positive strivings, which are associated with self-oriented perfectionism, are connected to increased positive affect (Kilbert et al., 2005). Furthermore, self-oriented perfectionism is not associated with negative factors such as proneness to suicide, guilt, and shame (Kilbert et al., 2005).

In contrast to self-oriented perfectionism, socially prescribed perfectionism is related to maladaptive psychological traits (Frost et al., 1993; Kilbert et al., 2005). The socially prescribed perfectionism subscale is positively correlated with the negative affect items of the PANAS but is not correlated with the positive affect items (Frost et al., 1993). Maladaptive evaluative concerns, one of the dimensions of socially prescribed perfectionism, are connected to increased negative affect. In addition, socially prescribed perfectionism is negatively correlated with self-esteem and positively correlated with depression, proneness to suicide, anxiety, guilt, and shame (Kilbert et al., 2005). In a study comparing depressed patients, control participants, and anxious patients, depressed

and anxious patients both had higher levels of socially prescribed perfectionism than did controls (Hewitt & Flett, 1991a).

Furthermore, research has also looked at those who have a combination of both self-oriented and socially prescribed perfectionism. Kilbert and colleagues (2005), for example, classified participants as self-oriented perfectionists only, socially prescribed perfectionists only, generally perfectionistic (high in both types), or non-perfectionistic (low in both types). In cases where people are high in both types, it appears that the negative effects of socially prescribed perfectionism can overshadow the potentially positive effects of self-oriented perfectionism. For instance, participants classified as only self-oriented perfectionists had higher self-esteem, perceived self-control, and achievement motivation than both socially prescribed only and generally perfectionistic participants. Similarly, socially-prescribed-only perfectionists and generally perfectionistic participants had higher rates of depression, suicide proneness, and guilt than self-oriented perfectionists and non-perfectionistic participants (Kilbert et al., 2005). Therefore, the adaptiveness of self-oriented perfectionism appears to only exist in the absence of socially prescribed perfectionism.

In summary, perfectionism seems to be a double-edged sword. Self-oriented perfectionism is affectively adaptive, whereas socially prescribed perfectionism tends to be affectively maladaptive (Kilbert et al., 2005). Additionally, the negative effects of socially prescribed perfectionism tend to overshadow the effects of self-oriented perfectionism when they are present together. However, perfectionism does not only influence people affectively, but also has effects on their motivation and performance.

Motivational and Performance Consequences

Researchers have paid substantial attention to the ways that perfectionism shapes academic and athletic performance (Bong et al., 2014; Stoeber, 2011; Stoeber & Rambow, 2007; Stoll et al., 2008). Perhaps not surprisingly, there are differences in motivation and performance between self-oriented perfectionists and socially prescribed perfectionists.

Self-oriented perfectionism is adaptive in an academic setting (Bong et al., 2014). It is positively correlated with academic achievement, is negatively correlated with acceptability of cheating and academic procrastination, and is not significantly related to test anxiety. In addition, self-oriented perfectionists tend to have high levels of achievement motivation and perceived self-control (Kilbert et al., 2005). The perfectionistic strivings dimension of self-oriented perfectionism is adaptive when it comes to academic and athletic motivation and performance as well. Perfectionistic strivings are related to hope of success, motivation in school, and achievement in school (Stoeber & Rambow, 2007). Perfectionistic strivings are also positively correlated with athletes' self-confidence, hope of success, approach goal orientations, and performance in training and competitions (Stoll et al., 2008; Stoeber, 2011). Athletes even score more points on a basketball task if they have high levels of striving for perfection (Stoll et al., 2008).

In contrast, socially prescribed perfectionism has maladaptive effects on motivation and performance. Socially prescribed perfectionists tend to have low levels of achievement motivation and perceived self-control (Kilbert et al., 2005). This form of

perfectionism is also positively associated with test anxiety, acceptability of cheating, and procrastination, although it is not significantly related to academic achievement in this case (Bong et al., 2014). The dimensions of perfectionistic concerns and negative reactions to imperfection that are facets of socially prescribed perfectionism can also have harmful effects. In academics, negative reactions to imperfection and perceived parental pressure to be perfect have been shown to be maladaptive, negatively influencing motivation. Negative reactions to imperfection are also related to fear of failure, somatic complaints, and depressive symptoms (Stoeber & Rambow, 2007). When it comes to athletics, negative reactions to imperfection have adverse effects on athletes' first-time performance of a new basketball task when controlling for the positive effects of striving for perfection (Stoll et al., 2008). Similarly, perfectionistic concerns are also maladaptive, being positively correlated with competitive anxiety and fear of failure (Stoeber, 2011).

The different forms of perfectionism are also associated with different achievement motives and goal orientations (Stoeber, 2011). People high in perfectionistic striving, which is related to self-oriented perfectionism, tend to have approach goal orientations; that is, they have high hope of success that motivates them to do well. In contrast, those high in perfectionistic concerns, related to socially-prescribed perfectionism, are motivated by avoidance goal orientations; that is, they focus more on avoiding failure (Stoeber, 2011).

Overall, perfectionism is related to performance and motivation, particularly regarding academics and athletics, and the two types of perfectionism differ in their

effects on these variables. Based on the type of perfectionist someone is, there are different long-term consequences of perfectionism on these important factors (Bong et al., 2014; Stoeber, 2011; Stoeber & Rambow, 2007; Stoll et al., 2008).

Influences of Negative Feedback

Taken together, numerous studies have shown that self-oriented and socially prescribed perfectionism have distinct downstream consequences on affect, motivation, and performance. However, the studies reviewed so far are mostly correlational. Other studies have looked at how self-oriented and socially prescribed perfectionists affectively respond to success or failure by manipulating positive or negative feedback.

Feedback and Individual Difference Variables

First, it is important to understand that, even aside from the research on perfectionism, people respond to positive and negative feedback differently, and researchers have come to different conclusions about the impact of feedback. Some say that positive feedback is beneficial because it can increase people's confidence that they can actually accomplish their goals, motivating them because they anticipate success, whereas negative feedback can lower confidence and people's expectations of succeeding (Weiner, 1974; Zajonc & Brickman, 1969). However, others have made the opposite argument, arguing that positive feedback can lead to a sense of partial goal accomplishment so people therefore put in less effort to attain that goal, whereas negative feedback can be encouraging because it shows that more effort is necessary to accomplish the goal (Higgins, 1987; Kluger & De Nisi, 1996).

