

Running Head: THE GOOD AND BAD OF AMBIVALENCE

The good and bad of ambivalence: desiring ambivalence when  
the outcome is uncertain

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### Abstract

Decades of past research point to the downside of evaluative inconsistency. Generally, this past research suggests that having both positive and negative reactions towards the same object is an unpleasant state that can result in negative affect. Consequently, people are often motivated to reduce or resolve their ambivalence in various ways. The current research takes a different tack and explores the possibility that people sometimes desire to be ambivalent and seek information to deliberately cultivate their ambivalence for strategic self-protection purposes. Across educational, employment and consumer choice settings, we demonstrate that when people are uncertain they can obtain a desired object or outcome, they will cultivate ambivalence in order to protect their feelings in the event that they fail to get what they want. We find that people are most likely to generate ambivalence when they are most uncertain that they can obtain their desired target. Depending on the outcome, this cultivated ambivalence can either be useful (when people fail to obtain the desired target) or backfire (when people obtain the desired target). Furthermore, we explore whether people are more likely to expose themselves to the possibility of failure to the extent that they are ambivalent.

People sometimes hold inconsistent evaluations, that is, both positive and negative reactions towards the same object (e.g., Kaplan, 1972; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995). One can love their job, but hate the commute; approve of their spouse's educational views, but disapprove of his or her political views; or like the layout of a new house but dislike the location. The term ambivalence refers to these conflicting thoughts and feelings. Research on ambivalence originated in response to the inherent limitation of bipolar measures of attitudes (Kaplan, 1972; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995). Bipolar scales require respondents to place their attitude towards an object on a unidimensional continuum, such as a scale ranging from negative to positive with neutral in the middle. One limitation of this approach is that it does not allow for distinguishing ambivalent attitudes (both positive and negative reactions) from indifferent attitudes (neither positive or negative reactions). In both cases, the respondent would select the neutral mid-point of the scale.

The measurement of ambivalence was developed precisely because of this issue and avoids this limitation by separately assessing the positive and negative components of the attitude (Kaplan, 1972). Although several ways of computing ambivalence based on these assessments have been developed (Kaplan, 1972; Priester & Petty, 1996; Thompson, Zanna, & Griffin, 1995), they all are designed to reflect the notion that ambivalence exists to the extent that there is some degree of both positive and negative reactions towards the same object. Ambivalence has received attention from scholars in various disciplines such as psychology (Conner & Armitage, 2008), political science (Rudolph & Popp, 2007) and consumer behavior (Nowlis, Kahn, & Dhar, 2002).

*The Aversiveness of Ambivalence*

Past research points to the downside of holding ambivalent attitudes (e.g., Hass, Katz, Rizzo, Bailey, & Moore, 1992; King & Emmons, 1990; Newby-Clark, McGregor, & Zanna, 2002). Generally, this past research suggests that ambivalence is an aversive and undesirable state that can result in negative affect. Ambivalence has been shown to cause discomfort, anxiety and tension particularly in situations when both the positive and negative components of the attitude are simultaneously accessible (Hass, Katz, Rizzo, Bailey, & Moore, 1992; Newby-Clark, McGregor, & Zanna, 2002; Nordgren, van Harreveld, & van der Pligt, 2006; Williams & Aaker, 2002). The aversiveness of ambivalence has been established not only with controversial attitude targets such as racial attitudes, abortion and capital punishment (Hass et al., 1992; Newby-Clark, McGregor, & Zanna, 2002) but also with more benign attitude objects such as photographic film and a moving company (Williams & Aaker, 2002). Mixed emotional persuasive appeals (i.e. advertisements evoking both happiness and sadness) led to heightened levels of discomfort in individuals with a lower propensity to accept duality (Williams & Aaker, 2002). Psychological tension and discomfort have also been found to result from accessible high levels of racial ambivalence among White Americans (i.e. simultaneously holding both pro-black and anti-black attitudes see Hass et al., 1992) as well as accessible ambivalent attitudes towards capital punishment and abortion (Newby-Clark, McGregor, & Zanna, 2002).

Because ambivalence tends to be a negative state, people are often motivated to reduce the inconsistency. They take active steps to resolve the ambivalence by seeking information that would help them either reduce or eliminate it altogether (Briñol, Petty, &

Wheeler, 2006; Clark, Wegener, & Fabrigar, 2008; Maio, Bell, & Esses, 1996; Nordgren et al., 2006; Sengupta & Johar 2002; Zemborain & Johar 2007). Maio et al. (1996) showed that people pay careful attention to new information that might help them resolve their ambivalence regarding a minority group. Ambivalent individuals have been shown not only to elaborate on information that would help them reduce their ambivalence but also avoid information that might increase their ambivalence (Clark, Wegener, & Fabrigar, 2008). The role of discomfort in motivating people to reduce their ambivalence was directly examined in a clever experiment using placebo pills (Nordgren et al., 2006). Participants resolved their ambivalence regarding genetically modified food by spontaneously focusing on one side of this issue. One-sided thinking was not initiated when discomfort could be attributed to another source, namely a sugar pill that participants were told induces tension.

#### *Ambivalence as a Means of Self-protection*

In the present research, we take a different tack and explore the possibility that people might sometimes desire to be ambivalent and seek information to deliberately cultivate ambivalence for strategic self-protection purposes. People have been shown to employ various strategies to protect themselves from uncertain and potentially negative outcomes (Cantor & Norem, 1989; Higgins & Harris, 1988; Martin, Marsh, & Debus, 2001; Tice & Baumeister, 1990). For example, people self-handicap by procrastinating, drinking heavily or strategically reducing their effort in order to have an excuse in the event of failure (Higgins & Harris, 1988; Tice & Baumeister, 1990). Engaging in these self-handicapping behaviors allows individuals to attribute their failure to lack of effort, for example, and not lack of ability. Another well-documented strategy is defensive-

pessimism, which involves setting unrealistically low expectations for success (Cantor & Norem, 1989; Martin, Marsh, & Debus, 2001). People engage in this strategy in order to motivate themselves to put forth more effort to enhance the likelihood of success on the one hand and to set lower standards of performance on the other.

