The Price of Being Ethical: Consumer Purchasing Behavior in the Face of an Ethical Dilemma. An Experimental Approach.

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Abstract

Economic theory suggests that consumers seek to maximize utility at the lowest cost possible, and firms who have higher cost of production will be driven out of the market. Recently, more and more firms have started using "ethical" labels as means of product differentiation. The question of whether this practice can be profitable has been studied using surveys, hypothetical and field studies, but each of those methodologies entails limitations. Here, I model a market environment in the lab, examining the willingness to pay for ethically produced goods, particularly, goods which do not use child labor. Addiitonally, I incorporate psychology literature on ethical decision-making, and measure personality traits including Machiavellianism, Locus of Control and Personal Moral Philosophy, as well as the effects of social norm elicitation. The results show that both price and the personality type affect our choice to buy ethically produced goods. In addition, introducing a social norm can significantly change the buying behavior of people.

I. Introduction

A recent publication in the AER summarizes the economist's view of 'ethical production methods' as follows: ''When unethical behavior cuts costs, competition drives down prices and entrepreneurs' incomes, and thereby reduces their willingness to pay for ethical conduct" (Schleifer, 2004). Theories of consumer decision-making lead to a similar prediction - a consumer choosing amongst products of equivalent quality should focus on posted prices, largely without consideration of the means of production. Several events, including the 1996 scandal over Nike's production of soccer balls, Kathie Lee Gifford's production of clothing, and even recent issues in the natural gas industry regarding the externalities associated with hydrofracturing suggest production methods may influence a firm's 'bottom line.' Several firms use labeling and other methods to certify that their production technologies are 'ethical' in the sense that they do not use child labor, do not use animal testing, or they are environmentally conscious. The effectiveness of these strategies depends, in part, on how much consumers are willing to pay for ethically produced goods. The primary contribution of this thesis is the development and application of a methodology for determining the demand for ethically produced goods utilizing experimental methods.

The issue is not new. Both scholars and businesses have used consumer surveys relying on hypothetical choices to examine consumer willingness to pay (Simon, 1995; Mason, 2000; Rokka and Uusitalo, 2008). A survey commissioned by the Co-operative Bank in the UK (Mason, 2000) suggests that one third of consumers are concerned with ethical issues. A survey by brand marketer Corporate Edge (Rogers, 1998) showed that 57% of their respondents would stop buying a brand if they knew it involved child labor. 21% claimed to support action against

companies whose practices they find unethical. In addition to polls, hypothetical scenarios presented to people yield similar results. Rokka and Uusitalo (2008) surveyed 330 consumers asking them which of three products they are most likely to buy, based on environmental label, functionality of the package, brand and price. Surprisingly, they found that most consumers – one third of all – considered the environmental label as the most important criteria in their choice. Unfortunately, studies of survey research indicate there is a well documented 'attitude-behavior gap' that may limit the external validity of these results (Carrigan and Attalla, 2001; Ajzen, Brown, & Carvajal, 2004; Pelsmacker, 2005). It is empirically shown that attitudes alone are not a very good predictor of buying behavior (Cobb-Walgren and Ruble 1995; Shaw and Clarke 1999; Rokka and Uusitalo, 2008). Some authors have suggested abandoning the methodology entirely, because the "answers are never reliable" (Ulrich and Sarasin, 1995).

Field studies provide an alternative methodology relying on observed behavior, rather than responses to hypothetical scenarios. For example, Bjorner, Hansen and Russell (2004) used a large Danish panel data on actual consumer behavior over a four-year period to examine the effect of the environmentally certified label Nordic Swan on consumer's brand choice for toilet paper, paper towel and detergent. Similar to the results from survey methods, they found that the Nordic Swan Label has a significant effect on consumer's brand choice for toilet paper, with a willingness to pay of 13 to 18% of the price. Moreover, the label seemed to affect consumer's choice of detergent. Another example comes from Teisl, Roe and Hicks (2002), who examined the effect of dolphin-safe labels on tuna cans. They used regression analysis to look at the change of purchasing behavior after an eco-label was introduced, using monthly sales, price, and retail-support information data for all scannable food items in 3000 supermarkets in the

United States with at least $2 million in annual sales (estimated to cover 84% of all supermarket sales). The statistical significance of the label coefficient in the tuna share equation indicated the dolphin-safe label did increase the market share of canned tuna, and this increase continued over time. While the evidence is compelling, the effectiveness of this methodology hinges on the informational content provided by the labels, which may vary significantly to different groups of consumers (Teisl et al., 2008).

Experimental methods can serve as an important complement to both survey and field research by examining decision making in an environment with real (as opposed to hypothetical) stakes, and in which the informational content of a labeling process can be tightly controlled. Moreover, several 'economic' experiments have documented the limitations associated with the self-interest model and detail the subtleties associated with framing and the relevance of psychological variables or personality traits (Bradsley, 2010; Davis and Holt, 1993). Psychologists have a long history of studying ethical decision making in various contexts, including business environments (Hagerty and Sims, 1978; Bommer et al. 1987; Ferrell, Gresham and Fraedrich, 1989; Loe, Ferrell and Mansfield, 2000; O'Fallon and Butterfield, 2005). Variables such as Machiavellianism, Locus of Control, Idealism and Relativism have consistently been shown to have important effects on choice in the face of an ethical dilemma (O'Fallon and Butterfield, 2005; Loe, Ferrell and Mansfield, 2000). Hunt and Chonko (1984) define *Machiavellianism* as "a negative epithet, indicating at least an immoral way of manipulating others to accomplish one's objectives". Ferrell, Gresham and Fraedrich (1989) identify it as a value-oriented form of egoism. Therefore, a person high in *Machiavellianism* will act in a purely self-interested manner without exhibiting remorse for his or her actions. I measure

Machiavellianism using the Mach IV scale developed by Christie and Geis (1970), which is comprised of 20 questions. Respondents are required to indicate how much each statement resonated with their personal beliefs by using a five-point Likert scale.