Which type of feedback is more beneficial also depends on the task at hand. For

example, people who are pursuing goals while promotion focused consider the rewards of good performance, whereas those who are prevention focused think about the punishments associated with poor performance (Van-Dijk & Kluger, 2004). Some tasks induce promotion focus, particularly tasks requiring open-mindedness and creativity. Other tasks induce prevention focus, such as tasks requiring vigilance, accuracy, and adherence (Van-Dijk & Kluger, 2011). When completing a task that induces promotion focus, positive feedback increases motivation more than negative feedback. However, when the task induces prevention focus, negative feedback is more beneficial (Van-Dijk & Kluger, 2004; Van-Dijk & Kluger, 2011). Therefore, the regulatory focus induced by a task influences how feedback influences people's motivation to accomplish it. In addition, individuals have propensities to one regulatory focus, that is, their chronic regulatory focus. The same feedback effects hold true when it comes to individual differences in regulatory focus (Van-Dijk & Kluger, 2004). Thus, the effectiveness of positive and negative feedback depends on not only the task, but also the person.

Taken together, positive and negative feedback can each improve or worsen performance. Depending on the person and the situation, receiving negative feedback might motivate someone to perform better next time and enhance their performance, but in other situations it might have the opposite effect. I argue that one of the personal factors that shape such responses could be perfectionism, as people's reactions to feedback could depend on their levels of self-oriented and socially-prescribed perfectionism.

Feedback and Perfectionism

When it comes to the research on how perfectionists respond affectively to feedback, the results are consistent with the correlational studies (i.e., self-oriented perfectionism tends to be adaptive whereas socially-prescribed perfectionism tends to be maladaptive). In these studies, researchers have had participants perform a task, manipulated whether they received positive or negative feedback on their performance on that task, and then used self-report measures to explore different variables of interest (Besser, Flett, Hewitt, & Guez 2008; Stoeber, Hutchfield, & Wood, 2008; Stoeber, Kempe, et al., 2008; Stoeber, Schneider, Hussain, & Matthews, 2014;). In one particular study, participants completed a task and received feedback telling them they scored either 2/10 or 8/10 correct. Participants then reported their affective reactions and completed the task again to explore reactions to subsequent feedback (Stoeber et al., 2014). Self-oriented perfectionism was associated with adaptive reactions to negative feedback. These perfectionists showed no increases in negative emotions after the initial failure, and only showed increases in anxiety after repeated failure (Stoeber et al., 2014). In contrast, socially prescribed perfectionism was associated with maladaptive affective reactions to negative feedback. Socially prescribed perfectionism predicted increases in self-reported anxiety, depression, and anger after the first failure, and anger continued to increase after repeated failures (Stoeber et al., 2014). In a similar study (Besser et al., 2008), participants performed a task and received feedback saying either “Sorry, your performance is below average,” or “Well done, your performance is above average” before completing self-report measures. Participants high in socially prescribed

perfectionism exhibited increases in dysphoria and anxiety as well as lower state self-esteem after receiving negative feedback or after performing poorly compared to baseline levels, highlighting the maladaptive effects of this form of perfectionism (Besser et al., 2008).

Yet another study had participants read scenarios in which the character achieved either a perfect outcome or a flawed outcome. Participants were instructed to imagine the situation happening to themselves and then indicated their emotional reactions to them, specifically how much satisfaction, dissatisfaction, pride, and embarrassment they would feel. The researchers found that self-oriented perfectionism (in the absence of socially prescribed perfectionism) was positively correlated with satisfaction and pride for participants in a perfect outcome condition. However, socially prescribed perfectionism was associated with greater dissatisfaction for both those in the flawed outcome condition and those in the perfect outcome condition. In addition, socially prescribed perfectionism kept participants who had high levels of self-oriented perfectionism from being satisfied and prideful after accomplishing a perfect outcome. The negative influences of socially prescribed perfectionism outweighed the positive aspects of self-oriented perfectionism (Stoeber & Yang, 2010). This particular finding emphasizes the negative influence of socially prescribed perfectionism on affect to the point that these participants experienced dissatisfaction regardless of what condition they were in. Even when they imagined an apparently perfect outcome, they were still dissatisfied, unlike those who were high in self-oriented and low in socially prescribed perfectionism.

The current research uses the general method of providing false feedback on

performance that past research has used, but takes the paradigm a step further. This study explores how feedback shapes aspiration level, persistence, and performance in the short-term for different types of perfectionists.

Impact of Feedback on Aspiration Level, Persistence, and Performance

Past research has shown that perfectionism is related to different emotional and psychological responses, both in general and in the face of negative feedback (Besser et al., 2008; Kilbert et al., 2005; Stoeber et al., 2014; Stoeber & Yang, 2010). Nonetheless, past research has barely investigated the short-term effects that feedback has on performance and motivation for the different types of perfectionists. A main goal of this research was to explore how feedback shapes aspiration level, persistence, and performance for self-oriented and socially prescribed perfectionists. Although studies largely reveal different affective reactions to feedback, I believe that this can be extended to differences in aspiration, persistence, and performance.

Aspiration Level

Previous research has indicated that feedback impacts aspiration level. Stoeber Hutchfield, et al. (2008) explore perfectionistic striving, which is associated with self-oriented perfectionism, versus self-criticism, which is associated with socially prescribed perfectionism. Participants were given self-report measures on self-efficacy and perfectionism and were then shown seven envelopes containing the first test that were labeled from *Very Easy* (1) to *Very Difficult* (7). Participants were asked to select their preferred level of difficulty, completed the test, and were given either positive or negative feedback. Participants then completed the self-efficacy measure a second time and chose

an envelope for the second test. This was the researchers' measure of aspiration level (Stoeber, Hutchfield, et al., 2008). High perfectionistic striving was connected to higher aspiration level even before participants received feedback, and high self-criticism was correlated with low self-efficacy. Perfectionistic striving was also associated with an increase in aspiration level after successful feedback on task performance. Those who strived for perfection had higher aspirations, and selected a more difficult task after being successful. In contrast, self-criticism was associated with a decrease in self-efficacy after failure as well as a decrease in aspiration whether the participant was successful or failed. Thus, those with this subcomponent of socially prescribed perfectionism were pessimistic about their abilities and this increased after they failed at a task (Stoeber, Hutchfield, et al., 2008). These results suggest that different types of perfectionists respond to feedback differently in terms of how it influences their levels of aspiration. The present study measures aspiration level in a similar way but looks at the persistence and performance variables as well. I expected that high self-oriented perfectionism would predict high aspiration levels, whereas high socially prescribed perfectionism would predict low aspiration levels. In addition, I predicted that there would be an interaction between perfectionism and feedback on aspiration level. This hypothesis is described in more detail below.

Persistence.

