Articles

Does Hard Work Pay Off? The Influence of Perceived Effort on Romantic Attraction

Jennifer R. Dwiggins*[a], Gary W. Lewandowski Jr.[a]

[a] Monmouth University, West Long Branch, NJ, USA.

Abstract

This study examines how a person's willingness to exert effort affects how others perceive their romantic desirability. The study also examines whether the participants' implicit theory of personality (incremental or entity) influences ratings of the target's romantic desirability based on the target's level of effort. Seventy-eight (17 males, 61 females) single college students participated in the study. Participants read one of four descriptions of a target. The descriptions manipulated both the target's ability (hard work or natural ability) and success (successful or unsuccessful). Participants also completed a measure to assess their implicit theory of personality. Participants then rated the target's desirability. There was a significant difference in desirability ratings of the target for the main effect of ability. There were no other significant differences found between the variables. The findings suggest that when a person expends effort, they are more romantically desirable regardless of how successful they are. Findings also suggest that a person's implicit theory of personality does not interact with the target's effort to affect romantic desirability.

Keywords: attraction, hard work, effort, dating desirability, success

Many people admire talent. This admiration is ubiquitous, the famous singer, the star athlete, the model student, the list continues. However, individuals come about their own talents through different means. Some have to work hard to excel at a task while for others the same tasks come naturally. The willingness to exert effort is a trait that one could possess regardless of natural ability. If people view other's putting forth effort as desirable, it might influence that person's desirability as a potential date or partner, seeing as a person's traits play an important role in initial romantic attraction (Cottrell, Neuberg, & Li, 2007; Wojciszke, Abele, & Baryla, 2009). Attraction is an important first step in the process of forming intimate relationships. Knowing what influences partner selection is important in order ensure people are choosing partners who will facilitate a good relationship. However, past research has not addressed whether or not effort is an attractive characteristic when first meeting a potential romantic partner. The goal of the present study is to examine the difference in romantic desirability between people who work hard to achieve their goals compared to those who rely on natural ability.

Effort

To put in effort means to work hard in order to try and achieve a goal. Unlike natural talent, anyone can exert effort if they so desire. People tend to rank effort as a trait they wish to see others possess (Ben Hamida, Mineka, &

Bailey, 1998; Bochner & Van Zyl, 1985). Traits such as industriousness and ambition, which directly relate to effort, are socially desirable for acquaintances, family members, or friends to possess (Bochner & Van Zyl, 1985). When compared to other traits displayed by potential partners, women rated hardworking as an important trait for a male partner (Ben Hamida et al., 1998). The notion that those who put in effort reap rewards for their effort may provide the reasoning behind effort's desirableness. When people exert effort, they are more likely to be successful in a myriad of activities (Revelle & Michaels, 1976; Thomas, 1983; Van Lange, Rusbult, Drigotas, Arriaga, Witcher, & Cox, 1997; Wieselquist et al., 1999). The effort might lead to increased time spent on that activity or increased motivation creating a better likelihood of success thus enhancing views on effort exertion.

It should follow that effort's desirability as a trait would lead to increased liking for a person exhibiting that trait. Tjosvold (1985) studied how people react to those who demonstrate a willingness to exert effort by examining people's reactions to subordinates who are low in ability compared to those exhibiting low effort. Researchers had students evaluate a confederate who exhibited either low ability or low effort. Participants communicated with the confederates and then rated the confederate based on overall feelings toward the person. Participants indicated that they would like to work with and were overall more satisfied with the confederates who were low in ability rather than those who showed low effort. One reason this might be is that it is easier to increase someone's skill level, but harder to increase someone's desire to increase his or her skill level.

The combination of these studies has provided evidence that effort is a desirable trait for general attractiveness, but have yet to delve into romantic attraction. These studies show that effort could be a respectable trait or an admired trait, but not necessarily a trait that increases romantic attraction or desirability. Romantic attraction involves liking, which includes a desire to know and be around the other person (Lamm & Wiesmann, 1997). A work partner or friend might be desirable because they possess a good quality without the person becoming desired romantically (Nesler, Storr, & Tedeschi, 1993). In the present study, we want to examine romantic desirability; therefore, participants must go beyond admiration or respect of the target's traits.

Viewing a potential partner as having a desirable trait or personality increases their romantic attractiveness (Lewandowski, Aron, & Gee, 2007). When initially encountering a potential partner, observers must evaluate the person's attractiveness as a partner by relying on any information they can obtain. Even though the information might not be plentiful, when a person meets another for the first time, they form an impression almost immediately (Moskowitz, 1993). Observers base this impression on characteristics displayed by the person. Positive assumptions are made of people displaying desirable characteristics (Nisbett & Wilson, 1977). For example, someone might assume an attractive person to be nice, funny, and caring because the person is attractive. This occurs even though participants might be viewing one individual trait.