We suggest that ambivalence is another psychological means of protection that people can utilize when they are uncertain whether they can obtain a desired outcome. Rather than modify some aspect of their effort or expectations, people might sometimes adopt particular views of the outcome that buffer them against the sting of failure. Specifically, when people want an object or outcome they are uncertain they can obtain, such as a coveted job, house, or admission to a prestigious school, they can cultivate ambivalence in order to protect their feelings in the event that they fail to get what they want. Depending on the outcome, this cultivated ambivalence can either be useful (when people fail to obtain the desired target) or backfire (when people obtain the desired target). In other words, cultivating both positive and negative thoughts and feelings towards a desirable target can potentially protect one's feelings in the event that it is not obtained. Not getting what one wants is aversive, at a minimum, and when self-relevant, can threaten one's self-views as a good and competent person. Therefore, making an attempt to recognize that a coveted target has drawbacks as well as advantages might mitigate the disappointment that can occur if that target is ultimately not obtained. However, if the desirable target is obtained, these cultivated thoughts and feelings can be detrimental, as the person has now endorsed the drawbacks of their desired target.

In essence, we propose that ambivalence cultivation serves as an insurance policy, one that is costly and without benefit in the event that one doesn't need it. We posit that

people are most likely to generate ambivalence when they are most uncertain that they can obtain their desired target (i.e. 50%-50% chance). We predict that when people think they are very likely to obtain their desired target or very unlikely they will not turn to ambivalence. If one thinks one is sure to obtain the target, there is no need for self-protection. Similarly, if one thinks one has very little shot, the potential failure provides little threat. For example, though a casual amateur athlete might desire to play in the NBA some day, he need not cultivate ambivalence toward the NBA to protect his potential self-worth. Its very unobtainability renders it non-threatening. Hence, it is those outcomes that are potentially within reach but potentially unreachable that require the greatest preemptive self-protection.

We suggest that the protective utility of ambivalence can have an important downstream consequence. We posit that people would be more likely to expose themselves to the possibility of failure to the extent that they have cultivated ambivalence, and hence are protected from possible feelings that could result from negative outcomes. Achieving positive outcomes typically requires some exposure to risk--one might fail or be refused, which could be subjectively worse than trying at all--but overcoming risk aversion could, in many cases, lead one to objectively better outcomes. Thus, when it comes to reducing risk aversion, this downstream consequence of ambivalence can potentially be adaptive.

### *The Present Research*

Across educational, employment and consumer choice settings, we examine whether ambivalence serves as a psychological means of protection from future disappointment and the downstream consequences of being ambivalent. Experiment 1

tests whether people cultivate ambivalence and examines the effect of ambivalence on self-view and discomfort in a university application setting. Experiment 2, explores the effect of ambivalence on self-view in a real world employment seeking setting. As suggested by our self-protective account, we examine whether job candidates are most likely to cultivate ambivalence when they are most uncertain whether they can obtain a desired job. We explore whether job candidates want information to actively cultivate their ambivalence and whether they are more likely to be open to negotiating their position to the extent that they are ambivalent. In experiment 3, we directly manipulate ambivalence in order to further establish the causal link between ambivalence and self-protection. Consistent with our self-protective account we explore whether house bidders are more likely to make a lower bid on a desired house to the extent that they are ambivalent.

## EXPERIMENT 1

In Experiment 1, we sought to examine whether people cultivate ambivalence under outcome uncertainty and how this ambivalence affects resulting self-views and discomfort. To directly test our self-protective account, we took two steps. First, we used a design that included measurements in two time periods, namely before the outcome was known and after the outcome was known. This allowed us to examine the effect of being ambivalent prior to finding out the outcome on self-view and discomfort after finding out the outcome. Second, we introduced mixed information about the chosen option (i.e. both positive and negative), in order to allow for varying degrees of ambivalence before the outcome was known. In other words, we provided mixed information to enable the cultivation of varying degrees of ambivalence.

We predicted that depending on the outcome, this cultivated ambivalence would either be useful (when people failed to obtain the desired target) or backfire (when people obtained the desired target). In other words, cultivating both positive and negative thoughts and feelings towards a desirable target can potentially protect one's feelings in the event that it is not obtained. However, if the desirable target is obtained, these cultivated thoughts and feelings can be detrimental, as the person has now endorsed the drawbacks of their desired target. Specifically, we expected that when people failed to obtain their desired target, the more ambivalent people were prior to finding out the outcome, the better they would feel about themselves, whereas the opposite pattern would emerge when people obtained their desired target. In that case, the more ambivalent people were, the worse they would feel about themselves once they found out the outcome.

In order to provide further evidence that ambivalence is not necessarily a negative state that people attempt to reduce, we directly assessed participants' discomfort-related emotions. We predicted that we would replicate past research showing that ambivalence is associated with discomfort (Hass, Katz, Rizzo, Bailey, & Moore, 1992; Newby-Clark, McGregor, & Zanna, 2002; Nordgren, van Harreveld, & van der Pligt, 2006; Williams & Aaker, 2002) but only when people obtained their desired outcome. When they failed to obtain their desired target, we expected ambivalence would not lead to more discomfort. In other words, when people failed to obtain their desired outcome we expected ambivalence to be beneficial in terms of self-view and impose no cost in terms of discomfort.

## Method

### *Participants and Design*

A total of 206 participants (99 males, 100 females, 7 non-reporting) from a national online pool took part in exchange for monetary compensation. Participants were randomly assigned to one of two university application outcome conditions: acceptance or rejection.

### *Procedure*

On the opening screen of the study, participants were led to believe that they were taking part in research exploring the role of imagination and visualization techniques in people's perceptions of different kinds of issues. All participants were told that they would be asked to read a scenario, and that they should try to put themselves in the situation and imagine that it was actually happening to them. When participants continued to the next screen, they were instructed to imagine that after a great deal of work they finally finished their application for admission to their top choice graduate school. They learned that they had spent months preparing their application as the school was very competitive and the acceptance rate was very low. Last year two top students from their undergraduate program were rejected. They had applied to other schools that they were considering to attend, but if they were to get in to this university it would mean a lot to them. They learned that they had been accepted to their backup university but they hadn't yet heard anything from their top choice university.

Next, they read that while waiting for a doctor's appointment they found the latest issue of the U.S. News and World Report. The report consisted of a table comparing the top choice university and the back up university on five of the following dimensions -

post graduation salary, employment rate three months after graduation, student-teacher ratio, tuition, and average teacher's rating (out of 5) (see table 1). In the report, the top choice university was superior on three out of these five dimensions (as indicated by numeric values). Participants were told to examine the information carefully. They then completed the ambivalence measures (time 1 – before the outcome was known). Following a filler task, they learned about their application outcome. They then completed the self-view and discomfort items (time 2 – after the outcome was known).

### *Independent Variables*

*University Application Outcome.* Participants were randomly assigned to university application outcome conditions. In the *rejection* condition, they read that a month after hearing that they were accepted to their backup university they learned that they had not been accepted to their top choice university. In the *acceptance* condition, they read that a month after hearing that they were accepted to their backup university they learned that they had been accepted to their top choice university.