Feedback influences people's motivation to persist at a task (Fishbach, Eyal, & Finkelstein, 2010; Van-Dijk & Kluger, 2004; Van Dijk & Kluger, 2011). Furthermore, as described above, self-oriented perfectionists tend to have high levels of achievement

motivation, whereas socially prescribed perfectionists tend to have low levels of achievement motivation (Kilbert et al., 2005, Stoeber & Rambow, 2007). No studies, however, have tested the difference between how self-oriented and socially prescribed perfectionists respond to feedback when it comes to short-term motivation to persist on a task. I expected that high self-oriented perfectionism would predict higher persistence, whereas high socially prescribed perfectionism would predict lower persistence. I also hypothesized that there would be an interaction between perfectionism and feedback on persistence, which I explain below.

Performance.

As described above, there is also a relationship between perfectionism and both academic and athletic performance in the long-term (Bong et al., 2014; Stoeber, 2011; Stoeber & Rambow, 2007; Stoll et al., 2008). Self-oriented perfectionists tend to have high academic and athletic achievement (Bong et al., 2014; Stoeber, 2011; Stoeber & Rambow, 2007; Stoll et al., 2008). However, socially prescribed perfectionism is not significantly related to performance or negatively impacts it (Bong et al., 2014; Stoll et al., 2008). Again, research has not looked at how self-oriented and socially prescribed perfectionists respond to feedback when it comes to their performance on a subsequent task. I hypothesized that high self-oriented perfectionism would predict higher performance, and high socially prescribed perfectionism would predict lower performance. Additionally, I anticipated an interaction between perfectionism and feedback on performance, a prediction I describe next.

Hypotheses and the Present Study

The goal of the present study was to explore the short-term effects of perfectionism, particularly how different types of perfectionists cope with negative feedback. Although we know the long-term effects of perfectionism, it is important to understand the short-term effects in order to gain a complete picture. In addition, it is in the short-term context that interventions can be applied. By exploring short-term dynamics, we can therefore come to understand how to prevent negative long-term consequences and to promote positive long-term consequences. I therefore explored how self-oriented and socially prescribed perfectionists react to positive and negative feedback on an initial task and how this feedback influences their aspiration level, persistence, and performance on a subsequent task.

As described above, I predicted that high self-oriented perfectionism would generally predict high aspiration level, persistence, and performance, whereas high socially prescribed perfectionism would generally predict low aspiration level, persistence and performance. Although I did not have a hypothesis about the effects of feedback on the three variables, I hypothesized that feedback would have different effects on self-oriented and socially prescribed perfectionists. In particular, I generated two competing hypotheses regarding how feedback might influence self-oriented and socially prescribed perfectionists.

On one hand, self-oriented perfectionism might predict higher aspiration levels, persistence, and performance for participants who received both positive and negative feedback because self-oriented perfectionism is adaptive. Socially prescribed

perfectionism, however, might predict lower levels of each of these variables for participants who received negative feedback and higher levels for participants who received positive feedback. Socially prescribed perfectionists are motivated to be perfect because of other people's expectations; therefore, when an external source informs them that they performed poorly, they might lose hope that they can actually accomplish the goal and therefore respond with low aspiration levels, persistence, and performance. When socially prescribed perfectionists learn that they performed well, however, it might motivate them to keep working hard to keep that approval. Consistent with these predictions, research already reveals that socially prescribed perfectionists have maladaptive affective responses to negative feedback and self-oriented perfectionists have healthier reactions (Besser et al., 2008; Stoeber et al., 2014; Stoeber, Hutchfield, et al., 2008; Stoeber, Kempe, et al., 2008).

On the other hand, there are also reasons to predict a different pattern of responses. Research also suggests that self-oriented perfectionism might relate to adaptive reactions for those who receive positive feedback but not those who receive negative feedback. Conversely, socially prescribed perfectionism might relate to higher levels of aspiration, persistence, and performance for those who received negative feedback, but lower levels of each variable for those who received positive feedback. If an external source is telling socially prescribed perfectionists that they performed poorly, it might motivate them to work harder in order to prove themselves and gain approval. However, positive feedback might lead them to believe that they had already proven themselves and so they stop trying. Self-oriented perfectionists might respond in the

opposite way. This set of predictions is grounded in research on promotion and prevention focus. For people with promotion focus as their chronic regulatory focus, which emphasizes the rewards of good performance, positive feedback is more beneficial. For those who tend toward prevention focus, which is concerned with avoiding the punishments of poor performance, negative feedback is more effective (Van-Dijk & Kluger, 2004; Van-Dijk & Kluger, 2011). This is connected to the research that shows that people with high perfectionistic strivings (which are related to self-oriented perfectionism) have approach goal orientations and have hope for success whereas people with high perfectionistic concerns (which are related to socially prescribed perfectionism) have avoidance goal orientations and focus more on avoiding failure (Stoeber, 2011). Thus, self-oriented perfectionism might be related to promotion focus and therefore positive feedback would be more beneficial. In contrast, socially prescribed perfectionism might be connected to prevention focus, and negative feedback would therefore be more advantageous.

In summary, previous research suggests two sets of competing hypotheses. Self-oriented perfectionism could predict adaptive reactions to both positive feedback and negative feedback, or it could predict adaptive responses to positive feedback but maladaptive responses to negative feedback. Furthermore, socially prescribed perfectionism could predict adaptive responses to positive feedback and maladaptive responses to negative feedback or vice versa.

Method

Participants

Participants were 404 adults (M age=32.68, SD =10.95). Participants included 216 males, 182 females, and 6 people who did not report their gender. All participants were fluent in English, and 398 (98.5%) of the participants indicated that English was their primary language. All participants except one indicated that they resided in the United States. Participants were recruited through Amazon.com's Mechanical Turk (MTurk), a secure online service where people sign up to complete surveys and other online tasks for small sums of money, and were each compensated \$1 for participating in the study.

Procedure

Participants first completed 20 anagrams (that is, they were instructed to unscramble 20 words as quickly as possible; see Appendix A). At the bottom of each page, participants had the option to proceed to the next anagram without completing the anagram.

After completing the anagram task, participants were randomly assigned to the negative feedback condition ($n = 199$) or the positive feedback ($n= 205$) condition. I inserted a spinning loading gif to make it appear as though performance was being calculated by the computer. Those in the negative feedback condition read the following feedback: "Compared to other participants, you have scored in the bottom 20%. Sorry." Participants in the positive feedback condition received the following feedback: "Compared to other participants, you have scored in the top 20%. Well done!" This feedback was based on the feedback manipulation used by Stoeber, Hutchfield, and

colleagues (2008).