Observers also judge traits variously depending on the interpersonal context (Cottrell et al., 2007; Wojciszke et al., 2009). Observers assess traits depending on their potential benefit in a given situation. For example, when participating in a work-group, people value intelligence as a trait for their group mates (Cottrell et al., 2007). In an interpersonal relationship, observers desire communal traits (Wojciszke et al., 2009). Communal traits benefit the observer because they display a willingness to put others before themselves. Effort would be a trait where there is the potential for many benefits to the romantic partner. First, as mentioned earlier, effort is often associated with success, therefore providing a possible benefit for the partner. Effort is also good for relationships. The more energy someone puts in to a relationship, the more the person is committed to that relationship (Rusbult, Martz, & Agnew, 1998). In addition, relationships where at least one partner is willing to sacrifice or put in effort for the

other have higher reported relationship satisfaction (Van Lange et al., 1997; Wieselquist, Rusbult, Foster, & Agnew, 1999). A person who exerts effort has the potential to increase the benefits for their romantic partner and therefore be more desirable to potential partners.

Similarity-attraction effect

Desirable traits give one reason two people can be attracted to one another, but there are many factors that draw two people together. Important to the concept of attraction is similarity. Individuals who are similar to each other are more romantically attracted to each other (Byrne & Nelson, 1965; Cuperman & Ickes, 2009; Griffitt & Veitch, 1974).

Studies on the similarity-attraction effect have covered a broad range of different traits. People like those with similar personalities, attitudes, interests, values, and even attractiveness levels (Jones, Pelham, Carvallo, & Mirenberg, 2004; Montoya & Horton, 2004; Singh, 1973). In two studies, with a participant total of 128 undergraduates, some participants completed a personality rating scale while others completed an attitudes rating scale (Singh, 1973). When asked to come to the study, researchers told participants that they were either similar or dissimilar to another person on either scale that was previously completed. In both conditions, participants preferred those who were similar to themselves over those who were dissimilar to themselves. However, those who believed they had similar attitudes as the other person showed more attraction than those who were similar on the personality measure. Even though there might be differences in how powerful the similarity-attraction effect is depending on what two people have in common, similarity is a strong determinant of attraction no matter what the similarity might be. Effort falls into many of the categories covered by the similarity-attraction effect including attitudes, values, and personalities. Therefore, based on the similarity-attraction effect, a person would be more attracted to a romantic partner who held the same beliefs and ideas about effort.

Implicit theories of personality

In order to test the similarity-attraction effect on effort, there needs to be a way to measure a person's willingness to exert effort. There is a variety of ways to measure effort, however in the present study, we focus on the implicit beliefs that influence a person's willingness to exert effort. When it comes to attitudes about people's ability to change their characteristics, there are typically two viewpoints. A person's implicit theory of personality encompasses these two viewpoints. Some believe that characteristics, such as a person's intelligence, are pliable, while others believe that characteristics are set and cannot be changed (Dweck, Chiu, & Hong, 1995). These two beliefs define the difference between incremental and entity theorists. Those who hold an incremental mindset believe that characteristics are malleable while entity theorists believe that people have fixed characteristics (Dweck et al., 1995; Dweck & Leggett, 1988). These beliefs motivate people to behave and judge others differently.

The differing views entity and incremental theorists hold regarding human characteristics affect their own approach to effort and achievement (Dweck et al., 1995; Dweck & Leggett, 1988; Hong, Chiu, Dweck, Lin, & Wan, 1999). Incremental theorists are more willing to put effort into improving themselves and their situations when compared to entity theorists (Hong et al., 1999). In a study conducted with college freshmen, incremental theorists were more likely than entity theorists to take a class to improve on their English skills after being informed that a good grasp of English is important for college success. One reason people put effort into different activities is due to how theorists attribute their failure. The same pattern of believing in improvement emerges. In the same experiment, researchers found that incremental theorists were more likely to attribute a poor performance on an intelligence task to a lack of effort (Hong et al., 1999). Entity theorists were more likely to attribute their failure to a lack of

ability. Attributing failure to a lack of ability leads to a helplessness response, while attributing failure to a lack of effort leads to a learning response where the person is willing to put effort into learning what they need to (Dweck et al., 1995; Dweck & Leggett, 1988; Hong et al., 1999).

Individuals with incremental and entity implicit theories hold different views about the value of effort and even exert different amounts of effort in their own tasks as a result. These ideas may translate into not only how they view and expend their own effort, but also how they view other's effort. Someone who views effort as pointless and exerts little effort, might not find being hardworking as a desirable trait for a romantic partner. However, effort levels are not the only way in which implicit theories can affect relationships; there are other disparities between the two theorists as well.

Relationship implications of implicit personalities

An individual's belief in either the malleability or stability of personality traits can also influence their relationships (Kammrath & Dweck, 2006; Kammrath & Peetz, 2012; Ruvolo & Rotondo, 1998). Incremental and entity theorists approach their relationships differently. One of the ways the two differ is in how they view their partner's traits and how that influences their feelings about their relationships (Ruvolo & Rotondo, 1998). In a study of 301 dating couples, participants compared how they viewed their partner's traits to the well-being of their relationship. When the participants held an incremental mindset, the way they viewed their partners did not affect their relationship well-being as much as it did for entity theorists. The incremental theorists were more able to overlook certain personality characteristics because they believed that their partners had the ability to change their personality or other traits whereas entity theorists assigned more importance to a partner's traits.