Locus of control captures the beliefs of individuals about whether the outcomes of their actions depend on what they do or on outside forces. Internals attribute life's events to their own abilities or efforts, whereas externals attribute life's events to some external source, such as fate, luck, or powerful others (Rotter, 1966). Perhaps because externals are less likely to believe their moral actions make a difference, prior research indicates that they are less likely to act ethically when faced with a controversial choice. I measure this variable using Rotter's Internal–External Locus of Control Scale (Rotter, 1966) which consists of 29 questions.

The Ethics Position Questionnaire (EPQ) developed by Forsyth (1980) measures personal moral philosophy using two scales: idealism and relativism. Relativism is the extent to which one rejects universal moral rules in favor of personal judgment on a case-by-case basis. Idealism is the extent to which one believes the "right" outcome can always be achieved regardless of the difficulties. Respondents indicate to what extent they agree or disagree with each of 20 statements on a five-point Likert scale. The EPQ allocates respondents in one of four categories – absolutist, situationists, exceptionists and subjectivists.

The instruments used to measure these three attributes exhibit desirable psychometric characteristics (Van Kenhove, Vermeir, and Verniers, 2001; Ormel and Schaufeli, 1991). Van Kenhove, Vermeir, and Verniers (2001) show that the Chronbach's α associated with the Machiavellian scale is equal to 0.71; the Chronbach's α for the idealism scale is found to be

0.84, and for the relativism scale - 0.77. The Chronbach's α associated with the measurement of locus of control has been found to be as high as 0.81 (Ormel and Schaufeli, 1991).

An important contextual moderating variable in studying ethical decision-making is peer influence (social norm). The theoretical support for this effect comes from social learning theory, according to which we model our behavior based on what we observe in others (Bandura, 1977). The effect has been incorporated in other theories of ethical decision-making as well (Trevino, 1986). Empirical results suggest there is a direct effect of peer influence on ethical choice (Beams et al., 2003). Given the extent to which social constructs affect views of ethical behavior, we examine how social norms affect consumer decision-making in our experimental paradigm, by introducing *high* and *low* social norm treatments.

Our approach builds on the work of (Rode, Hogarth & La Menstrel, 2008), who examine decision making in a triopolistic market with three sellers and six buyers. Both buyers and sellers have certain valuations of a good, and buyers know that one of the three sellers incurs higher cost of production. In one condition, the buyers know the higher cost is associated with lack of child labor in production, in the other condition, the reason for the high cost is unknown. The central findings of this paper suggest that if consumers are aware a company incurs a higher cost due to ethical production, they are likely to pay higher price for their product. We build on this methodology by controlling the supply prices, which allows us to track a demand curve for ethically produced goods. As part of our approach, we also collect data on the psychological variables that have been shown to effect ethical decision making. In addition, we examine the effects of social norm elicitation.

Clearly, our approach is not without limits. Collecting psychological data in conjunction with an economic decision making task comes with the cost of introducing potential 'order effects.' Indeed, our data suggest these effects may be important. Yet, we believe the incorporation of psychological variables and social norms in our decision making task provides an interesting an important benefit. In brief, our results suggest that the demand for ethically produced goods is downward sloping. There are significant effects of social norm elicitation and personality preferences but they are difficult to identify due to order effects.

The remainder of the paper is organized as follows: In the next section, I present the experimental design and procedure, and formulate my hypotheses. In Section III, I analyze the results and Section IV concludes.

II. **Experimental Design and Procedure**

In total 114 students from Gettysburg College participated in a total of seven sessions. The sessions lasted approximately 50minutes. Subjects received a $6 participation fee and their earning from the experiment. Average earnings were $12.40.

Upon arrival, the subjects were seated and read through a set of general instructions (see Appendix). The instructions indicated the session would consist of a decision-making task, and three surveys. Subjects received $21 for completing the surveys. After all participants read the instructions and signed a consent form, they were given either the three surveys first or the decision-making task first. The ordering was counterbalanced in this way to avoid order effects. Sixty-six subjects took the surveys first, and 48 subjects took it after the decision-making task. The three surveys were presented in the following order: Mach IV scale, Rotter's Internal-

External Locus of Control Scale, and EPQ. Participants were not aware of the nature or type of the surveys, and were instructed to fill them out in accordance with their personal beliefs and preferences; it was emphasized that there is no right or wrong answer. Participants received detailed instructions prior to the decision-making task. Subjects had the role of buyers in a market with two producers (A and B) that offered identical products. The firms were said to produce their goods in third-world countries where exploitation of child labor is a serious problem. Participants were informed that firm A uses child labor, while firm B does not, therefore the price of firm B might be higher by a certain premium. Subjects were made aware that since firm B does not use child labor, the premium associated with any units they choose to buy from B will be donated to GoodWeave - an internationally recognized organization fighting child labor. All subjects were required to buy three units of the good at 16 different price premiums, using the $21 earned through filling out the surveys. The price firm A charged was held constant at $4 for all 16 choices, and the price firm B charged grew from $4 to $7 at increments of 20cents. While for the first decision the prices of the two firms were equal ($4), for the last decision buying all 3 units from firm B required spending the full endowment ($21).