Next, participants were asked to complete another anagram task. To measure aspiration level, participants indicated whether they would prefer to complete a low difficulty, moderate difficulty, or high difficulty version of the task, but were informed that they may or may not be given their preferred level of difficulty. The loading gif was used again to create the illusion that the computer was determining their difficulty level. All participants then learned that they had been assigned the moderate difficulty anagram task, and all participants completed the same task. In this second task, participants completed a mixture of 15 solvable and five unsolvable anagrams. At the bottom of each page, participants had the option to proceed to the next anagram without completing the anagram. Persistence was measured by the average amount of time participants spent on the unsolvable anagrams. Performance was measured in two different ways, by the speed with which participants completed the solvable anagrams and by the amount of anagrams that they solved correctly.

Finally, among other demographic questions, participants completed the Multidimensional Perfectionism Scale to assess their levels of self-oriented perfectionism and socially prescribed perfectionism. I included a manipulation check and also asked participants how much they cared about their performance on the anagram task and to what extent they believed their feedback on the first anagram task. In addition, I asked what feedback they received to ensure that they remembered. After completing the study, participants were fully debriefed, learned that the feedback was randomly assigned, and received compensation for their time.

Measures

Aspiration level. Aspiration level was measured by participants' preferences to complete an easy, moderately difficult, or difficult version of the anagram task (Stoeber, Hutchfield, et al., 2008).

Persistence. For each unsolvable anagram, I removed reaction times that were outliers, that is, reaction times that were three or more standard deviations above the mean. Persistence was then operationalized as the average amount of time participants spent on the unsolvable anagrams (Toburen & Meier, 2010); higher scores indicated greater persistence.

Performance. I measured the amount of time in milliseconds that participants spent solving each solvable anagram. For each solvable anagram, I removed reaction times that were outliers (i.e., three or more standard deviations above the mean). Performance was then operationalized in two ways: the average speed in which participants completed the solvable anagrams (lower scores indicated higher performance) and the number of anagrams that participants solved correctly.

Perfectionism. Participants completed 30 items from the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991b). Specifically, participants completed the self-oriented and socially prescribed subscales. I excluded the other-oriented perfectionism subscale because the focus of this study was not on perfectionism directed outward to other people, but rather perfectionism directed inward and the effects of different motivations behind this desire to be perfect. Participants indicated their agreement with numerous statements on a 7-point scale from *Disagree* (1) to *Agree* (7;

See Appendix B for all items). Analyses indicated that participants' responses were highly reliable for each of the scales (self-oriented Cronbach's $\alpha = .93$, socially prescribed Cronbach's $\alpha = .88$).²

Checks. Participants selected what feedback they received to ensure that they remembered. Participants also responded to the questions, "To what extent did you believe your feedback on the first anagram task?" and "How much did you care about your performance on the anagram task?" on five-point scales from *Not at All* (1) to *Very Much* (5).

Results

I predicted that, in general, higher self-oriented perfectionism would predict higher aspiration level, persistence, and performance, whereas higher socially prescribed perfectionism would predict lower aspiration level, persistence, and performance. I did not predict a main effect for feedback in general. I expected, however, that feedback would have different effects on self-oriented and socially prescribed perfectionists.

Based on previous research, I formed two sets of competing hypotheses. One prediction was that self-oriented perfectionism could predict higher aspiration level, persistence, and performance after receiving both positive feedback and negative feedback, and socially prescribed perfectionism could predict higher levels after receiving positive feedback but lower levels after negative feedback. An alternative

² Stoeber, Kempe, & Keogh (2008) used items for the MPS to calculate separate scores for different facets: perfectionistic striving, importance of being perfect, others' high standards, and conditional acceptance. Analyses indicated that each of these scales were less reliable than the traditional MPS subscales (.79, .85, .76, and .75), respectively. Because (a) the reliabilities were lower, (b) the MPS was not developed with these facets in mind, and (c) we did not have different predictions for the self-related facets nor different predictions for the socially prescribed facets, we used the traditional MPS subscales for subsequent analyses.

hypothesis was that self-oriented perfectionism could predict higher levels of the three variables in response to positive feedback but lower levels in response to negative feedback, whereas socially prescribed perfectionism could predict higher levels after negative feedback and lower levels after positive feedback. Before testing these hypotheses, I examined participants' responses to the various checks included in the questionnaire.

Checks

Correct memory for feedback. Because it was vital that participants had attended to and remembered their feedback, I examined whether participants remembered the feedback that they had received. Analyses indicated that 394 (of 404) participants correctly recalled their feedback. Moreover, a chi-square analysis indicated that participants' correct memory for feedback did not differ based on feedback condition (chi square = .47, $p = .49$). In the following hypothesis tests, the 10 participants who did not correctly remember their feedback were excluded.

Believability. I examined whether participants believed the feedback they had received, using their responses on a 1 to 5 scale from *Not at All* to *Very Much*. Although the feedback manipulation was identical to a feedback manipulation used in previous work (Stoeber, Hutchfield, et al., 2008), analyses indicated that 111 participants responded *Not at All* when asked whether they believed their feedback. Furthermore, an analysis of variance indicated that the extent to which participants believed feedback differed based on the feedback condition, $F(1, 397) = 27.90, p < .01$. Specifically, participants in the positive feedback condition believed feedback more ($M = 3.06$,

$SD=1.30$) than participants in the negative feedback condition ($M=2.35$, $SD=1.39$). In an attempt to remediate this problem, I dropped all participants who indicated that they did not believe the feedback from hypothesis tests; 173 participants remained in the positive feedback condition (84% of original participants in the positive feedback condition) and 120 participants remained in the negative feedback condition (60% of original participants in the negative feedback condition). Moreover, I also included the degree to which participants believed feedback (from *Slightly* to *Very Much*) as a control variable in tests of the hypotheses.

Care. Participants reported that they cared about the task ($M= 3.78$ on a 5-point scale, $SD= 1.08$). Furthermore, the degree to which participants cared did not differ based on condition, $F(1, 396)= .13$, $p=.72$. Nonetheless, I included the degree to which participants cared as a control variable in primary tests of the hypotheses.

Hypothesis Tests

Before testing hypotheses, I examined the correlations among the variables, displayed in Table 1. I found weak negative correlations between feedback and (a) aspiration level and (b) performance count. Thus, those in the negative feedback condition tended to have lower aspiration levels and performance counts. In addition, I found weak positive correlations between self-oriented perfectionism and (a) aspiration level and (b) performance count. Therefore, as levels of self-oriented perfectionism increased, so did aspiration level and performance count. Socially prescribed perfectionism was not related to the dependent variables. There was also a moderate positive correlation between self-oriented perfectionism and socially prescribed

perfectionism, meaning that as self-oriented perfectionism increased, socially prescribed perfectionism tended to increase as well.