### *Dependent Measures*

*Objective Ambivalence.* Objective ambivalence was measured before the application outcome was revealed. Participants were asked to complete 2 items adapted from Kaplan (1972). First, participants received the following question: “Considering only your NEGATIVE thoughts and feelings about your top choice university and ignoring the positive ones, how negative would you say your negative thoughts and feelings toward the university are?” Next we assessed positive reactions: “Considering only your POSITIVE thoughts and feelings about your top choice university and ignoring

the negative ones, how positive would you say your positive thoughts and feelings toward the university are?” Responses were provided on separate scales ranging from 0 (No negative [positive] thoughts or feelings) to 10 (Maximum negative [positive] thoughts or feelings). Ambivalence was then calculated for each participant using a formula developed by Thompson, Zanna, and Griffin (1995):  $\text{ambivalence} = (P + N)/2 - |P - N|$ , where P = positive and N = negative.

*Self-View.* In order to assess self-view, participants were asked the following question after they found out their application outcome: “Given the status of your top choice university application, how good do you feel about yourself?” using a scale ranging from 1 (bad) to 7 (good).

*Discomfort.* Following self-view, participants indicated to what extent the following feelings (tense, anxious, uneasy) apply to them when they think about their top choice university (adapted from Devine, Monteith, Zuwerink, & Elliot, 1991). Responses were averaged to form a composite index ( $\alpha = .91$ ) – such that higher ratings reflected feeling more discomfort.

## Results and Discussion

*Self-View.* We hypothesized that when people failed to obtain their desired target, the more ambivalent people were prior to finding out the outcome, the better they would feel about themselves after learning the outcome, whereas the opposite pattern would emerge when people obtained their desired target. In that case, the more ambivalent people were, the worse they would feel about themselves once they found out the outcome. In order to test this hypothesis, we submitted the self-view data to a regression analysis using objective ambivalence, university application outcome, and their

interaction as predictors. Following the recommendation of Aiken & West (1991), the continuous predictor in this analysis, and in subsequent regression analyses, was centered (i.e., the mean was set to zero). There was a main effect of university application outcome on self-view, such that those who were accepted felt better about themselves than those who were rejected from the university,  $\beta = 3.16$ ,  $t(202) = 20.06$ ,  $p < .001$ . As illustrated in figure 1, though, we also found the predicted interaction between application outcome and objective ambivalence before the outcome was known,  $\beta = -.18$ ,  $t(202) = -3.69$ ,  $p < .001$ . For people who were rejected from the university, the more objectively ambivalent they were prior to finding out the outcome, the better they felt about themselves once the outcome was known,  $\beta = .06$ ,  $t(202) = 1.98$ ,  $p = .049$ , whereas for people who were accepted to the university, the more objectively ambivalent they were prior to finding out the outcome, the worse they felt about themselves once the outcome was known,  $\beta = -.12$ ,  $t(202) = -3.16$ ,  $p = .002$ . Thus, cultivating ambivalence was beneficial in terms of self-view when people failed to obtain their desired outcome, but was detrimental when people obtained their desired outcome.

*Discomfort.* We expected that ambivalence would be associated with greater discomfort when people obtained their desired outcome, but would not be associated with increased discomfort when people failed to obtain their desired outcome. In order to test this prediction, we submitted the discomfort data to a regression analysis using objective ambivalence, university application outcome, and their interaction as predictors. There was a main effect of university application outcome on discomfort, such that those who were rejected from the university felt more discomfort-related emotions than those who were accepted to the university,  $\beta = -2.01$ ,  $t(202) = -9.35$ ,  $p < .001$ . As illustrated in figure 2, this main effect was qualified by the predicted interaction between application

outcome and objective ambivalence before the outcome was known,  $\beta = .21$ ,  $t(202) = 3.15$ ,  $p = .002$ . For people who were rejected from the university, there was no relationship between ambivalence prior to finding out the outcome and the discomfort they felt once the outcome was known,  $\beta = -.06$ ,  $t(202) = -1.50$ ,  $p = .135$ , whereas for people who were accepted to the university, the more ambivalent they were prior to finding out the outcome, the more discomfort they felt once the outcome was known,  $\beta = .14$ ,  $t(202) = 2.86$ ,  $p = .005$ . Therefore, replicating past research we found that ambivalence was associated with increased discomfort, but this effect was only observed when people obtained their desired outcome. When people failed to obtain their desired outcome, ambivalence did not result in any added discomfort.

These findings lend support to our self-protective account. Ambivalence prior to finding out the outcome was protective when people failed to obtain their desired outcome but was maladaptive when they obtained their desired outcome. Moreover, ambivalence before the outcome was known was associated with more discomfort only when people obtained their desired target. Stated differently, cultivating ambivalence before the outcome was known had no cost in terms of discomfort and provided a benefit in terms of self-view, when people did not obtain their desired outcome.

## EXPERIMENT 2

In Experiment 2 we examined the effect of being ambivalent in a real world context, namely searching for a coveted job. In order to provide support that the effect is driven by ambivalence and not by devaluing the desired outcome, we measured attitudes towards the most desired job before candidates heard whether they received the job offer. We predicted that attitudes towards the job would be favorable and would not affect

peoples' self-view once the outcome was known.

In addition to examining the protective utility of ambivalence, in the current experiment, we sought to examine when people would be most likely to cultivate ambivalence. We predicted that people would be most likely to generate ambivalence when they were most uncertain that they could obtain their desired target. That is, job candidates would turn to ambivalence when they are on the fence - when they think that obtaining their desired job is a possibility, but they are uncertain that it will actually pan out. Specifically, we expected that there would be curvilinear relationship between perceived likelihood of obtaining the target and objective ambivalence, with low and high likelihoods being associated with low ambivalence and mid-level likelihood being associated with the most ambivalence.

To provide evidence that people indeed seek out ambivalence when desiring targets they are uncertain they can obtain, we examined the type of information the job candidates wanted to receive prior to finding out whether they got the job. We predicted that they would be most likely to seek two-sided information when they were most uncertain that they could obtain their desired target. Adding two-sided information, by definition, increases ambivalence, as it leads to increased intensity of both positive and negative thoughts and feelings.

Finally, we explored whether people would be more likely to expose themselves to the possibility of failure to the extent that they cultivated ambivalence, and hence were protected from possible feelings that could result from negative outcomes. Achieving positive outcomes typically requires some exposure to risk--one might fail or be refused, which could be subjectively worse than trying at all--but overcoming risk aversion could,

in many cases, lead one to objectively better outcomes. Thus, when it comes to reducing risk aversion, this downstream consequence of ambivalence can potentially be adaptive. In the current job search context, we predicted that this decrease in risk aversion would be manifested in a greater likelihood of negotiating various aspects of the position. In particular, we predicted that for those who were in the midst of a job search, the more ambivalent they were about their future job opportunity, the more willing they would be to negotiate various aspects of the position.