In the "low" and "high" conditions, participants were given additional information. They were presented with another column containing example quantities bought from firm B associated with each choice (1-16). Subjects were informed that those numbers are based on real quantities bought by participants in a prior session.[1]

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[1] The numbers were based on the average of the lowest half (for the "low" condition) and highest half ("high" condition) of the participants' choices in the baseline. For the quantities presented in each treatment, refer to the Appendix.

Table 1. Choices faced by subjects as part of the decision-making task.

Decision	Price of Good A	Price of Good B*	Units bought from A	Units bought from B	Total Units bought (A+B) **must equal 3**
1	4.00	4.00			3
2	4.00	4.20			3
3	4.00	4.40			3
4	4.00	4.60			3
5	4.00	4.80			3
6	4.00	5.00			3
7	4.00	5.20			3
8	4.00	5.40			3
9	4.00	5.60			3
10	4.00	5.80			3
11	4.00	6.00			3
12	4.00	6.20			3
13	4.00	6.40			3
14	4.00	6.60			3
15	4.00	6.80			3
16	4.00	7.00			3

When all participants were finished with all 16 decisions, one volunteer drew a number from 1 to 16, and subject payoffs were associated with this decision. Each participant was provided with a formula sheet to use in calculating his or her earnings, and the amount of money to be donated on their part. Participants were paid privately, in cash. After each of them had received their personal payoff, the sum of contributions was calculated, and the donation was carried out online.

Hypotheses

H1: There will be a downward sloping demand for the ethically produced good - less units of good B will be purchased as the price of B increases.

H2: Social norms influence decision-making. Specifically,

    H2A: People in the high treatment will buy more units from good B compared to the baseline treatment.

H2B: People in the low treatment will buy less units from good B compared to the baseline treatment.

H3: Psychological variables affect decision-making. In particular,

H3A: Machiavellianism is negatively correlated with quantity bought from B.

H3B: Those with internal locus of control will buy more of the ethical good than those with external locus of control.

H3C: Low relativism and high idealism (absolutists) are associated with higher quantity bought from B than any other combination (situationists, exceptionists and subjectivists).
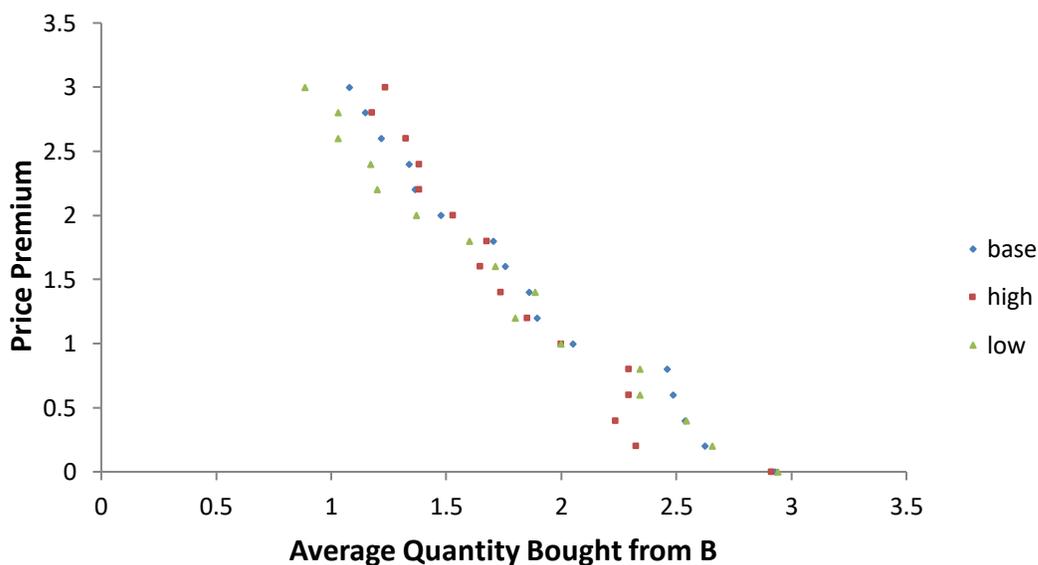
Results

The data obtained from the seven experimental sessions consists of 1824 observations. I analyze it using ANOVA tests and linear regression analysis. The quantity bought from the ethical good B (*qb*) is the dependent variable. The price premium (*pp*) measures the difference between price of firm A and price of firm B. The other independent variables are derived from the scores participants had on the psychological instruments Mach IV (*mach*) , Rotter's I-E Locus of Control Scale (*loc*) , and the Ethics Positioning Questionnaire (*ideal, relat*). *High* and *low* are dummy variables accounting for the "high" and "low" norm treatments. *Before* is a dummy equal to 1 when the surveys are presented first. I present descriptive statistics associated with each variable in Table 2.

Table 2. Summary statistics				
Variable	*Mean*	*Std. Dev.*	*Min*	*Max*
qb	1.865	1.217	0	3
pp	1.5	0.922	0	3
mach	3.408	.407	2.4	4.35
loc	10.772	3.858	2	22
ideal	3.224	.400	1.9	4
relat	2.856	.378	2	4.2
high	.298	.458	0	1
low	.298	.458	0	1
before	.579	.494	0	1
Observations	1824			

Hypotheses H1and H2: downward sloping demand and social norms

As seen from Figure 1 and Table 3, there is significant evidence that demand for the ethically produced good is downward sloping.[2]
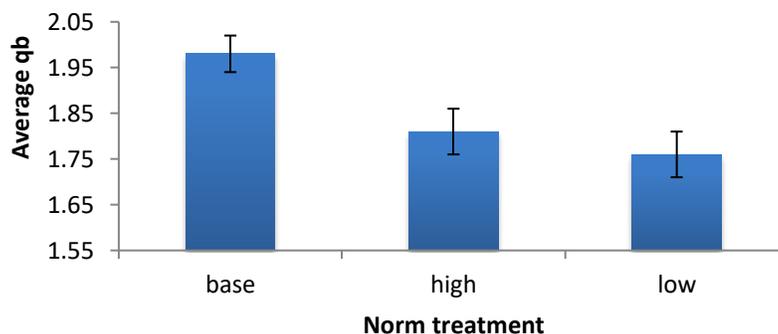
Figure 1. Average *qb* as a function of *pp* in each norm treatment

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[2] Below we report the results of a regression using pooled data. We fail to reject the hypothesis that subjects taking the survey before and after come from the same population (p>.05) for the baseline and social norm treatments.