To provide more rigorous tests of my hypotheses, I conducted a series of moderated regression analyses. For each outcome variable, I tested hypotheses in three ways (because self-oriented and socially prescribed perfectionism were moderately correlated). The first two models were partial models that focused on each kind of perfectionism in isolation. In the first regression, I entered checks, condition, self-oriented perfectionism, and the interaction between self-oriented perfectionism and condition. In the second regression, I entered checks, condition, socially prescribed perfectionism, and the interaction between socially prescribed perfectionism and condition. Finally, in the third regression—the full model—I entered all predictors including checks, condition, self-oriented perfectionism, social prescribed perfectionism, the interaction of socially prescribed perfectionism and self-oriented perfectionism, the interaction of condition and self-oriented perfectionism, the interaction of condition and socially prescribed perfectionism, and finally the interaction of condition, socially prescribed perfectionism, and self-oriented perfectionism. For all analyses, negative feedback was coded as 1, positive feedback was coded as 0, and continuous variables were mean-centered.

Below, I focus on the results of the full model (the third regression) for each outcome variable. Unless otherwise noted, the patterns are the same for the full and partial models.

Aspiration Level

I first explored whether self-oriented and socially prescribed perfectionism and relevant interactions predicted aspiration level. Results are displayed in Table 2. When looking at the full model, one finds that feedback predicted aspiration level; participants who received negative feedback had lower aspiration levels than participants who received positive feedback. In addition, higher levels of self-oriented perfectionism predicted higher aspiration levels—this effect was not moderated by feedback condition. In contrast, socially-prescribed perfectionism predicted lower aspiration (a finding that was significant in the full model, but not the partial model). This effect was not moderated by feedback condition. Finally, there were no other significant interactions. These results provided mixed support of my hypotheses because I confirmed my hypothesis that there would be effects of perfectionism on aspiration level. However, I did not find that feedback influenced aspiration level differently for self-oriented and socially-prescribed perfectionists.

Persistence

Next, I explored whether self-oriented and socially prescribed perfectionism and relevant interactions predicted persistence. Results are shown in Table 3. Looking at the full model, feedback marginally predicted persistence; participants who received negative feedback had lower persistence than participants who received positive feedback. Also, higher levels of self-oriented perfectionism marginally predicted higher levels of persistence, and higher socially prescribed perfectionism marginally predicted lower persistence. These relationships were not moderated by feedback condition. There were

no other significant interactions between feedback condition, perfectionism, and persistence. In addition, when looking at the partial model, there were no significant findings. The results provided mixed support of my hypotheses because they supported my prediction that there would be effects of perfectionism on persistence, but I did not find that self-oriented and socially-prescribed perfectionists responded to feedback differently in terms of how it influenced their persistence.

Performance

I then explored whether self-oriented and socially prescribed perfectionism and relevant interactions predicted performance. As described in the method section, I measured performance in two different ways. I measured the speed with which participants completed the solvable anagrams, and I looked at the number of anagrams that they solved correctly.

Response time. Contrary to expectations, neither feedback condition, self-oriented perfectionism, socially oriented perfectionism, nor the relevant interactions significantly predicted the response time measure of performance. This was the case in both the full model and the partial models, as is evident in Table 4.

Count. Looking at the full model, higher levels of self-oriented perfectionism predicted higher performance levels. In contrast, higher levels of socially prescribed perfectionism predicted lower performance. I also found a significant interaction between feedback condition and socially prescribed perfectionism. Analyses of simple slopes indicated that for participants in the positive feedback condition, higher levels of socially prescribed perfectionism predicted fewer correct answers, $B = -1.34$, $SE = .37$, t

(277) = -3.60, $p = .00$. However, for those in the negative feedback condition, there was not a significant relationship between socially prescribed perfectionism and number of correct answers, $B = -.24$, $SE = .43$, $t(277) = -.56$, $p = .58$. In addition, the partial models show that feedback predicted performance; participants who received negative feedback had lower performance levels than participants who received positive feedback. There were no other significant interactions. The results provided mixed support of my hypotheses because they supported my prediction that there would be effects of perfectionism on performance, but I did not find most of the interactions that I anticipated. However, I did partially support one of my competing hypotheses because I found that those high in socially prescribed perfectionism who received positive feedback had low performance levels. Nevertheless, the corresponding prediction regarding an interaction with self-oriented perfectionism was not supported.

Discussion

The goal of this study was to investigate the effects that feedback has on self-oriented and socially prescribed perfectionists' aspiration levels, persistence, and performance on a task. Overall, results indicated that there was partial support for hypotheses. I predicted that higher levels of self-oriented perfectionism would correspond with higher aspiration, persistence, and performance, whereas higher levels of socially prescribed perfectionism would correspond with lower levels of each outcome variable. Results supported these hypotheses. Although I did not make any predictions regarding the main effects of feedback, I found that participants who received negative feedback had lower aspiration levels and persistence than participants who received

positive feedback. Feedback had a less robust effect on performance, however. According to the partial model, participants that received negative feedback correctly solved fewer anagrams than those who received positive feedback, but feedback did not influence performance according to the full model.

An important goal of the study was to test whether feedback would have different effects depending on participants' levels of self-oriented perfectionism and socially prescribed perfectionism. I had two competing hypotheses. On one hand, literature suggested that self-oriented perfectionism could predict higher aspiration level, persistence, and performance after receiving both positive feedback and negative feedback, and socially prescribed perfectionism could predict higher levels after receiving positive feedback but lower levels after getting negative feedback. This version of the hypothesis was partially supported because self-oriented perfectionism predicted high levels of the three variables regardless of feedback. On the other hand, literature suggested an alternative hypothesis. Self-oriented perfectionism could predict higher levels of aspiration, persistence, and performance after receiving positive feedback but lower levels in response to negative feedback, whereas socially prescribed perfectionism could predict higher levels after negative feedback and lower levels in response to positive feedback. In only one case did feedback interact with perfectionism type to predict an outcome: For participants in the positive feedback condition, higher levels of socially prescribed perfectionism predicted lower performance. This is consistent with my second set of hypotheses. However, feedback did not otherwise have different effects based on levels of self-oriented and socially-prescribed perfectionism.