This research supports that a person's implicit theory of personality influences not only how they view their own effort, but how the individual view others effort as well. Incremental theorists believe that people can change; therefore believing that effort is advantageous (Dweck et al., 1995; Dweck & Leggett, 1988). Entity theorists believe the opposite about both a person's characteristics and the benefits of effort. These differences influence how an individual might view a potential romantic partner in terms of effort expenditure. Adhering to the similarity-attraction effect, individuals with the same beliefs have the potential to be more attracted to each other (Byrne & Nelson, 1965; Cuperman & Ickes, 2009; Griffitt & Veitch, 1974). Therefore, if an individual finds effort to be advantageous, then that person would want a partner that similarly finds effort worthwhile.

The present study

Research shows that hard work and effort are desired characteristics for a person to possess and are a crucial and beneficial component of a relationship (Ben Hamida et al., 1998; Bochner & Van Zyl, 1985; Van Lange et al., 1997; Wieselquist et al., 1999). We also know that one specific trait can have a broad effect on how people perceive others. The beneficial traits that are propitious for partners in romantic relationships are going to have a positive effect on perceptions of another (Nisbett & Wilson, 1977). However, research has failed to examine if effort is desirable to the extent that a person would be romantically attracted to someone who possessed this trait. The present study will expand on the topic of attraction and effort by examining whether or not putting in effort influences romantic desirability during initial observation of a potential partner. As mentioned earlier, effort is often associated with success. Due to effort's close relationship to success, we chose to manipulate success in the present study. This way the researchers could assure participants were not assuming success and basing the target's desirability on something other than effort.

Hypothesis 1:

H 1.1. There will be a main effect for ability such that when participants rate a target with whom they have never met, a hard working target will be seen as more romantically desirable than a naturally talented target.

H 1.2. There will also be a main effect for success such that participants will view successful targets as more romantically desirable than those who are unsuccessful.

H 1.3. In regards to the interaction effect between ability and success, when the target is hardworking, they will be romantically desirable regardless of success; however, when the target is naturally talented they will be more romantically desirable when they are successful.

Studies have also found that another important characteristic for attraction is similarity. The more two people are similar, the more attracted they are to each other (Byrne & Nelson, 1965). In order to investigate more in-depth how effort as a trait can affect attraction, it is important to determine if similarity mediates the relationship between effort and desirability. However, research has yet to examine if the similarity-attraction effect can be applied to effort. In the present study, willingness to expend effort was associated with the participants' implicit theory of personality because studies show that the two theories differ in the amount of effort they expend. Incremental theorists are willing to expend more effort because of their belief that personality characteristics are malleable (Dweck et al., 1995; Dweck & Leggett, 1988; Hong et al., 1999). A benefit to utilizing the implicit theory of personality is that it measures a participant's willingness to expend effort indirectly, which could help alleviate social desirability bias.

Hypothesis 2:

H 2.1. In addition to participants finding the hard working target to be more romantically desirable, the main effect of a participants' implicit theory will yield results such that entity theorists will find the target more romantically desirable than incremental theorists will.

H 2.2. When comparing the interaction effect between implicit theory and ability, individuals will rate hardworking others as more desirable than naturally talented others when they hold an incremental mindset as opposed to an entity mindset. When participants hold an entity mindset, they will find the naturally talented individual to be more desirable than the hard working individual. This hypothesis is congruent with research on the similarity-attraction effect.

Method

Participants

The participants in this study were 78 students, 61 female and 17 male, from a private, four-year university in the Northeastern United States. The study used convenience sampling where students self-selected one fifteen minute timeslot using the Psychology Department's online participation pool. Participants received class credit for participating. Of the 78 participants, 30.7% were freshmen, 37.2% were sophomores, 23.1% were juniors, and 9% were seniors. Participants ranged in age from 18 to 25 with a mean age of 19.59 (*SD* = 1.28). The majority of the participants were European American (80.8%). All participants had to be single at the time of the study. Six participants indicated that they were in relationships, which led to the removal of their data. The number of participants reflects the removal of the six aforementioned participants. The researchers used data from all other participants in the study.

Materials

Implicit theory measure — This measure includes three items assessing whether the participant held an incremental or entity mindset (Dweck et al., 1995). Questions included were, "The kind of person someone is, is something very basic about them and it can't be changed very much;", "Everyone is a certain kind of person and there is not much that can be done to really change that;", and "People can do things differently, but the important parts of who they are can't really be changed." Researchers chose this scale over other measures of implicit theory because it measures a person's overall beliefs instead of focusing on one domain of implicit theory (e.g. intelligence or morality). Participants rated the statements using a 6-pt Likert scale (1 = *strongly disagree;* 6 = *strongly agree*) based on participants agreement with the statements. Higher numbers indicate entity theory while lower numbers indicate implicit theory. The Cronbach's alpha was .79. The mean for the scale is 3.60 with a standard deviation of .97.