As seen in the figure, increases in the price premium results in decreases in the average quantity purchased for each treatment. The robustness of this effect is confirmed by the regression estimates provided in Table 3. The coefficient estimate for *pp* was negative and statistically significant at the 1% level. A $1 increase in the price premium changes the predicted quantity bought from B by approximately 0.6 units. The regression estimates for the norm treatments are mixed. Based on the regression from the survey before, the quantities bought in the *high* and *low* treatments were significantly lower than the *base.* This was also confirmed by use of two-sample t-tests with unequal variance and Welch's degrees of freedom. There was a significant difference between the low treatment (*M = 1.76, SD = 1.22*) and the base (*M = 1.98, SD = 1.16*), *p* < .01, as well as a significant difference between the high treatment (*M = 1.81, SD = 1.28*) and the base, *p* = .01.

Figure 2. Average qb in each norm treatment

While social norm elicitation had significant effects, they were in the predicted direction only in the *low* treatment. When we revealed the purchasing behavior of others, subjects bought less of the ethically produced good, regardless of the norm treatment. The results contradict hypothesis *H2A* and support *H2B*.
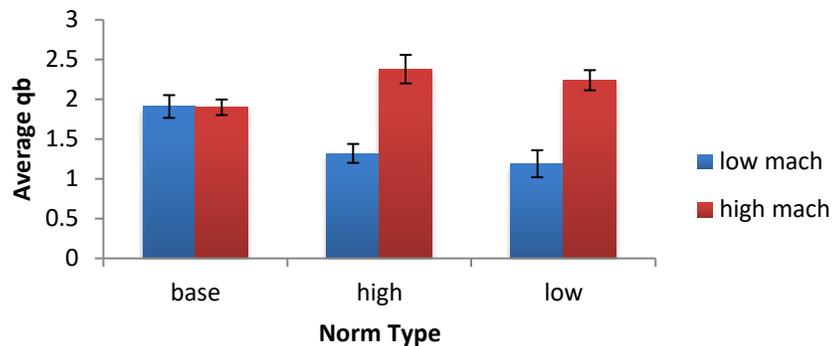
Hypotheses Related to Psychological Variables: Systematizing Personal Differences

Analyzing the effect of psychological variables produced mixed results. There was a significant order effect, with subjects taking the decision making task first scoring higher on the Machiavellian and Idealism scales and lower on the Locus of Control and Relativism scales. These differences were statistically significant (Wilcoxon rank-sum (Mann-Whitney) tests, *p* < .05). We analyze the data using ANOVA tests and regression analysis. For the regression, we were unable to pool the data in analyzing the psychological variables due to ordering effects. We present results from three regression models.

Since Machiavellianism is a value-oriented form of egoism, our hypothesis is that this variable will be negatively correlated with ethicality (Hypothesis H2A). We test this hypothesis using dichotomized Mach IV scores. After the raw scores were converted into standardized scores, we took the top 25% of all scores to be representative of the high Machiavellians, and the bottom 25% to be representative of low Machiavellians.[3] Results from a one-way ANOVA indicate that high Machiavellians (*M = 2.04, SD = 1.19*) buy significantly more than low Machiavellians (*M = 1.48, SD = 1.33*). We use a 2x3 ANOVA to examine the effect of norm treatment and Machiavellianism on *qb.* There was an interaction between norm type and Machiavellian type. Post-hoc simple comparisons revealed that there is no significant difference between *qb* by high or low Machiavellians in the *base* treatment, but both in the *high* and *low* treatments, those high in Machiavellianism bought more than those low in Machiavellianism. This set of results was contrary to our predictions, and the reason for this is unclear.
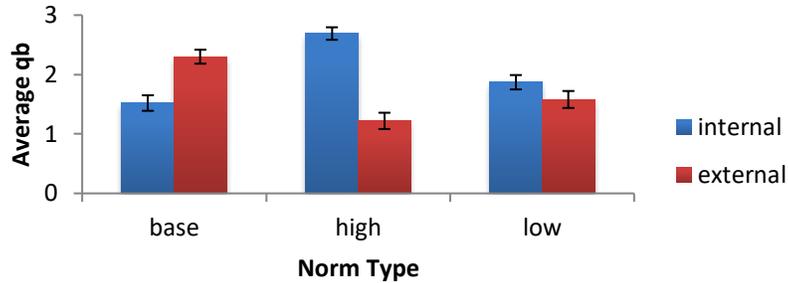
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[3] The results presented below did not significantly differ if the cutoff threshold was 0 for any of the psychological variables.