### *Participants and Design*

A total of 52 participants (24 males, 28 females) from the Stanford Student pool took part in exchange for monetary compensation. Among these 52 participants, 35 participants filled out the follow up survey.

### *Procedure*

Students nearing graduation, who had recently interviewed for jobs but had not heard back yet, were asked to think about the jobs they had applied to and were still waiting to hear back from. They were then instructed to focus on the job they wanted the most and list the position title and company name. Next, they completed the ambivalence, attitudes, perceived likelihood of obtaining the job, information seeking and likelihood of negotiation items. When they finished filling out the survey they were sent a link to the second survey and were asked to complete that survey only after they had heard back about the status of their most desired job application. In the second survey they were asked to indicate whether they received the job offer and to complete the self-view measure.

### *Independent Variables*

*Job Application Outcome.* Participants indicated whether they got the job offer for their most desired job (yes/no dichotomous question).

### *Dependent Measures*

*Attitudes.* First, participants rated their most desired job on two semantic differential scales ranging from 1 (bad, unfavorable) to 7 (good, favorable). Responses were averaged to form a composite index ( $r = .77, p < .001$ ).

*Objective Ambivalence.* As in Experiment 1, participants' positive and negative reactions were assessed separately, and their objective ambivalence towards the job was calculated as in Experiment 1. Higher values reflected more ambivalent attitudes.

*Perceived Likelihood of Obtaining the Job.* Participants were asked to indicate on a scale from 0 (no chance at all) to 100 (will definitely get it), the likelihood that they would get their most desired job.

*Ambivalence Seeking.* Participants were asked to indicate the extent to which they would like to learn new negative information about the company of their most desired job (on a scale ranging from 1=not at all to 7=very much). In addition, participants were asked to indicate the extent to which they would like to learn new positive information about the company of their most desired job (on a scale ranging from 1=not at all to 7=very much). Information sidedness was then calculated for each participant adapting the formula developed by Thompson, Zanna, and Griffin (1995): sidedness =  $|P - N| - (P + N)/2$ , where P = positive information and N = negative information (see Nordgren, van Harreveld & van der Pligt, 2006). Scores were reverse coded so that higher values reflected more two-sided information seeking.

*Likelihood of Negotiation.* Next, participants were asked to indicate on a scale from 0 (no chance at all) to 100 (definitely will), the likelihood that they would negotiate other aspects of the position (e.g. number of sick days, holidays, work schedule etc.), if they got an offer for their most desired job.

*Self-View.* After they found out whether they got their most desired job, participants were asked how good they felt about themselves given the outcome, using a scale ranging from 1 (bad) to 7 (good).

## Results and Discussion

*Objective Ambivalence.* We predicted that people would be most likely to generate ambivalence when they were most uncertain that they could obtain their desired target. Specifically, we expected that there would be curvilinear relationship between perceived likelihood of obtaining the target and objective ambivalence, with low and high likelihoods being associated with low ambivalence and mid-level likelihood being associated with the most ambivalence. As predicted we found a significant negative quadratic relationship between objective ambivalence and perceived likelihood of obtaining the desired job,  $\beta = -6.96$ ,  $t(49) = -2.09$ ,  $p = .042$  (see figure 3). There was no linear relationship between objective ambivalence and perceived likelihood of obtaining the desired job,  $\beta = 1.83$ ,  $t(49) = 0.55$ ,  $p = .587$ . Thus, ambivalence was cultivated when people were most uncertain whether they could obtain their desired job (when the perceived likelihood was 50%).<sup>3</sup>

*Ambivalence Seeking.* We expected that people would be most likely to seek out two-sided information (i.e. ambivalence inducing) when they were most uncertain that

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<sup>3</sup> There was no linear ( $p = .80$ ) or quadratic ( $p = .11$ ) relationship between attitudes and perceived likelihood of obtaining the desired job.

they could obtain their desired target. As predicted we found a significant negative quadratic relationship between perceived likelihood of obtaining the desired job and information sidedness seeking,  $\beta = -1.92$ ,  $t(49) = -2.00$ ,  $p = .05$  (see figure 4). There was no linear relationship between perceived likelihood of obtaining the desired job and information sidedness seeking,  $\beta = 1.07$ ,  $t(49) = 1.12$ ,  $p = .27$ . Thus, ambivalent inducing information (i.e. two-sided information) was sought out when people were most uncertain whether they could obtain their desired job.

*Likelihood of Negotiation.* We predicted that people would be more likely to indicate that they would negotiate various aspects of the position to the extent that they were ambivalent. Indeed, we found a significant positive relationship between objective ambivalence and the likelihood of negotiating other aspects of the position,  $r = .28$ ,  $p = .042$ , such that the more ambivalent participants were, the more likely they were to indicate that they would negotiate other aspects of the position.<sup>4</sup>

*Self-View.* We hypothesized that the ambivalence prior to learning the outcome would make people feel better about themselves if they did not get the job, but would make people feel worse about themselves if they failed to get the job. We submitted the self-view data to a regression analysis using objective ambivalence, job search outcome, and their interaction as parameters. There was a main effect of job search outcome on self-view, such that those who got the job felt better about themselves than those who did not get the job,  $\beta = 3.49$ ,  $t(31) = 9.98$ ,  $p < .001$ . As illustrated in figure 5, though, we also found the predicted interaction between job search outcome and objective ambivalence before the outcome was known,  $\beta = -.25$ ,  $t(31) = -2.19$ ,  $p = .036$ . For people who got the

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<sup>4</sup> There was no relationship between attitudes towards the most desired job and likelihood of negotiating ( $r = -.16$ ,  $p = .271$ ).

job, the more objectively ambivalent they were before finding out about the job, the worse they felt about themselves once the outcome was known,  $\beta = -.13, p = .025$ , whereas for people who did not get the job, there was no relationship between objective ambivalence and how they felt about themselves,  $\beta = .11, p = .189$  (though not significant, this relationship is in the predicted direction and did not reach significance probably due to small sample size). Importantly, when we submitted the self-view data to a regression analysis using attitudes towards the most desired job, job search outcome, and their interaction as parameters, none of the main effects,  $ps < .254$ , or the interaction ( $p = .104$ ) were significant. This pattern of results provides initial support that ambivalence is indeed driving the effect, whereas attitudes do not play a central role.