Romantic desirability questionnaire — This seven-item measure assessed the desirability of the target as a potential date and romantic partner (Jensen-Campbell, Graziano, & West, 1995; Snyder, Kirkpatrick, & Barrett, 2008). Participants rated the seven items based on how likely they were to participate in each activity with the target. Questions including "Give Sam your number if you were to meet him/her in a social setting;" Go on a date with Sam;" and "Want to get to know Sam better," assessed whether or not participants would want to date the target. The questionnaire also included questions assessing participants' willingness to enter into a relationship with the target. These included, "Enter into a short-term romantic relationship with Sam;" "Want Sam as a romantic partner;" and "Enter into a committed relationship with Sam." Due to the similarity in questions and responses, the questions formed one scale for overall romantic desirability. All responses were measured on a 5-pt Likert scale (1 = *very unlikely*; 5 = *very likely*), higher numbers indicating more romantic desirability. The Cronbach's alpha was .95. The mean for the scale is 3.43 with a standard deviation of 1.03

Exploratory measures — As discussed earlier, effort in a relationship can lead to better relationship satisfaction and commitment, leading some to assume that those who put effort into their relationships would engage in positive, relationship-enhancing activities**.** The researchers designed this exploratory measure to assess whether or not others would assume a person willing to put in effort might exhibit relationship-enhancing traits while in a romantic relationship. Four separate statements related to relationship enhancing traits measured the participants' perception of the target as a partner. Participants imagined Sam as a partner and rated four traits based on how likely Sam would be to exhibit them as a partner. The traits included "Be responsive to your needs", "Be willing to sacrifice for you" "Be a good romantic partner" and "Be willing to change for you." All responses were measured on a 5-pt Likert scale (1 = *very unlikely*; 5 = *very likely*).

Design and Procedure

Experimental Manipulation 1

This study employed two, between-subjects, 2x2 factorial designs. The first factorial was a between-subjects experimental design with two independent variables, ability and success. There were four conditions; ability had two levels (hardworking or natural ability) and success had two levels (successful or unsuccessful). Using random assignment, the researcher assigned each participant to one of four conditions. Each participant received a description about a non-gendered college junior named "Sam", which served as the manipulation in the study (Appendix). The researcher controlled the descriptions so to manipulate only the ability and success of the target.

The researchers reviewed research on different types of effort to create the vignettes. The vignettes focused on effort originating from intrinsic motivation, seeing as effort originating from extrinsic sources was not viewed as stable (Lockhart, Keil, & Aw, 2013). The activity chosen was soccer because, not only is it a common activity in which many can participate, but it was believed that if the effort was geared towards relationships then it would be too influential on the participants' desirability ratings. The description manipulated ability by describing the target as someone who "works hard in order to achieve different goals" or "does not work hard in order to achieve different goals." The description manipulated success by describing the target as someone who "is one of the best players and has enjoyed a lot of success" or "is not one of the best players and has not enjoyed a lot of success." The descriptions were pilot tested with a group of a dozen participants who were similar in demographics to the study's sample. The dependent variable was the target's romantic desirability measured using the Romantic Desirability Questionnaire. The target's romantic desirability included dating and partner desirability.

Experimental Manipulation 2

For the second 2x2 between-subjects hybrid factorial design there were two independent variables, ability and the participant's implicit theory of personality. The first independent variable, ability, had two levels (hardworking or natural ability). These levels were the same as the first experimental manipulation for ability. The second independent variable, the participant's implicit theory of personality, had two levels (incremental theorist or entity theorist). The researchers manipulated ability using the same descriptions in the first design and measured the participant's implicit theory of personality using the Implicit Theory Measure. The dependent variable was the target's romantic desirability again measured by the Romantic Desirability Questionnaire.

To participate in the study, students signed up through the Psychology Department's online undergraduate research participant pool for a 15-minute timeslot. The researcher ran each participant in groups of up to eight. Each participant's data was used in both experimental manipulations. When the participant first arrived, they read and signed an informed consent form. The researcher then asked participants to read one of four ability scenarios. The researcher instructed participants to "assume that the person being described is of the sex you would prefer in a romantic partner." After participants finished reading the scenario, they received a packet containing the Implicit Theory Measure, Romantic Desirability Questionnaire, exploratory items, manipulation check, and demographics sheet. The manipulation check included three items. The first item measured how much participants thought that the target was hard working by stating, "Sam is hard working." The second item stated, "Sam relies on natural ability." The third item measured how successful the participants found Sam to be by stating, "Sam was successful when it came to soccer." Participants rated each statement using a 6-pt Likert scale (1 = *strongly disagree;* 6 = *strongly agree*) based on how well the participants agreed with the statement given. Before leaving, the participants received the debriefing script, which the researcher read to the group.