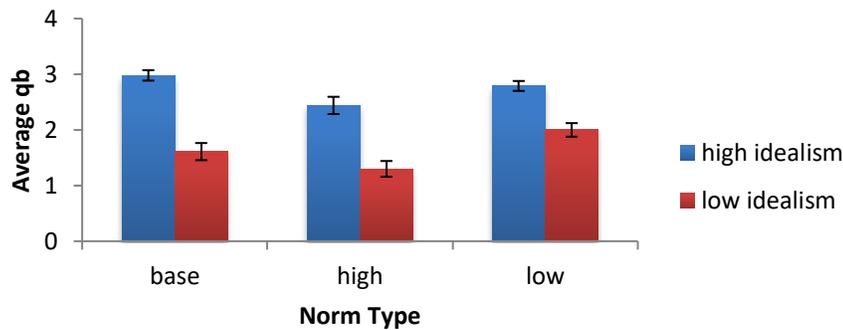**Figure 3: Average *qb* by Machiavellian Type And Norm Type**

With respect to Locus of control, we predict that externals, who believe that powers outside of their control guide their lives, will purchase less of the ethical good. To test this hypothesis, we dichotomized the variable in a similar manner, where externals were the highest 25% of the standardized scores, and internals were the lowest 25%. A one-way ANOVA showed no significant difference between internals (*M = 1.82, SD = 1.31*) and externals (*M = 1.67, SD = 1.31*) in the quantity bought, *p* = .202. A 2x3 ANOVA examining the effects of norm type and *loc* type revealed a significant interaction between the two variables. As seen in Figure 4, in the base treatment, internals bought more, and in the low treatment they bought less, but these effects were not statistically significant. There was a statistically significant difference between the *loc* types in the high norm treatment, where internals bought significantly more than externals.

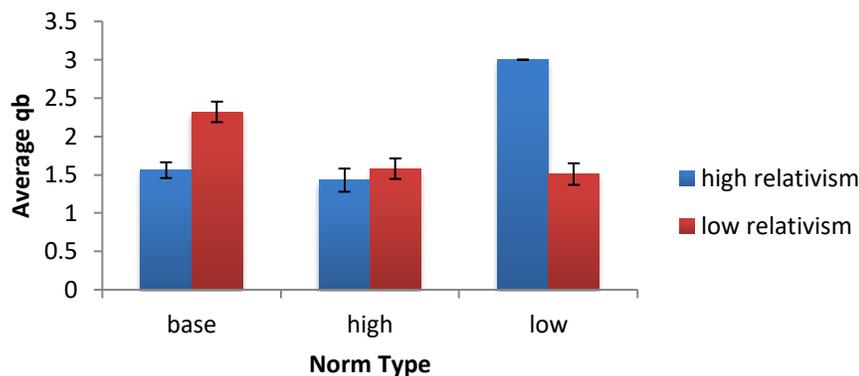**Figure 4: Average *qb* by Locus of Control Type And Norm Type**

We predict that those high in idealism, and those low in relativism will exhibit more ethical behavior. As with the other psychological variables, we classify the top 25% of standardized idealism (relativism) scores as high idealists (relativists), and the bottom 25% as low idealists (relativists). A one-way ANOVA looking at the effects of idealism on *qb* revealed that high idealists (*M = 2.26, SD = 1.14*) bought significantly more than low idealists (*M = 1.62, SD = 1.32*), *p* <.01. There was no significant interaction between norm type and idealism type, *p* = .07, as revealed by 2x3 ANOVA.

Figure 5: Average quantity bought by Idealism Type And Norm Type

A one-way ANOVA examining the effect of relativism on quantity bought showed no significant difference between those high in relativism($M = 2.61, SD = 1.33$) and those low on relativism ($M = 1.79, SD = 1.31$). A 2x3 ANOVA looking at the effects of norm type and relativism type revealed an interaction, $p < .01$. There was no significant difference between high and low relativists in the base or high treatments, but in the low treatment, low relativists bought significantly less than high relativists.

Figure 6: Average quantity bought by Idealism Type And Norm Type

Our regression estimates indicate that the psychological variables played an important part in decision making. We utilized the following model:

$$qb = \beta_0 + \beta_1\,pp + \beta_2\,mach + \beta_3\,loc + \beta_4\,ideal + \beta_5\,relat + \beta_6\,high + \beta_7\,low$$

with separate regressions for those who took the survey before (*before* = 1) and after the decision-making task (*before* = 0). As seen in Table 3, the results from the regression analysis replicate the findings outlined above, with a few exceptions. The coefficient estimate of *pp* was negative and statistically significant in both models. A $1 increase in the price

premium changes the predicted quantity bought from B by approximately 0.6 units. The coefficient estimate of mach was positive and statistically significant for those taking the survey before. A one unit increase in Machiavellian score resulted in .359 increase in the predicted quantity bought from B, ceteris paribus. This finding is in line with the ANOVA results, but contrary to prediction. The coefficient estimate of mach when surveys are taken after, however, matches predictions. In that model specification, a one unit increase in Machiavellianism resulted in .541 decrease in the predicted units bought from B. This discrepancy shows that there are strong priming effects of the decision-making task.

The coefficient estimate of *loc* is positive in both models, but only significant when subjects take the surveys after. A one unit increase in *loc* results in .102units increase in the predicted quantity bought from B, ceteris paribus. This finding contradicts not only theoretical predictions, but also empirical findings. In an empirical review of the literature covering the period 1996-2003, O'Fallon and Butterfield (2005) looked at 11 studies on Locus of Control, seven of which suggested internals are more positively associated with ethical choice than externals. The other four studies were inconclusive. However, only one of those studies used ethical behavior as a dependent variable, and the results from it were inconclusive. The other ten studies used either behavioral intent or behavioral judgment as a proxy for ethical behavior. It may be the case that regarding this variable, behavioral intent does not always match actual behavior. In fact, Rotter himself - when he developed his scale, argued that externals would be more prone to subtle suggestion and persuasion. This idea was taken by others to suggest that externals are more likely to follow ideas embodied in guilt appeals as means of resolving this guilt (Ghingold, 1981; Lascu, 1991). If participants in the current study perceived the message

underlying the experiment as guilt-inducing, this would explain the externls' higher preference

for goods which did not involve child labor.