In sum, Experiment 2 provided further evidence that people seek out ambivalence and that they are most likely to do so when they are most uncertain that they can obtain their desired target. This cultivated ambivalence has implications for people's willingness to take risks. We found that the more ambivalent the job candidates were, the more likely they were to indicate that they would negotiate other aspects of the position. Of importance, attitudes did not play a role in self-view, likelihood of obtaining the desired outcome or likelihood of negotiation, whereas ambivalence did. Thus, our pattern of results cannot be attributed to job candidates simply devaluing their desired job.

### EXPERIMENT 3

Experiment 3 was designed to accomplish several objectives. First, we wanted to demonstrate the effect of being ambivalent in a purchase context, specifically a house-bidding context. This allowed us to further establish the relationship between ambivalence and risk aversion and generalize it to additional situations. We posited that

the protective utility of ambivalence would allow people to open up to failure, thus reducing their risk aversion. Specifically, we hypothesized that the more ambivalent people were, the more likely they would be to place a lower bid on a desired house.

Second, we sought to further establish the causal link between ambivalence and self-protection. To do so, we directly manipulated ambivalence without affecting attitudes. This allowed us to demonstrate that the protective utility is driven by ambivalence and not from devaluing the desired outcome and also to demonstrate that ambivalence, regardless of its cause, can serve a self-protective function. We also added an additional outcome measure—participants' feeling about the outcome—because we did not know a-priori whether the self would be implicated in this context (i.e. whether being a savvy bidder is important to one's self-view). We expected that ambivalence would make people feel better about themselves and the outcome when they failed to obtain their desired house, but would make them feel worse when they obtained their desired house.

## Method

### *Participants and Design*

A total of 118 participants (60 males, 56 females, 2 non-reporting; age 30 and up) from a national online pool took part in exchange for monetary compensation.

Participants were randomly assigned to conditions in a 2 (ambivalence: high or low)  $\times$  2 (house bid outcome: acceptance or rejection) between-participants factorial design.

### *Procedure*

On the opening screen of the study, participants were led to believe that they were taking part in research exploring the role of imagination and visualization techniques in

people's perceptions of different kinds of issues. All participants were told that they would be asked to read a scenario, and that they should try to put themselves in the situation and imagine that it was actually happening to them. When participants continued to the next screen, they were instructed to imagine that they were looking to buy their first home. They read that after seeing quite a few houses on the market, they had found a house and they read about its features. They read that the real-estate agent had told them that there might be other bids on this house. Next, they completed the ambivalence, attitudes, interest in the house and willingness to pay for the house. They then learned about the outcome of their bid and completed the self-view and feelings about the outcome measures.

#### *Independent Variables*

*Ambivalence Manipulation.* Participants were randomly assigned to ambivalence conditions. In the *low ambivalence* condition, the house was described as a good house that was slightly smaller than what they had wanted, but had a nice view and a great backyard. In the *high ambivalence* condition, the house was described as having some features that they loved (really close to work, the exact size that they had wanted, safe and quiet neighborhood) but also a couple of drawbacks (backyard was slightly smaller than they had wanted, bland view).

*House Bidding Outcome.* Participants were randomly assigned to house bid outcome conditions. In the *rejection* condition, they learned that they were outbid and they did not get the house. In the *acceptance* condition, they learned that their bid was accepted and they got the house.

#### *Dependent Measures*

*Attitudes.* First, participants rated the house on two semantic differential scales ranging from 1 (bad, unfavorable) to 7 (good, favorable). Responses were averaged to form a composite index ( $r = .86, p < .001$ ).

*Measured Objective Ambivalence.* As in Experiments 1 and 2, participants' positive and negative reactions were assessed separately and their objective ambivalence towards the house was calculated as in Experiments 1 and 2. Higher ratings reflected more ambivalent attitudes.

*Interest in the House.* Participants were asked to indicate the extent that they would want to make and offer on the house on a scale ranging from 1 (not at all) to 5 (extremely).

*Willingness to Pay.* Participants were asked to indicate how much of the asking price they would be willing to offer on a scale ranging from 50% of the asking price to 150% of the asking price in 10% increments.

*Self-View.* After the bid outcome was known, participants were asked how good they felt about themselves given the outcome, using a scale ranging from 1 (extremely bad) to 7 (extremely good).

*Feeling about the Outcome.* Participants were also asked to indicate how good they felt about the outcome, using a scale ranging from 1 (extremely bad) to 7 (extremely good).

## Results and Discussion

*Manipulation Check.* We expected the ambivalence manipulation to affect ambivalence without significantly affecting attitudes. As expected the ambivalence manipulation had a significant effect on objective ambivalence before the outcome was

known,  $t(116) = -2.10, p = .038$ , such that those in the high ambivalence condition ( $M = 2.4$ ) were more objectively ambivalent than those in the low ambivalence condition ( $M = 1.47$ ). Importantly, the ambivalence manipulation had no effect on the attitude index,  $t(96.26) = 1.56, p = .122^6$ .

*Interest in the House.* We expected that the ambivalence manipulation would have no effect on the level of interest in the house. As predicted there was no difference between the high ( $M = 3.58$ ) and low ambivalence ( $M = 3.36$ ) conditions in the extent to which participants wanted to make an offer on the house,  $t(116) = 1.56, p = .121$ .

*Willingness to Pay.* We predicted that people would be more likely to offer a lower percentage of asking price to the extent that they were ambivalent. Indeed, we found a significant negative relationship between objective ambivalence and the percent of the asking price participants indicated that they would be willing to offer,  $r = -.21, p = .021$ , such that the more objectively ambivalent participants were, the lower asking price percentage they were willing to offer.<sup>7</sup>

*Self-View.* We submitted the self-view data to a  $2 \times 2$  ANOVA with bid outcome and ambivalence manipulation as the independent variables. This analysis revealed a

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<sup>6</sup> Levene's test was significant,  $F(1, 114) = 9.31, p < .05$ , thus equal variances were not assumed.