Results

Manipulation Check: Perceived Ability

An independent samples *t*-test tested the effectiveness of the ability manipulation. The first analysis compared the scores from the participant's randomly assigned ability condition (hardworking or natural ability) on perceptions of the target being hardworking. The means and standard deviations on the hardworking manipulation check for the two experimental conditions were: *M* = 5.90, *SD* = .31 for hard working and *M* = 2.15, *SD* = .93. The analysis was significant and had a large effect size; *t*(76) = 23.80, *p* = .001 (two-tailed), effect size (*d*) = .94. The analysis

indicates that participants assigned to the hardworking condition rated the target as significantly more hardworking than those who were assigned to the natural ability condition. The results are displayed in Figure 1.
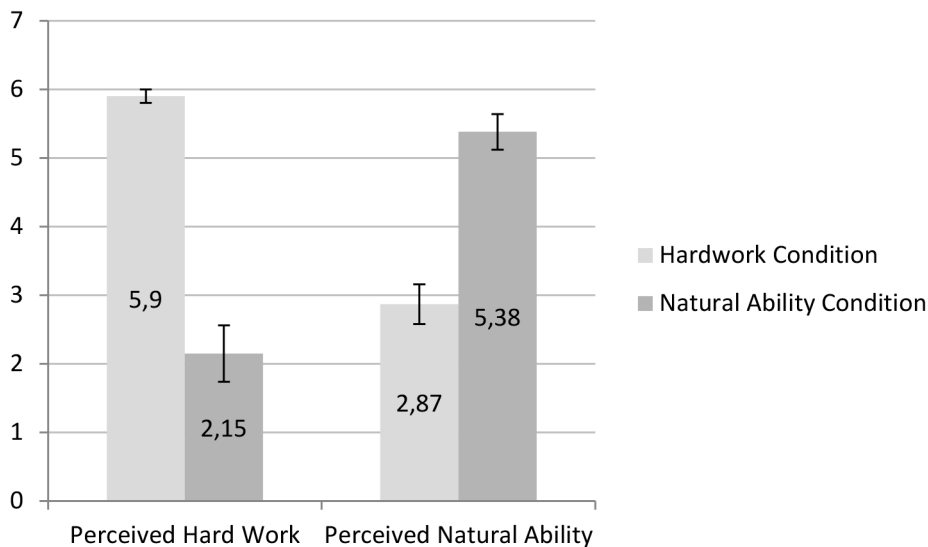

Figure 1. Means for perceived hard work and natural ability of the target dependent on participants randomly assigned ability condition

A parallel analysis compared the scores from the participant's randomly assigned ability condition (hardworking or natural ability) on perceptions of the target possessing natural ability. The means and standard deviations on the natural ability manipulation check for the two experimental conditions were: M = 2.87, SD = 1.32 for hard working and M = 5.38, SD = .81 for natural talent. The analysis was significant and had a large effect size; $t(76)$ = -10.11, p = .001 (two-tailed), effect size (d) = .76. The analysis indicates that participants assigned to the hard-working condition rated the target as relying significantly less on natural ability than those assigned to the natural ability condition. The results are displayed in Figure 1.

Manipulation Check: Perceived Success

As with ability, we ran an independent samples t-test also tested the effectiveness of the success manipulation. The analysis compared the participants' randomly assigned success condition (successful or unsuccessful) with perceptions of the target being successful. The means and standard deviations for the two experimental conditions were: M = 5.10, SD = .85 for successful and M = 3.15, SD = .1.25 for unsuccessful. The analysis revealed that the two group means were significantly different from each other and had a moderate effect size, $t(76)$ = 8.06, p = .001 (two-tailed), effect size (d) = .67. These results indicate that participants assigned to the successful condition rated the target as significantly more successful than those assigned to the unsuccessful condition.

Ability and Success on Romantic Desirability

A two-way factorial analysis of variance compared the independent variables of ability of the target (hardworking or naturally talented) and success of the target (successful or unsuccessful) with the target's romantic desirability as the dependent variable. The means and standard deviations for each condition appear in Figure 2. The results for the two main effects were: ability of target $F(1, 74)$ = 80.52, p = .001, $\eta^2_{partial}$ = .52 and the success of target $F(1, 74)$ = .08, p = .78, $\eta^2_{partial}$ = .001. As hypothesized, those who received the hardworking description rated