Theoretical Implications

This study further explores the differences between self-oriented and socially prescribed perfectionism. In particular, this study tests perfectionism's relationship with motivation and performance variables in the short-term. It also expands on research that has shown that feedback manipulations impact affective reactions (Besser et al., 2008; Stoeber et al., 2014; Stoeber, Hutchfield, et al., 2008; Stoeber, Kempe, et al., 2008) by exploring how feedback shapes the relations between different kinds of perfectionism with aspiration level, persistence, and performance.

Overall, the results demonstrate how feedback can influence aspiration level and persistence. Participants responded more adaptively to positive feedback than negative feedback in regard to these variables. Past research has been inconsistent in determining what type of feedback is more effective. On one hand, there is the claim that positive feedback is more beneficial (Weiner, 1974; Zajonc & Brickman, 1969), but on the other hand there is the idea that negative feedback is more useful (Higgins, 1987; Kluger & De Nisi, 1996). Still more argue that it depends on different factors, such as the type of task or the person (Van Dijk & Kluger, 2011; Vancouver & Tischner, 2004). With this sample and with this anagram task, my results support the idea that negative feedback can be de-motivating, whereas positive feedback can be motivating. Nevertheless, although feedback shaped motivational variables, it had a less robust effect on actual performance. Future research could further explore this question of why feedback robustly predicted aspiration level and persistence but not performance in an attempt to get clearer results.

Possibly more importantly, this study provides further support for the claims that

self-oriented perfectionism is more adaptive whereas socially prescribed perfectionism is more maladaptive. Past research has demonstrated that the two types of perfectionism have different long-term effects on variables such as academic and athletic motivation and performance (Bong et al., 2014; Stoeber, 2011; Stoeber & Rambow, 2007; Stoll et al., 2008). This study provided insight showing that, in the short-term, self-oriented and socially prescribed perfectionism have an impact on variables like aspiration level, persistence, and performance. Even in short-term contexts, increased self-oriented perfectionism predicted higher levels of aspiration, persistence, and performance, whereas increased socially prescribed perfectionists predicted lower levels. By understanding how perfectionism shapes people in the short term, we can begin to understand its more long-term effects. In short-term contexts – like long-term contexts— self-oriented perfectionists tend to have more positive and adaptive responses whereas socially prescribed perfectionists had negative ones. This is important to explore because interventions can be implemented in the short-term contexts to prevent any negative long-term outcomes, and to promote positive long-term outcomes. By applying strategies to lower a person's level of socially prescribed perfectionism, one can avoid the negative effects down the road. Likewise, by encouraging self-oriented perfectionism, some positive long-term motivational and performance outcomes could result.

Finally, this study investigated the impact of feedback on self-oriented and socially prescribed perfectionists' aspiration levels on a specific task, how much they were willing to persist at that task, and how well they actually performed. Contrary to predictions, the current research suggests that self-oriented and socially prescribed

perfectionists do not robustly respond differently to positive and negative feedback in terms of how it influences their aspiration levels, persistence, and performance. I expect that further research could shed more light on this topic. I discuss ideas for future research below.

Future Directions/Limitations

As mentioned above, I did not find support for the hypothesis that feedback would have different impacts on people depending on their levels of self-oriented and socially prescribed perfectionism. I only found one interaction that indicated otherwise. One limitation of this study is that it was completed entirely online. This could have contributed to why I did not find all of the anticipated results. One could argue that the participants did not really care about their performance on the task in the same way as they did in previous research, and that could have influenced the results in this way. However, I included how much participants cared in a manipulation check and control variable in hypothesis tests. Nevertheless, perhaps participants' motivation could have been financial rather than achievement oriented. Because the study was conducted on MTurk, participants might have been primarily motivated by money rather than achievement or self-presentational motives. Nevertheless, in previous studies, participants also may have taken part for a variety of reasons: whether they were motivated by a monetary incentive, class credit, or some other factor. To address this issue in future research, studies could measure the degree to which participants cared for non-monetary reasons. In a replication of this study, for example, one could ask participants a number of questions to assess, for example, their levels of how much they

cared about their performance for personal reasons and how much they cared for monetary reasons.

In addition, participants' low levels of believability could be part of what led to feedback not having the effects that I expected. Although the wording of the feedback I used was based on past research (Stoeber, Hutchfield, et al., 2008), a considerable number of participants indicated that they did not believe their feedback, particularly those who got negative feedback. Although I attempted to address this problem by excluding participants who indicated that they believed the feedback "not at all" and including believability as a control variable, it still raises concerns that should be attended to in future research. An important and unanswered question is whether there were psychological differences between participants who believed feedback and those who did not. One notable concern is the degree to which believability was related to key variables such self-oriented and socially oriented perfectionism, as well as outcomes variables. One possibility, for example, was that believability was related to perfectionism. It is possible that perfectionistic participants coped with negative feedback by adopting the mindset that the feedback must not have been true. Consistent with this possibility, more people who received negative feedback did not believe it than those who received positive feedback. Another possibility is that believability may have only seemed artificially high in this study, because participants were primed to disbelieve feedback due to the presence of the manipulation check. Simply asking participants how much they believed their feedback might have made them suspicious when they otherwise were not and primed them to think that they should not believe feedback. In any event, future

research should explore the ways in which self-oriented and socially prescribed perfectionists cope with feedback, including whether self-serving motives shape the degree to which they believe feedback in the first place.

In addition to addressing the issue with believability, future research could also look into the effects that the source of the feedback might have on aspiration level, persistence, and performance for self-oriented and socially prescribed perfectionists. Particularly, future research could investigate the differences between computer-generated feedback and feedback given by another person. Socially prescribed perfectionists, for instance, are motivated to be perfect because of others' expectations of them. Therefore, socially prescribed perfectionists might respond differently if it was the experimenter who was giving them feedback face-to-face rather than a computer. In addition, according to social impact theory (Latané, 1981), the strength, immediacy, and number of a source play a role in how much of an influence the source has on a person. Source strength or importance particularly can be determined by factors such as status, age, socioeconomic status, prior relationship with the target, and future power over the target (Latané, 1981). Therefore, it would also be interesting to see how the importance of the source giving the feedback might influence how perfectionists, particularly socially prescribed perfectionists, would respond. Research like this could look at the question of whether the source giving the feedback has to be important in order to motivate socially prescribed perfectionists. Similarly, another study could manipulate task importance and investigate how that influences participants' responses to feedback, focusing on how self-oriented perfectionists react in particular. As an important source might have a greater

influence on socially prescribed perfectionists, an important task might impact self-oriented perfectionists more.