<sup>7</sup> The ambivalence manipulation had a direct effect on measured ambivalence and significant indirect effect on willingness to pay. It did not, however, have a direct effect on willingness to pay. When we entered both ambivalence manipulation and measured ambivalence into a linear regression predicting willingness to pay, the ambivalence manipulation did not have a significant effect,  $\beta = .29, p = .242$ , whereas measured ambivalence was a significant predictor of willingness to pay,  $\beta = -.13, p = .013$ . The Preacher and Hayes (2004) bootstrapping technique (with 10,000 iterations) produced a 95% confidence interval for the indirect effect that ranged from  $-.35$  to  $-.01$ , which did not include zero. This suggests that in addition to affecting ambivalence, this particular manipulation affected another variable that had an opposite effect on willingness to pay (i.e. a positive effect) and was acting as a suppressor of the direct effect (Rucker, Preacher, Tormala, & Petty, 2011). One such variable could be the degree of fit. It could be that participants in the high ambivalent condition viewed the house as a better fit than in the low ambivalent condition and that this perceived greater fit increased the asking price percentage they were willing to offer. Of greatest importance, however, ambivalence was affected by the manipulation and did have the predicted effect on willingness to pay. In future research we will examine whether this was unique to our specific manipulation of ambivalence or is a more general phenomenon.

main effect of bid outcome,  $F(1, 114) = 167.3, p < .001$ , such that those who got the house ( $M = 6.00$ ) felt better about themselves than those who did not get the house ( $M = 3.52$ ). Most germane to our primary concerns, the main effect of bid outcome was qualified by the significant predicted interaction with the ambivalence manipulation,  $F(1, 114) = 8.04, p = .005$ . As illustrated in figure 6a, when the offer was rejected, people tended to feel better about themselves in the high ambivalence condition than in the low ambivalence condition,  $F(1, 114) = 3.16, p = .078$ . The opposite pattern emerged when the offer on the house was accepted. In that case, people felt better about themselves in the low ambivalence condition than in the high ambivalence condition,  $F(1, 114) = 5.00, p = .027$ .

*Feeling about the Outcome.* We submitted the feeling about the outcome data to a  $2 \times 2$  ANOVA with bid outcome and ambivalence manipulation as the independent variables. This analysis revealed a main effect of bid outcome,  $F(1, 114) = 249.79, p < .001$ , such that those who got the house ( $M = 6.03$ ) felt better about the outcome than those who did not get the house ( $M = 3.05$ ). Importantly, the main effect of bid outcome was qualified by a significant interaction with the ambivalence manipulation,  $F(1, 114) = 9.02, p = .003$ . As illustrated in figure 6b, when the offer was rejected, people felt better about the outcome in the high ambivalence condition than in the low ambivalence condition  $F(1, 114) = 3.83, p = .053$ . The opposite pattern emerged when the offer on the house was accepted. In that case, people felt better about the outcome in the low ambivalence condition than in the high ambivalence condition,  $F(1, 114) = 5.26, p = .024$ .

In sum, Experiment 3 provided further evidence for the causal link between ambivalence and self-protection. The effect of ambivalence on feelings about the self and

about the outcome was independent of attitudes. Also consistent with the self-protective account, ambivalence was associated with a decrease in risk aversion such that the more objectively ambivalent participants were, the more likely they were to take a risk by offering a lower price on the house. This finding provides further indication that ambivalence allows people to open up to failure and thus take more risks.

## GENERAL DISCUSSION

A voluminous body of research has highlighted the negative aspects of evaluative inconsistency. In general, ambivalence has been viewed as a negative psychological state that people attempt to reduce or resolve. In contrast, the current research suggests that ambivalence can sometimes be a desired cultivated state that serves to protect people from feeling disappointed about themselves and their outcomes. Our studies suggest that people turn to ambivalence when they are most uncertain that they can obtain their desired outcome. Across three experiments, we found evidence that people desire to be ambivalent when the outcome is uncertain and we examined its consequences.

In experiment 1, we sought to examine whether people cultivate ambivalence under outcome uncertainty and how this ambivalence affects resulting self-views. In this study, all participants received mixed information regarding their desired target (top choice university) in order to enable the cultivation of ambivalence. To permit a test of the effect of ambivalence on self-view, we manipulated the university application outcome. We found the predicted interaction between ambivalence and application outcome, such that ambivalence prior to finding out the outcome was protective when people failed to obtain their desired target but was maladaptive when they obtained their desired target. Moreover, while ambivalence was beneficial in terms of self-view when

participants failed to obtain their desired target, it had no cost in terms of discomfort. In other words, ambivalence did not result in increased discomfort when people failed to obtain their desired outcome. Only when people obtained their desired outcome did we replicate past research showing that ambivalence results in increased discomfort

Experiment 2 examined the effect of ambivalence on self-view in a real world context, specifically, students nearing graduation and seeking actual employment. Providing further evidence for our self-protective account, we found that job candidates were most likely to generate ambivalence and prefer information that would cultivate their ambivalence when they were least certain about whether they could obtain their desired job. Moreover, ambivalence was associated with an increased likelihood of willingness to negotiate various aspects of the position. This finding suggests that people are more likely to expose themselves to the possibility of failure to the extent that they cultivate ambivalence.

Finally, in experiment 3 we sought to further establish the causal link between ambivalence and self-protection. To do so, we directly manipulated ambivalence in order to demonstrate that the protective utility is driven by ambivalence and not from devaluing the desired outcome. We found that when people failed to obtain their desired house, they felt better about themselves and about the outcome to the extent that they were ambivalent, whereas the opposite pattern emerged when people obtained their desired house. The house-bidding context allowed us to further establish the relationship between ambivalence and risk aversion. We found that the more ambivalent people were, the more likely they were to place a lower bid on a desired house. This finding provides further indication that ambivalence allows people to open up to failure and thus take more risks.

Whether this increased risk taking behavior is adaptive or maladaptive is an important question that we intend to further explore in future studies.

### IMPLICATIONS AND FUTURE DIRECTIONS

The current research paints a new picture of ambivalence. Ambivalence is not always an unpleasant and aversive state that people are motivated to resolve. In some cases, ambivalence can serve self-protective purposes by buffering self-views from rejection. In doing so, the current research expands current understanding of both self-protection strategies as well as the consequences of being ambivalent. A novel downstream consequence unveiled in the current research is reduction of risk aversion. The current research suggests that cultivating ambivalence can potentially be a useful way to promote reduction in risk aversion. In future research we intend to examine the adaptiveness of this reduction in risk aversion and design behavioral interventions that could help harness its potential useful impact.

Future research will also further examine the conditions under which people cultivate ambivalence, by experimentally manipulating factors such as the probability of obtaining the desired target, the subjective importance of its attainment, and the self-implications of failure. Finally, in order to provide further evidence for the motivated aspect of cultivating ambivalence, we intend to demonstrate that ambivalence is not cultivated when people are provided with alternate avenues for self-protection (e.g., self-affirmation).

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*Table 1.* The report comparing the top choice university and the back up university presented to participants in Experiment 1.