the target as more romantically desirable than those who received the natural ability description. However, contrary to the hypothesis, those who received the successful description did not rate the target as more romantically desirable than those who received the unsuccessful description. The results show that, contrary to the hypothesis, the interaction between ability and success of the target was not significant $F(1, 74) = .14$, $p = .71$, $\eta^2_{partial} = .002$.
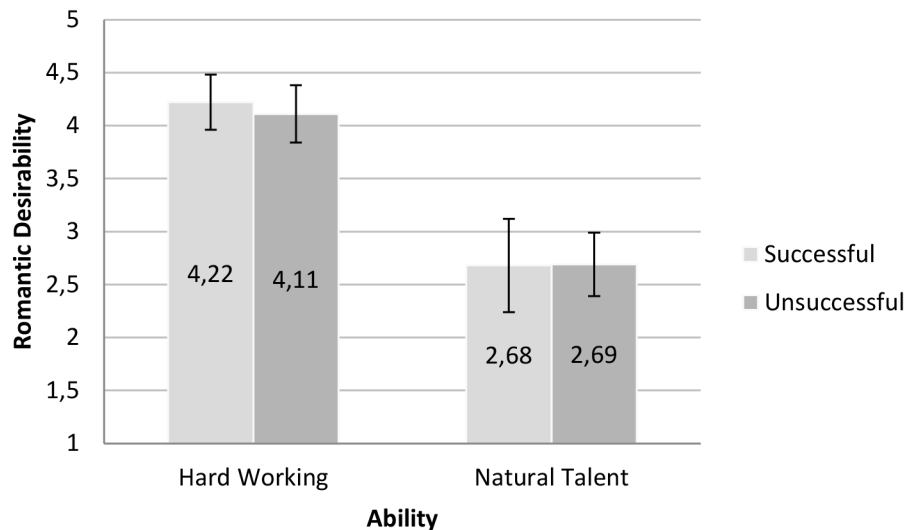

Figure 2. Means for ability and success on romantic desirability.

Ability and Implicit Theory on Romantic Desirability

Means and standard deviations for the four conditions (hardworking/incremental, hardworking/entity, naturally talented/incremental, naturally talented/entity) of the independent variables are shown in Figure 3. A two-way factorial analysis of variance compared the independent variables of ability of the target (hardworking or naturally talented) and the implicit theory of the participant (incremental or entity) with the target's romantic desirability as the dependent variable. The results for the two main effects were: ability of target $F(1, 74) = 72.82$, $p = .001$, $\eta^2_{partial} = .50$ and the participant's implicit theory $F(1, 74) = .1.76$, $p = .19$, $\eta^2_{partial} = .02$. As hypothesized, those who received the hardworking description rated the target as more romantically desirable than those who received the natural ability description. However, contrary to the hypothesis, entity theorists, compared to incremental theorists, did not rate the target as more romantically desirable. The results also show, contrary to the hypothesis, that the interaction between the independent variables was not significant $F(1, 74) = .004$, $p = .93$, $\eta^2_{partial} = .001$. Participants who held an incremental mindset did not find the hardworking target as more romantically desirable. Similarly, participants who held an entity mindset did not find the natural ability target as more romantically desirable.

Exploratory Analyses

Exploratory analyses revealed other differences in the responses between participants who received a description of the hardworking target and participants who received a description of the naturally talented target. When participant's rated the target as a potential partner, participants viewed the hardworking target as being an overall better partner, $F(1, 74) = 45.70$, $p = .001$, $\eta^2_{partial} = .38$, more responsive to their partner's needs, $F(1, 74) = 141.66$, $p = .001$, $\eta^2_{partial} = .66$, more willing to change for their partner, $F(1, 74) = 56.44$, $p = .001$, $\eta^2_{partial} = .43$,
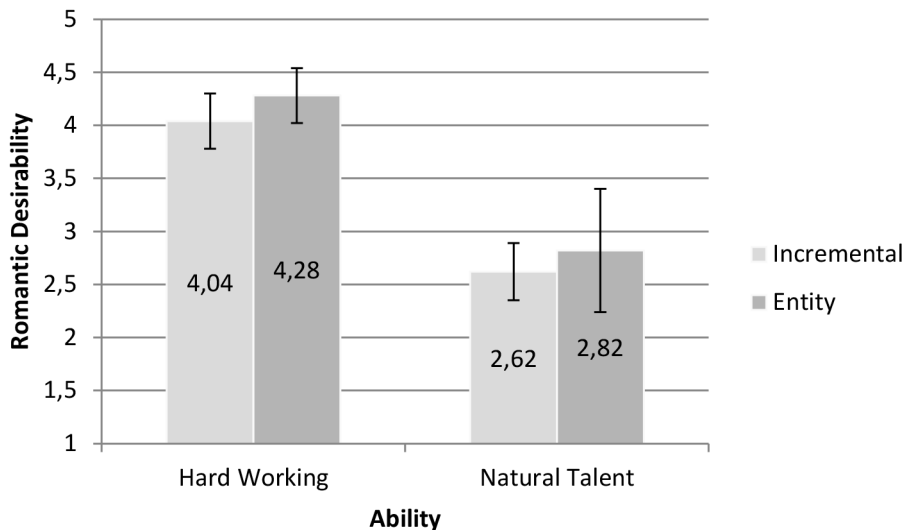
Figure 3. Means for ability and implicit theory on romantic desirability.

and as more willing to sacrifice for their partner, $F(1, 74) = 54.19$, $p = .001$, $\eta^2_{partial} = .42$, than the naturally talented target. The target's perceived success did not affect the ratings of the target as a potential partner either on its own or in combination with the target's ability.