It is also important to consider how people might have thought about the feedback. The feedback that I gave was relative rather than absolute. People learned how well they performed compared to others (in the top or bottom 20th percentile) rather than their objective performance (the number of anagrams solved correctly). However, when other people are not in the picture, then participants might react to feedback differently. Because socially prescribed perfectionists care about how other people view them, this comparison of themselves to others might influence them more than it would influence self-oriented perfectionists. Self-oriented perfectionists focus more on themselves instead of others, so objective feedback might have more of an impact on them than relative feedback. Future research could explore in depth how relative or absolute feedback might influence perfectionists.

Research could also investigate if it matters whether people receive feedback alone or in front of others. Since socially prescribed perfectionists care what other people think about them, if they were under the impression that other people know their scores, feedback might have a more amplified effect on their performance. Self-oriented perfectionists, however, most likely would not care that other people would know how well they performed because their motivation is internal. A future study could, for example, explore this in an online study where participants are under the impression that there are other participants taking part in the study at the time and that all of the scores are shared among the group.

In general, although I did not find some of the results I expected, I did uncover one interaction that was predicted in one of my competing hypotheses. I found that higher socially prescribed perfectionism predicted lower performance in the positive feedback condition but not the negative feedback condition. This is a plausible outcome because participants were told that they performed well from an external source, and socially prescribed perfectionists are particularly motivated by others to be perfect. Thus, it is possible that the positive feedback might have made socially prescribed perfectionists feel complacent about their performance, and for the second task they might not have felt that they needed to perform well again because they had already proven themselves. In short, in response to positive feedback, socially prescribed perfectionists might have lost motivation to perform well and therefore performed poorly.

Real-World Implications

Understanding these short-term effects of perfectionism can help us understand the dynamics that shape people's performance in domains such as school and work. Of particular performance, these findings suggest short-term interventions that might shape aspiration level and persistence. These short-term interventions could, feasibly, have an impact on long-term outcomes in a real-world setting.

This research, for example has important practical implications regarding the ways that positive and negative feedback influences people's aspiration levels and persistence. According to these results, when people are told that they perform poorly at a task, they then aspire to less and are less motivated to persist at a subsequent task, although there is less robust effect on actual performance in that task. Therefore, in

academics, work, athletics, and even social contexts, it is important to be intentional in how one words negative feedback; people might respond to negative feedback by essentially giving up on subsequent tasks as they lower their aspiration levels and persist less as a result. Therefore, teachers, bosses, coaches, and other authority figures could attempt to frame negative feedback in a way that does not de-motivate others. Rather than focusing only on the person's perceived failure after a task, they could additionally provide support and encourage the person to do better on the next task. Nonetheless, there may be potential benefits of negative feedback that were not measured in this study. For instance, people who receive realistic negative feedback might have a better sense of their true abilities, which is very useful. Unlike negative feedback, positive feedback is related to high aspiration level, persistence, and performance. The results of this study highlight the non-ambiguous benefits of positive feedback.

There are also important implications with regard to what this study reveals about the ways that self-oriented and socially prescribed perfectionism influence aspiration level, persistence, and performance. We know that self-oriented perfectionism is more adaptive whereas socially-prescribed perfectionism is more maladaptive. Therefore, this study is part of a large body of work that suggests we should not give people the impression that we expect perfection from them. When people feel pressure from others to be perfect, negative effects arise. If people can lessen the external pressure that the person feels to be perfect, then he or she can avoid the harmful effects of having that mindset. This is true in an academic setting, in a work environment, and in everyday social situations. In contrast, intrinsic motivation to be perfect is not a problem, as it can

actually be adaptive. Therefore, people should encourage others to be self-oriented perfectionists by helping them see for themselves the importance of doing their best and even encouraging self-motivated striving for perfection rather than criticizing perfectionism as a whole as something harmful that the person should let go of. Many people view perfectionism to be negative all together, but it does have its benefits. In order for perfectionism to be beneficial, however, people have to want it for themselves and desire it in a healthy way.

Conclusion

Through this study, I hoped to build upon research on the differences between self-oriented and socially prescribed perfectionism by exploring their short-term effects on aspiration level, persistence, and performance and the role that positive and negative feedback play. This research supported the assertion that perfectionism is not necessarily the negative characteristic that it is often perceived to be. In short, Salvador Dalí was not entirely correct. Perfectionism can be adaptive when people's desire to be perfect is internally motivated, and can even positively relate to factors such as aspiration level, persistence, and performance. Perfectionism is maladaptive when people feel pressure from others to be perfect and feel that they need to meet these unrealistic standards to get approval, which then negatively influences important motivational and performance variables. Although I found that the two types of perfectionism did not predict different responses to feedback, the adaptive and maladaptive qualities of self-oriented and socially prescribed perfectionism were highlighted throughout the findings of this study—most importantly, I demonstrated that these differences could be found in short-

term contexts, something that past research has not fully explored. The current research is important because it yields insights that help us understand the differences between the long-term consequences of self-oriented and socially prescribed perfectionism, and leads us down a road toward interventions that reduce negative outcomes and lead to lasting positive outcomes.

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Table 1.

Correlations among Study Variables

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.	6.	7.	8.
1. Care	3.88	1.00	1							
2. Believability	3.36	1.05	.27**	1						
3. Condition	.41	.49	.01	-.09	1					
4. Self-Oriented Perfectionism	4.54	1.08	.33**	.04	-.04	1				
5. Soc. Prescribed Perfectionism	3.64	.92	.07	.04	-.01	.55**	1			
6. Aspiration level	1.62	.67	.12*	.07	-.13*	.19**	-.06	1		
7. Persistence	32.48	20.42	.080	.00	-.08	.06	-.04	.15*	1	
8. Performance RT	16.11	7.80	.05	.02	-.02	.03	-.03	.03	.63**	1
9. Performance Count	10.65	3.75	.22**	.08	-.12*	.21**	-.05	.25**	.36**	.07

Note. Significant effects are in bold. The positive feedback condition was coded as 0 and the negative feedback condition was coded as 1.

** $p < .01$, * $p < .05$

Table 2

Relationship between Feedback Condition, Perfectionism, and Aspiration Level

	<i>Self-Oriented</i>				<i>Socially Prescribed</i>				<i>Self and Socially Prescribed</i>			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Cond.	-.17	.08	-2.16	.03	-.18	.08	-2.24	.03	-.15	.09	-1.76	.08
Self-Oriented	.15	.05	2.99	.00	--	--	--	--	.22	.06	3.64	.00
Cond.×Self	-.10	.07	-1.40	.16	--	--	--	--	-.10	.09	-1.18	.24
Socially Prescribed	--	--	--	--	-.03	.06	-.47	.64	-.17	.07	-2.54	.01
Cond.×Social	--	--	--	--	-.06	.09	-.72	.47	.01	.10	.06	.95
Social×Self	--	--	--	--	--	--	--	--	-.04	.04	-.92	.36
Cond.×Social×Self	--	--	--	--	--	--	--	--	-.02	.06	-.33	.75

Note. Significant effects are in bold.