Table 3. Estimates of Preliminary Regression

Core regressors	'Surveys before' OLS robust Coeff. Estimates	'Surveys after' OLS robust Coeff. Estimates	Pooled OLS robust Coeff. Estimate
pp	-.589***	-.645***	-.645***
	(.035)	(.034)	(.034)
mach	.359***	-.541***	-.471***
	(.090)	(.090)	(.085)
loc	.009	.102***	.097***
	(.008)	(.010)	(.009)
ideal	.634***	.048	.033
	(.076)	(.092)	(.088)
relat	-.301***	-.185	-.084
	(.094)	(.121)	(.114)
high	.017	-.310***	-.133**
	(.085)	(.089)	(.062)
low	-.107	-.569***	-.292***
	(.079)	(.091)	(.060)
before	-	-	-2.897***
			(.659)
befpp	-	-	.056
			(.049)
befmach	-	-	.790***
			(.122)
befloc	-	-	-.088***
			(.012)
befideal	-	-	.578***
			(.116)
befrelat	-	-	-.267*
			(.144)
Constant	.357	4.275***	3.706***
	(.473)	(.537)	(.502)
Observations	1056	768	1824
R-Squared	.2576	.3802	.2983

Note: Robust standard errors in parentheses.
***$P < .001$, ** $P < .05$, * $P < .1$

In both models, higher idealism and lower relativism scores were associated with

stronger preference for ethical goods, but the coefficient estimates were only significant in the

first model specification. This direction of this relationship is consistent with theoretical predictions, as well as previous empirical findings (Loe et al., 2000; O'Fallon and Butterfield, 2005). The discrepancy in significance scores may be based on priming effects.

There is a difference between the coefficient estimates of norm treatments in the two model specifications. In model 1, the coefficient estimates for both *high* and *low* were not statistically significant. In model 2, both coefficient estimates were significant and negative. This contradicts the third hypothesis. Rather than moving in the direction of the social norm, consumer preference for the ethical good always decreased when information on other purchases was presented.

In addition to the two models, in Table 3 we present a pooled regression:

$qb = \beta_0 + \beta_1\,pp + \beta_2\,mach + \beta_3\,loc + \beta_4\,ideal + \beta_5\,relat + \beta_6\,high + \beta_7\,low + \beta_8\,before + \beta_9\,befpp + \beta_{10}\,befmach + \beta_{11}\,befloc + \beta_{12}\,befideal + \beta_{13}\,befrelat$

Where *befpp, befmach, befloc, befideal* and *befrelat* are all interaction variables between *before* and the rest of the variables. The results of this regression align with the two separate models discussed above.

IV. Conclusion

We utilize experimental methods to examine consumer willingness to pay for ethically produced goods. We consider the effect of price premium on purchasing behavior, as well as the effects of individual differences and social norm elicitation. Participants engage in a decision-making task, and a task utilizing psychological test instruments – Mach IV, Rotter's

Internal-External Locus of Control scale, and Ethics Position Questionnaire. We also introduce treatments inducing high, low or no social norm.

The empirical analysis shows that the 'demand curve' for ethically produced goods is downward sloping. We find that the social norm elicitation has a significant effect on quantity bought, but it operates in the predicted direction only in the *low* treatment. Regardless of the amount of previous contribution, solely based on the fact that contribution existed, people buy less of the ethical good. The reason for the discrepancy between prediction and results may be the way norms were introduced. According to Krupka and Weber (2008) social norms have two important properties. They reflect social consensus regarding the appropriateness of different behaviors, and they are concerned with actions, rather than outcomes. The way we introduce social norms in this experiment may not have accurately reflected those two properties. There may be a better way to elicit norms, which would yield results similar to predictions. In our design social norms were introduced as a report of others' behavior. Actions during the experiment were not part of the social reference, and were not revealed to anyone else. A better way to introduce the norm may be to use updates about everyone's purchasing behavior in real time.

The results associated with the psychological variables are mixed, due to order effects. Among those who took the surveys first, the more idealistic, and the less relativistic ones purchased more of the ethical good as predicted. However, contrary to prediction, the more Machiavellian people purchased more of the ethical good, and the Locus of Control score did not have a significant effect. Among those who took the survey after the decision-making task, idealism and relativism were not significant predictors of purchasing behavior. Moreover,

externals were more likely to buy the ethical good, contrary to prediction. But as hypothesized. people higher in Machiavellianism bought less of the ethical good. The differences between the two models were substantial, and we believe this was due to priming effects associated with the instructions and the emphasis on child labor during the decision-making task. Further research is necessary to resolve the ambiguities presented by these results.

To address the potential external validity issues associated with using college students as subjects, although this type of research is questioned sometimes, it is more and more prevalent. In the context of consumer research employing human subjects, the percentage of articles published in the Journal of Consumer Research (JCR) using college students has steadily increased from 23% in the first volume in the 1970s to 89% in the 2000s (Peterson, 2001). Moreover, scholars argue reliable findings concerning behavioral processes can be accepted as valid regardless of the population sampled (Oakes, 1972). It should be recognized, however, that the phenomenon may not be perfectly replicable given a population with distinctly different characteristics.

Our results have some important implications. They can be useful in understanding how to engage more firms in ethical production. By examining the relationship between price premium and quantity bought, we show that, if recognized, ethical production methods can yield profits even when the product is offered at a higher price. However, for this to happen, we may need more standardized and trusted labels.