Discussion

The purpose of the study was to determine if a person's willingness to put in effort influences their romantic desirability. As hypothesized, the hardworking target was more desirable as a date and was assumed to have more relationship-enhancing traits than the naturally talented target. Exploratory analyses also revealed that participants perceived the hardworking target as a better partner than the target that relied on natural ability. However, contrary to the hypothesis, success of the target did not influence how romantically desirable the participants found the target or how participants perceived the target as a partner.

The study also aimed to see if the similarity-attraction effect applied to effort, so that incremental theorists would find the hardworking target more romantically desirable and entity theorists would find the target that relied on natural ability to be more romantically desirable. Contrary to the hypothesis, the participants' implicit theory and the interaction between the participants' implicit theory of personality and ability of the target did not influence their desirability ratings for the target.

Ability

Past research on effort supports the higher desirability ratings of the hardworking target (Ben Hamida et al., 1998; Bochner & Van Zyl, 1985). Hard work and industriousness, traits related to effort, are desirable traits for close others to possess. It is also known that traits influence a person's desirability not only as a friend, but also as a romantic other (Lewandowski et al., 2007). The present study expands on that research by showing that expending effort is not just a desirable trait, but a trait that if one exhibits in everyday life, could be influential on their romantic desirability. The present research also reveals that participants believe the target who exerted effort would parti-

cipate in relationship enhancing activities more than the naturally talented target. These included the effortful target being rated as an overall better partner, more responsive to their partner's needs, more willing to change for their partner, and more willing to sacrifice for their partner. Therefore, participants believe effort in everyday life (e.g. as a soccer player) can translate to the person's romantic relationships. This relates to how people perceive effort. As a desirable trait, effort should lead people to the assumption that the person exhibits other desirable traits, as per the halo effect (Nisbett & Wilson, 1977). These results bode well for those who are willing to go the extra mile.

Success

Another aspect of effort is its relationship to success. In many cases, those who exert effort are more successful (Revelle & Michaels, 1976; Thomas, 1983; Van Lange et al., 1997; Wieselquist et al., 1999). Therefore, in our scenario, it was interesting to find that when effort did not lead to success, participants still found the target to be as desirable as the successful target that exerted effort. Success also failed to influence the desirability of the naturally talented target. Researchers already know that people view effort as more desirable than natural ability even when both are unsuccessful; however, unsuccessful targets had not previously been compared to successful targets (Tjosvold, 1985). Research on performance attributions could explain the high desirableness ratings for the unsuccessful, effortful target. Carlston & Shovar (1983) discovered that participants rated targets who cited a lack of success on internal attributions as more modest and honest than those who made external attributions for their lack of success. It is also possible that success did not carry as much weight in this experiment because the activity depicted (playing soccer) did not directly relate to important mating characteristics, which might be considered for romantic partnerships. The results could have been different if the activity indicated that the target exhibited financial, physical, or reproductive success (Buss & Schmitt, 1993).

Implicit Theories of Personality

Previous research on implicit theories of personality shows a correlation between a person's implicit theory of personality and how much effort they are willing to exert on different tasks (Dweck et al., 1995; Dweck & Leggett, 1988). However, a person's implicit theory of personality did not directly relate to perception of effort. Having a specific implicit theory does not guarantee that that person will put in more or less effort. Even though incremental theorists are more prone to exert effort, it does not mean that entity theorists will never exert effort. The discrepancy between the hypothesis and results could have originated from the fact that measuring a person's implicit theory of personality is not a direct measure of their willingness to put in effort. A more direct measure of the participants' willingness to put in effort could have yielded different results. In addition, though the similarity attraction effect is a well-documented predictor of attraction, it is a better predictor when looking at similarities in general opposed to examining one trait (Tidwell, Eastwick, & Finkel, 2013). Being similar on one specific trait does not have as much of an impact on predicting attraction, which could provide an explanation for why the one trait studied (effort), was not significant in predicting desirability when combined with the participant's implicit theory.

Strengths and Limitations

The study had its strengths and limitations. Examining the results of the manipulation check, it is apparent that there was a high level of the control in both descriptions so that the description only manipulated ability and success. This speaks to the internal validity of the study. However, the high level of control could create a problem with the natural validity of the study. The study's naturalistic validity was limited due to the use of vignettes in a lab setting as the manipulation. The use of vignettes created a hypothetical situation in which participants might have answered differently than they would have if they had actually met "Sam".