	<b>Top Choice University</b>	<b>Back Up University</b>
Post Graduation Salary	\$120,000	\$90,000
Employment Rate	93%	87%
Tuition	\$45,000	\$40,000
Student-Teacher Ratio	7 to 1	9 to 1
Average Teacher's rating (out of 5)	4.5	4.8

*Figure 1.* Self-view as a function of objective ambivalence prior to finding out the outcome and university application outcome in Experiment 1.

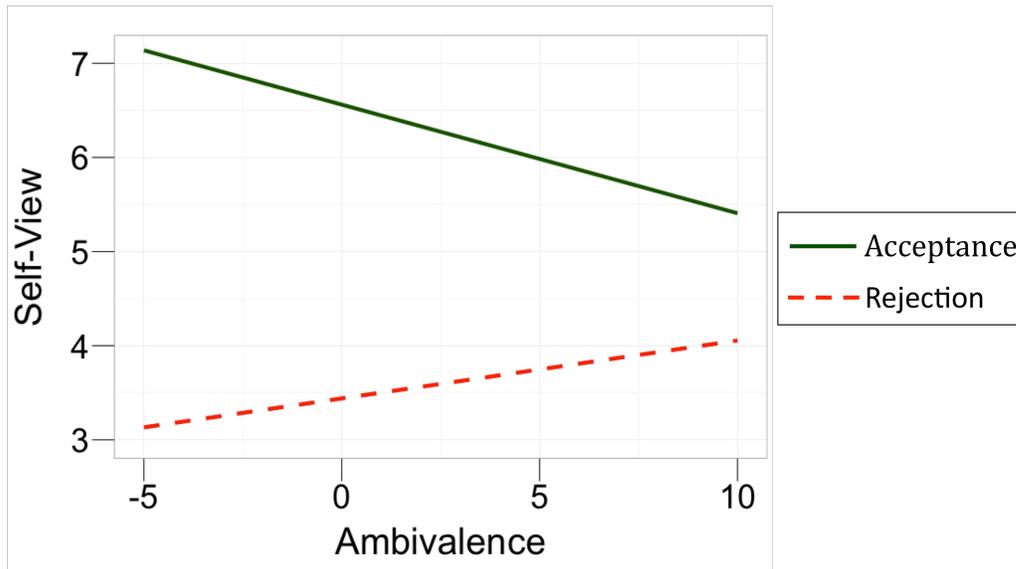


Figure 2. Discomfort as a function of objective ambivalence prior to finding out the outcome and university application outcome in Experiment 1.

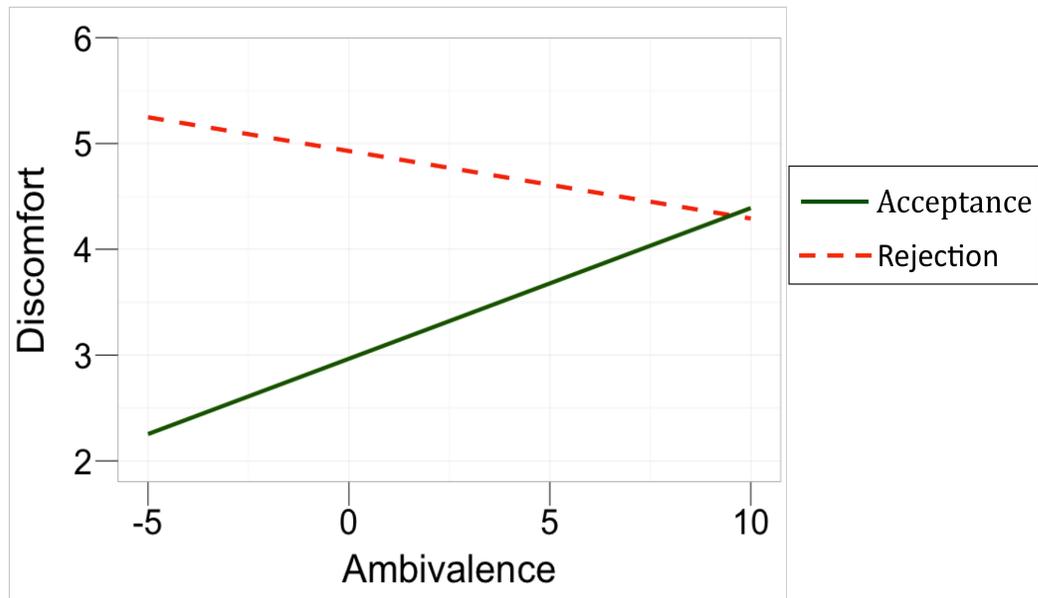
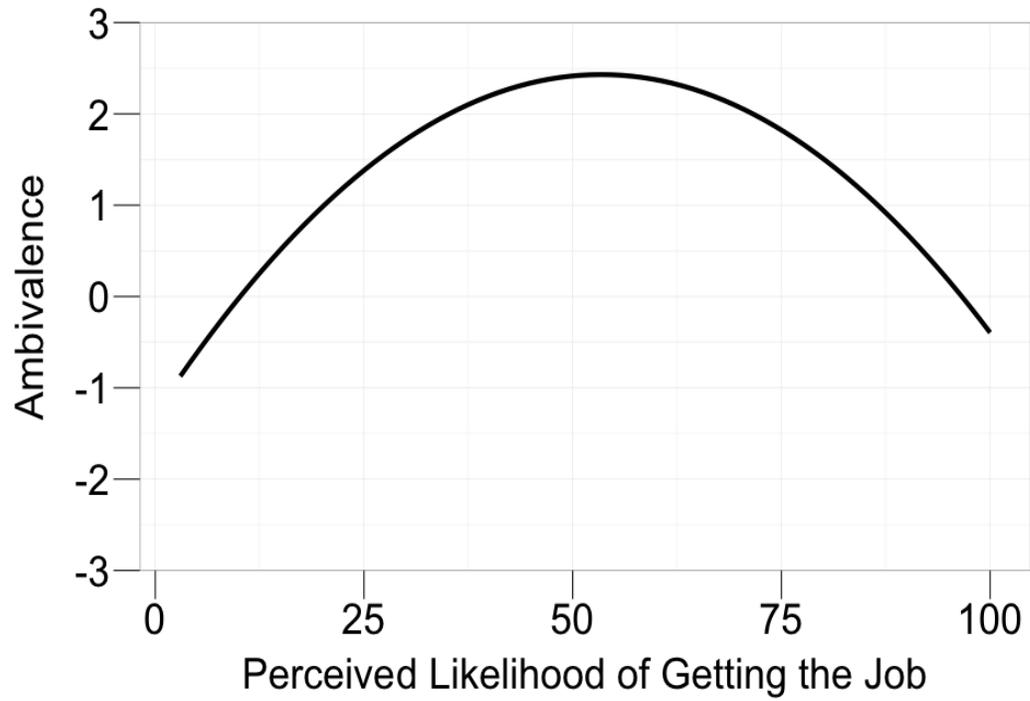


Figure 3. Objective ambivalence as a function of perceived likelihood of obtaining the job in Experiment 2.