The results can also be applicable in marketing environments. Firms using ethical production methods as a means of product differentiation should recognize that while

consumers are willing to pay more for ethical goods, the premium has important implications on total sales. Moreover, individual and contextual differences can be important in determining consumer choice. While further research in the area is required for the results to be conclusive and applicable, this is an important first step. Companies which deal with individual clients know that building a personal relationship and understanding the underlying psychological characteristics of the client is imperative for success. But the results of this study suggest that even companies who have mass consumer population can take personality differences into consideration. The National Longitudinal Survey of Youth, for example, measures Locus of Control, as well as other personality variables. If we manage to establish more robust relationships between preference for ethical goods and psychological traits, a firm can take into account the personality variance of a particular target population, and adapt production techniques and market campaigns accordingly.

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Appendix A

General Instructions

This is an experiment in decision making. The instructions are designed to inform you of the types of decisions you will be making and the results of those decisions. All earnings you make during the experiment will be totaled and paid to you in privacy in cash at the end of the experiment. A $6 'participation bonus' will be added to your experimental earnings. Payment of the bonus is conditional upon your good faith effort to complete the experiment, and maintaining the integrity of the experimental session by remaining quiet and keeping all of your decisions and the results of those decisions private. Now that the experiment has begun, please remain quiet. Raise your hand if you have any questions and one of the experimental monitors will assist you.

The experiment will consist of two parts: completion of three short surveys and a decision making task.

Surveys As part of the experiment, you will be asked to complete three short surveys. The surveys will consist of general statements, reflecting commonly held opinions. There is no right or wrong answer. You will probably disagree with some items and agree with others. We are interested in the extent to which you personally agree or disagree with such matters of opinion. For completing the surveys, you will earn $21. Your earnings for the survey completion portion of the experiment will be used (in part) as an endowment for the decision making task.

Decision-making task

For the decision making task, you will act as a buyer in a market for a single good. Assume that two firms are competing in this market, and the product they are offering is identical. The cost of production for firm B is higher than that of firm A, and this is reflected in the market price of the products they offer. Particularly, the price of firm B may be higher than the price of firm A by a certain premium. You will be asked how many units you wish to purchase from Firm A and from Firm B for a series of values of the premium.

Appendix B

Decision-making task

For the decision making task, you will act as a buyer in a market for a single good. Assume that two firms are competing in this market, and the product they are offering is identical. Both firms produce their goods in third-world countries where exploitation of child labor is a serious problem. Firm A uses child labor. Firm B does not. As a result, the cost of production for firm B is higher than that of firm A, and this is reflected in the market price of the products they offer. Particularly, the price of firm B may be higher than the price of firm A by a certain premium, identified as follows:

Premium = [Price of Firm B] – [Price of Firm A]

Again, this does not entail any difference in the products the two firms offer.

You will be asked how many units you wish to purchase from Firm A and from Firm B for a series of values of the premium. Since firm B is against child labor, the premium associated with any units you choose to purchase from firm B will be donated to GoodWeave - an internationally recognized organization fighting child labor. GoodWeave is helping to combat child labor by certifying child-labor-free rugs and by providing education and opportunities to children. In order to earn the GoodWeave label, rug exporters and importers must be licensed under the GoodWeave certification program and sign a legally binding contract to:

1. Adhere to the no-child-labor standard and not employ any person under age 14
2. Allow unannounced random inspections by local inspectors
3. Endeavor to pay fair wages to adult workers
4. Pay a licensing fee that helps support GoodWeave's monitoring, inspections and education programs

On your decision sheets, Firm B, which does not exploit child labor, will be marked with an asterisk (*). Firm A will not.

You will be presented with sixteen consecutive choices of buying goods. In each period, you have to buy 3 units of the good. You can buy all three units from Firm A, all three units from Firm B, or buy some of the three units from A and some from B. Each choice will be independent from the other ones, i.e. for each decision you start with your full endowment of $21.

The choices you will face are as follows:

Decision	Price of Good A	Price of Good B*	Units bought from A	Units bought from B	Total Units bought (A+B) **must equal 3**
1	4.00	4.00			3
2	4.00	4.20			3
3	4.00	4.40			3
4	4.00	4.60			3
5	4.00	4.80			3
6	4.00	5.00			3
7	4.00	5.20			3
8	4.00	5.40			3
9	4.00	5.60			3
10	4.00	5.80			3
11	4.00	6.00			3
12	4.00	6.20			3
13	4.00	6.40			3
14	4.00	6.60			3
15	4.00	6.80			3
16	4.00	7.00			3

One of your sixteen choices will be selected randomly and the transaction will be realized, i.e. you will receive the money you are left with after the transaction, and the premium Firm B incurs will be donated to charity. Therefore, your payoffs at the end will be calculated as follows:

$6 + $21 – [the price you paid for the three units in a given period]

And the money donated will be equal to

[number of units you bought from firm B in a given period]*[price of Firm B – price of Firm A]

All donations will be conducted online after the experiment is over.

Appendix C

Decision-making task Detailed Instructions - High Treatment

For the decision making task, you will act as a buyer in a market for a single good. Assume that two firms are competing in this market, and the product they are offering is identical. Both firms produce their goods in third-world countries where exploitation of child labor is a serious problem. Firm A uses child labor. Firm B does not. As a result, the cost of production for firm B is higher than that of firm A, and this is reflected in the market price of the products they offer. Particularly, the price of firm B may be higher than the price of firm A by a certain premium, identified as follows:

Premium = [Price of Firm B] – [Price of Firm A]

Again, this does not entail any difference in the products the two firms offer.