Measuring the participants' implicit theory of personality also revealed some limitations. As mentioned earlier, measuring the participants' implicit theory was not a direct measure of their views on effort. In addition, most of the implicit theory scores fell at the mid-range of the scale limiting the variability and possibly interfering with the measure's effectiveness of predicting the participant's views on effort. Looking at the dependent variable, our scale to measure romantic desirability was satisfactory due in part to the high reliability between responses. The measure is also generalizable to different types of desirability as mentioned in the materials. The questionnaire examines both dating desirability and partner desirability. However, we do recognize that a behavioral measure may have provided a more accurate measure of behavioral intentions of dating.

In regards to the sample, it would be ideal for the implication of the results if the number of males and females in the study had been proportional. However, a majority of the participants were female. When looking for potential relationship partners, women place emphasis on a man's status whereas men are more likely to value physical attractiveness (Buss & Schmitt, 1993). It is possible that men and women's differing views on attraction could have affected the desirability ratings. However, research also finds that both men and women place similar emphasis on personality characteristics when evaluating potential partners, indicating that there might not be a large disconnect between men's and women's responses in the present study (Li, Bailey, Kenrick, & Linsenmeier, 2002).

Future Directions

In a future study, researchers could improve on the present study's design by manipulating the participants' effort level instead of indirectly measuring the participants' willingness to put in effort. Future studies might also want to vary the task in which the target takes part. Participants might place more importance on success if the activity has bearing on the potential success of the relationship. We also suggest the addition of a picture for the target. Adding a picture would determine if effort expenditure influences not only the romantic desirability of the target, but their physical attractiveness as well. Participants might find a hardworking person to be more physically attractive than a person who relies on natural ability. Since a hardworking person is more romantically desirable, future studies could expand on the research to determine if it matters how a person expends their effort. For example, are people more desirable when they expend effort helping friends or if they expend effort in school? What a person puts effort into could influence how desirable or attractive they are to others.

Conclusion

The purpose of the study was to expand on attraction research. The study provided support for the hypothesis that someone who is hardworking will be more romantically desirable compared to someone who relies on natural ability. The hardworking target was desirable regardless of success. However, the study did not provide support for hypothesis that a person's implicit theory of personality would influence their desirability ratings of the target. Attraction is the first step in initiating intimate relationships. By studying what influences attraction, people can learn about what might be influencing their decisions and make informed decisions.

Competing Interests

The authors have declared that no competing interests exist.

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Appendix

Description 1 (Hard work and successful):

Sam is currently a junior in college majoring in psychology. Sam is an attractive student who is of average height and weight. Sam is also on the school's soccer team and has been since freshman year. Since freshman year, Sam has shown dedication to the game throughout each season and has become one of the best players on the team. When the team would finish a practice, Sam would stay after and run different drills in order to improve on different skills. Sam was also usually the first to arrive to practice in order to get in an extra run or to warm up. Sam has always been the type of person who works hard in order to achieve different goals. Sam believes that anyone can improve if they put in the effort. For this reason, Sam puts a lot of effort into school, work, and other hobbies as well. Thanks to this, Sam is one of the best players and has enjoyed a lot of success.

Description 2 (Hard work and unsuccessful):

Sam is currently a junior in college majoring in psychology. Sam is an attractive student who is of average height and weight. Sam is also on the school's soccer team and has been since freshman year. Since freshman year, Sam has shown dedication to the game throughout each season, but has not become one of the best players on the team. When the team would finish a practice, Sam would stay after and run different drills in order to improve on different skills. Sam was also usually the first to arrive to practice in order to get in an extra run or to warm up. Sam has always been the type of person who works hard in order to achieve different goals. Sam believes that anyone can improve if they put in the effort. For this reason, Sam puts a lot of effort into school, work, and other hobbies as well. Despite this, Sam is not one of the best players and has not enjoyed a lot of success.

Description 3 (Natural ability and successful):

Sam is currently a junior in college majoring in psychology. Sam is an attractive student who is of average height and weight. Sam is also on the school's soccer team and has been since freshman year. Since freshman year, Sam has shown an effortless attitude towards the game throughout each season and has become one of the best players on the team. When the team would finish a practice, Sam would be the first one off the field. Sam was also usually the last to arrive to practice and never got to warm up or get in an extra run. Sam has always been the type of person who does not work hard in order to achieve different goals. Sam believes that anyone can improve if they have natural ability. For this reason, Sam puts little effort into school, work, and other hobbies as well. Despite this, Sam is one of the best players and has enjoyed a lot of success.

Description 4 (Natural ability and unsuccessful):

Sam is currently a junior in college majoring in psychology. Sam is an attractive student who is of average height and weight. Sam is also on the school's soccer team and has been since freshman year. Since freshman year, Sam has shown an effortless attitude towards the game throughout each season and has not become one of the best players on the team. When the team

would finish a practice, Sam would be the first one off the field. Sam was also usually the last to arrive to practice and never got to warm up or get in an extra run. Sam has always been the type of person who does not work hard in order to achieve different goals. Sam believes that anyone can improve if they have natural ability. For this reason, Sam puts little effort into school, work, and other hobbies as well. Due to this, Sam is not one of the best players and has not enjoyed a lot of success.