*Figure 4.* Information sidedness seeking as a function of perceived likelihood of obtaining the job in Experiment 2.

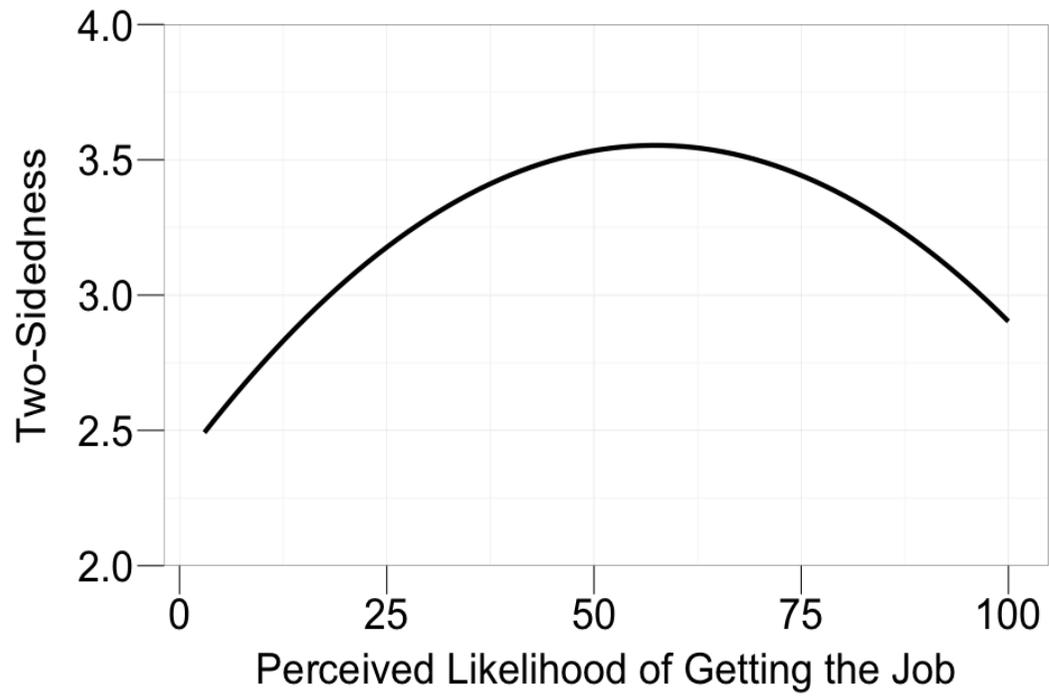
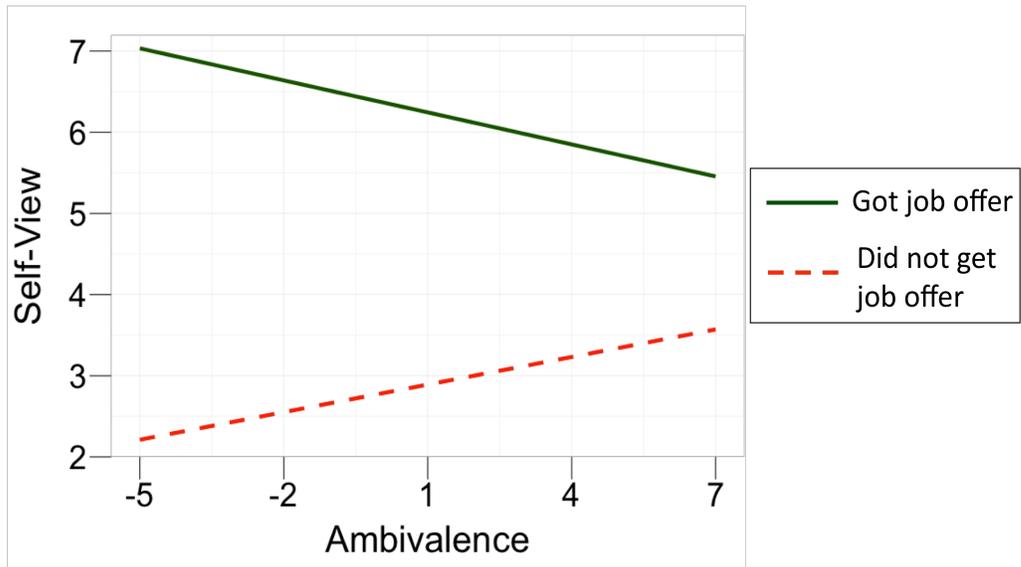
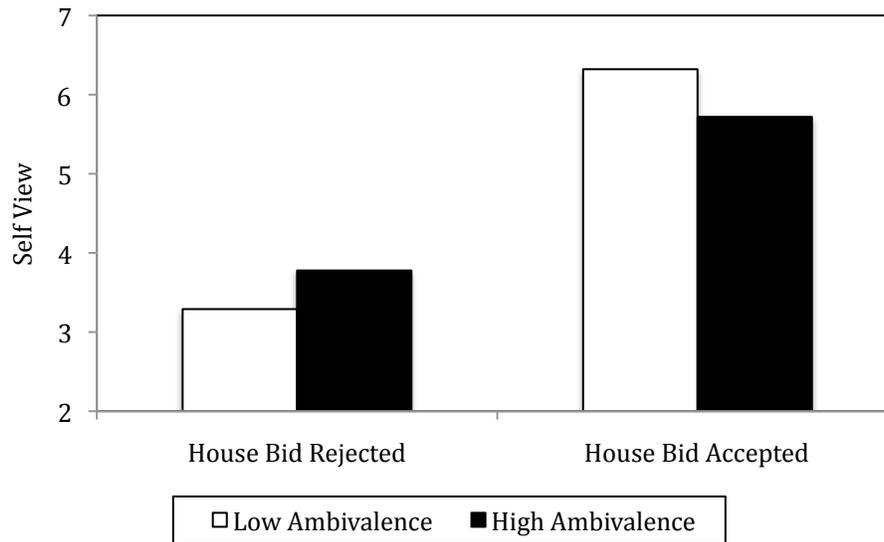


Figure 5. Self view as a function of objective ambivalence and job search outcome in Experiment 2.



*Figure 6a.* Self view as a function of ambivalence manipulation and house bid outcome in Experiment 3.



*Figure 6b.* Feeling about the outcome as a function of ambivalence manipulation and house bid outcome in Experiment 3.