You will be asked how many units you wish to purchase from Firm A and from Firm B for a series of values of the premium. Since firm B is against child labor, the premium associated with any units you choose to purchase from firm B will be donated to GoodWeave - an internationally recognized organization fighting child labor. GoodWeave is helping to combat child labor by certifying child-labor-free rugs and by providing education and opportunities to children. In order to earn the GoodWeave label, rug exporters and importers must be licensed under the GoodWeave certification program and sign a legally binding contract to:

1. Adhere to the no-child-labor standard and not employ any person under age 14
2. Allow unannounced random inspections by local inspectors
3. Endeavor to pay fair wages to adult workers
4. Pay a licensing fee that helps support GoodWeave's monitoring, inspections and education programs

On your decision sheets, Firm B, which does not exploit child labor, will be marked with an asterisk (*). Firm A will not.

You will be presented with sixteen consecutive choices of buying goods. In each period, you have to buy 3 units of the good. You can buy all three units from Firm A, all three units from Firm B, or buy some of the three units from A and some from B. Each choice will be independent from the other ones, i.e. for each decision you start with your full endowment of $21.

The numbers in the far right column below provide information on purchases by prior participants at Gettysburg College. They are based on actual numbers of units bought at each decision.

The choices you will face are as follows:

Decision	Price of Good A	Price of Good B*	Units bought from A	Units bought from B	Total Units bought (A+B) **must equal 3**	Units bought from B by prior participants
1	4.00	4.00			3	3.00
2	4.00	4.20			3	3.00
3	4.00	4.40			3	3.00
4	4.00	4.60			3	3.00
5	4.00	4.80			3	3.00
6	4.00	5.00			3	3.00
7	4.00	5.20			3	3.00
8	4.00	5.40			3	3.00
9	4.00	5.60			3	3.00
10	4.00	5.80			3	2.92
11	4.00	6.00			3	2.62
12	4.00	6.20			3	2.62
13	4.00	6.40			3	2.62
14	4.00	6.60			3	2.39
15	4.00	6.80			3	2.39
16	4.00	7.00			3	2.31

One of your sixteen choices will be selected randomly and the transaction will be realized, i.e. you will receive the money you are left with after the transaction, and the premium Firm B incurs will be donated to charity. Therefore, your payoffs at the end will be calculated as follows:

$6 + $21 – [the price you paid for the three units in a given period]

And the money donated will be equal to

[number of units you bought from firm B in a given period]*[price of Firm B – price of Firm A]

All donations will be conducted online after the experiment is over.

Appendix D

Decision-making task Detailed Instructions - Low Treatment

For the decision making task, you will act as a buyer in a market for a single good. Assume that two firms are competing in this market, and the product they are offering is identical. Both firms produce their goods in third-world countries where exploitation of child labor is a serious problem. Firm A uses child labor. Firm B does not. As a result, the cost of production for firm B is higher than that of firm A, and this is reflected in the market price of the products they offer. Particularly, the price of firm B may be higher than the price of firm A by a certain premium, identified as follows:

Premium = [Price of Firm B] – [Price of Firm A]

Again, this does not entail any difference in the products the two firms offer.

You will be asked how many units you wish to purchase from Firm A and from Firm B for a series of values of the premium. Since firm B is against child labor, the premium associated with any units you choose to purchase from firm B will be donated to GoodWeave - an internationally recognized organization fighting child labor. GoodWeave is helping to combat child labor by certifying child-labor-free rugs and by providing education and opportunities to children. In order to earn the GoodWeave label, rug exporters and importers must be licensed under the GoodWeave certification program and sign a legally binding contract to:

1. Adhere to the no-child-labor standard and not employ any person under age 14
2. Allow unannounced random inspections by local inspectors
3. Endeavor to pay fair wages to adult workers
4. Pay a licensing fee that helps support GoodWeave's monitoring, inspections and education programs

On your decision sheets, Firm B, which does not exploit child labor, will be marked with an asterisk (*). Firm A will not.

You will be presented with sixteen consecutive choices of buying goods. In each period, you have to buy 3 units of the good. You can buy all three units from Firm A, all three units from Firm B, or buy some of the three units from A and some from B. Each choice will be independent from the other ones, i.e. for each decision you start with your full endowment of $21.

The numbers in the far right column below provide information on purchases by prior participants at Gettysburg College. They are based on actual numbers of units bought at each decision.

The choices you will face are as follows:

Decision	Price of Good A	Price of Good B*	Units bought from A	Units bought from B	Total Units bought (A+B) **must equal 3**	Units bought from B by prior participants
1	4.00	4.00			3	2.77
2	4.00	4.20			3	2.46
3	4.00	4.40			3	2.31
4	4.00	4.60			3	2.31
5	4.00	4.80			3	2.15
6	4.00	5.00			3	1.15
7	4.00	5.20			3	1.00
8	4.00	5.40			3	1.00
9	4.00	5.60			3	0.85
10	4.00	5.80			3	0.77
11	4.00	6.00			3	0.62
12	4.00	6.20			3	0.31
13	4.00	6.40			3	0.23
14	4.00	6.60			3	0.15
15	4.00	6.80			3	0.15
16	4.00	7.00			3	0.15

One of your sixteen choices will be selected randomly and the transaction will be realized, i.e. you will receive the money you are left with after the transaction, and the premium Firm B incurs will be donated to charity. Therefore, your payoffs at the end will be calculated as follows:

$6 + $21 – [the price you paid for the three units in a given period]

And the money donated will be equal to

[number of units you bought from firm B in a given period]*[price of Firm B – price of Firm A]

All donations will be conducted online after the experiment is over.