Table 3

Relationship between Feedback Condition, Perfectionism, and Persistence

	<i>Self-Oriented</i>				<i>Socially Prescribed</i>				<i>Self and Socially Prescribed</i>			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>T</i>	<i>p</i>
Cond.	-3.46	2.48	-1.39	.16	-3.45	2.48	-1.40	.16	-4.79	2.68	-1.79	.08
Self-Oriented	1.41	1.56	.90	.37	--	--	--	--	3.62	1.92	1.88	.06
Cond.×Self	-2.03	2.28	-.89	.37	--	--	--	--	-2.85	2.79	-1.02	.31
Socially Prescribed	--	--	--	--	-1.29	1.75	-.74	.46	-3.49	2.11	-1.65	.10
Cond.×Social	--	--	--	--	.41	2.67	.15	.88	2.59	3.20	.81	.42
Social×Self	--	--	--	--	--	--	--	--	1.16	1.26	.92	.36
Cond.×Social×Self	--	--	--	--	--	--	--	--	2.24	1.93	1.16	.25

Note. Significant effects are in bold.

Table 4

Relationship between Feedback Condition, Perfectionism, and Performance (Response Time)

	<i>Self-Oriented</i>				<i>Socially Prescribed</i>				<i>Self and Socially Prescribed</i>			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Cond.	-.26	.95	-.28	.78	-.30	.95	-.31	.76	-.69	1.04	-.67	.51
Self-Oriented	-.19	.60	-.32	.75	--	--	--	--	-.08	.75	-.11	.91
Cond.×Self	.62	.88	.70	.48	--	--	--	--	1.12	1.08	1.04	.30
Socially Prescribed	--	--	--	--	-.28	.67	-.42	.68	-.24	.82	-.30	.77
Cond.×Social	--	--	--	--	-.02	1.03	-.02	.99	-.66	1.25	-.53	.60
Social×Self	--	--	--	--	--	--	--	--	-.15	.49	-.30	.76
Cond.×Social×Self	--	--	--	--	--	--	--	--	.83	.75	1.11	.27

Note. Significant effects are in bold.

Table 5

Relationship between Feedback Condition, Perfectionism, and Performance (Count)

	<i>Self-Oriented</i>				<i>Socially Prescribed</i>				<i>Self and Socially Prescribed</i>			
	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Cond.	-.87	.44	-1.97	.05	-.92	.44	-2.09	.04	-.64	.47	-1.37	.17
Self-Oriented	.55	.28	2.00	.05	--	--	--	--	1.27	.34	3.76	.00
Cond.×Self	-.13	.41	-.31	.76	--	--	--	--	-.73	.49	-1.49	.14
Socially Prescribed	--	--	--	--	-.55	.31	-1.75	.08	-1.34	.37	-3.60	.00
Cond.×Social	--	--	--	--	.64	.48	1.33	.19	1.10	.56	1.95	.05
Social×Self	--	--	--	--	--	--	--	--	.20	.22	.88	.38
Cond.×Social×Self	--	--	--	--	--	--	--	--	-.38	.34	-1.12	.26

Note. Significant effects are in bold.

Appendix A

Solvable Anagrams (Gilhooly & Hay, 1977):

HWCTA (WATCH), CPHOR (PORCH), VGOEL (GLOVE), DHIWT (WIDTH), UEJCI (JUICE), NHTOM (MONTH), LHCTO (CLOTH), LTANP (PLANT), RFATC (CRAFT), CNIFH (FINCH), DNEXI (INDEX), KOCAL (CLOAK), CRTKU (TRUCK), OLWRD (WORLD), OHDCR (CHORD), HNEBC (BENCH), NICBA (CABIN), EUNOC (OUNCE), BOTIR (ORBIT), BHUTM (THUMB), KTEON (TOKEN), OSHEU (HOUSE), LBPIM (BLIMP), HATBC (BATCH), GPURO (GROUP), HRACI (CHAIR), HMRYE (RHYME), TIRFU (FRUIT), BLACE (CABLE), AELKN (ANKLE), RLCYI (LYRIC), NYOHE (HONEY), TWAHE (WHEAT), BMLAU (ALBUM), and CEKLR (CLERK)

Unsolvable anagrams (Toburen & Meier, 2010):

PADUS, KYLIX, DBHOC, MALAE, and ALAVT

It is very important that I am perfect in everything I attempt	☐	☐	☐	☐	☐	☐	☐		X	
I strive to be the best at everything I do	☐	☐	☐	☐	☐	☐	☐		X	
The people around me expect me to succeed at everything I do	☐	☐	☐	☐	☐	☐	☐			X
I demand nothing less than perfection of myself	☐	☐	☐	☐	☐	☐	☐		X	
Others will like me even if I don't excel at everything*	☐	☐	☐	☐	☐	☐	☐			X
It makes me uneasy to see an error in my work	☐	☐	☐	☐	☐	☐	☐		X	
Success means that I must work even harder to please others	☐	☐	☐	☐	☐	☐	☐			X
I am perfectionistic in setting my goals	☐	☐	☐	☐	☐	☐	☐		X	
Others think I am okay, even when I do not succeed*	☐	☐	☐	☐	☐	☐	☐			X
I feel that people are too demanding of me	☐	☐	☐	☐	☐	☐	☐			X
I must work to my full potential at all times	☐	☐	☐	☐	☐	☐	☐		X	

Although they may not say it, other people get very upset with me when I slip up	☐	☐	☐	☐	☐	☐	☐			X
I do not have to be the best at whatever I am doing*	☐	☐	☐	☐	☐	☐	☐		X	
My family expects me to be perfect	☐	☐	☐	☐	☐	☐	☐			X
I do not have very high goals for myself*	☐	☐	☐	☐	☐	☐	☐		X	
My parent rarely expected me to excel in all aspects of my life*	☐	☐	☐	☐	☐	☐	☐			X
People expect nothing less than perfection from me	☐	☐	☐	☐	☐	☐	☐			X
I set very high standards for myself	☐	☐	☐	☐	☐	☐	☐		X	
People expect more from me than I am capable of giving	☐	☐	☐	☐	☐	☐	☐			X
I must always be successful at school or work	☐	☐	☐	☐	☐	☐	☐		X	
People around me think I am still competent even if I make a mistake*	☐	☐	☐	☐	☐	☐	☐			X

*Indicates items that are reverse-coded.