What Is Historic Integrity Worth to the General Public? Evidence from a Proposed Relocation of a West Virginia Agricultural Mill

Vishakha Maskey, Cheryl Brown, Alan R. Collins, and Hala F. Nassar

While historians believe that preserving a historic building in its original location is important to maintain its historic integrity, the general public's opinion is unknown. Survey data were gathered from local residents regarding a proposed relocation of a historic mill in rural West Virginia. Only a minority of the sample population supported preserving the mill at its original location. Willingness to pay for preservation was estimated at $8.45 for a one-time donation for the sample and $2.29 after adjusting for non-respondents using characteristics of the local population.

Key Words: contingent valuation, historic preservation, Tobit model, willingness to pay

Historic resources possess cultural, historic, and educational significance. Historic landscapes are culturally significant because they present the ways in which people lived, worked, organized to meet their needs, and coped as members of society in general and of their communities in particular. Culturally significant landscapes are "the expression of human culture and history in the physical environment" (King 2002, p. 12). Thus, cultural historic landscapes are a symbol of heritage, which is a factor in the location of economic activity (Graham, Ashworth, and Tunbridge 2000).

Heritage is also part of a location's identity, which is valued differently by local people than by outsiders such as tourists. According to the

Historic Environment Review Steering Group (2003), historic landscapes have a number of values, including existence, option, altruistic, community identity, and recreational. In addition, they represent a potential revenue source through tourism and use of the buildings. Research has shown that historic buildings revitalize neighborhoods and generate economic opportunity through heritage tourism (Leichenko, Coulson, and Listokin 2001, Listokin, Listokin, and Lahr 1998). Mixed results have been found regarding the impact on a property's market price of historic designation where positive or negative impacts may occur depending upon historical significance and restrictions imposed upon property owners (Schaeffer and Millerick 1991). The existing valuation studies of cultural goods suggest that people have positive values regarding the conservation or restoration of cultural resources (Noonan 2003, Navrud and Ready 2002).

Norton and Hannon (1997) consider how location influences environmental and cultural values and what this means for environmental management. Their theory of a hierarchy (from local to global) of place-based values indicates that protection will be strongest at the local level but also extends to the larger community. In the case of

Vishakha Maskey is a Ph.D. candidate, Cheryl Brown is Assistant Professor, and Alan R. Collins is Associate Professor in the Department of Agricultural and Resource Economics at West Virginia University in Morgantown. Hala F. Nassar is Assistant Professor in the Department of Planning and Landscape Architecture at Clemson University in Clemson, South Carolina.

relocation of a historic building, the value placed on the original location may depend on how individuals geographically define their community. According to McClelland et al. (1990), one of the seven qualities of historic integrity is location and setting; thus, a change in location compromises historic integrity. Historic preservation guidelines indicate that relocation of a historic building should be the last resort when all other attempts to preserve it fail because relocation will compromise historic integrity. Historians believe that the relocation of a historic building decreases its historic integrity for the National Register of Historic Places, depending on the degree of loss in historic context.

In order to sustain the value of historic resources, preservation, restoration, reconstruction, and relocation projects have been undertaken. Historic buildings have been relocated on a number of occasions for their protection or to generate economic opportunity through heritage tourism (for examples, see Gonter 2004, Associated Press 2004, Heritage Society of Austin 2003). Decisions to move historic structures involve the belief that it is better to relocate and preserve these structures than lose them forever. Educational and recreational values associated with historic buildings often explain their relocation and/or preservation (de la Torre and Mason 1998). However, according to King (2002), a change in historic context influences the way of life of the community, which needs to be addressed in decision making regarding allocation and use of the historic resource.

While historians agree on the desirability of historic integrity, the extent to which the general public values this aspect of preservation is largely unknown. No research studies have examined what values citizens within a community attach to a change in the integrity of a historic building by relocation of all or part of the structure. Therefore, this study will investigate the attitudes and values held by the general public towards historic integrity in the case of a proposed relocation of a privately owned, historic mill. The economic value of historic integrity accessible to the public will be determined using data from a contingent valuation survey of a 20-mile region around the mill. Previous research has examined the value of heritage or historical sites by considering willingness to pay to preserve, reduce damage, clean, maintain, or otherwise care for these resources

(Noonan 2002). This study will contribute to this literature by examining the relocation aspect of historic preservation.

Case Study Background

Reckart's Mill is located near Cranesville, West Virginia (Figure 1). The mill is considered a rural, historic industrial landscape because it represents the social history of the nineteenth century agricultural economy and the associated technological changes within the mill industry (Hardesty and Little 2000). It was built in 1865 as a three-story post and beam gristmill, cider press, and wood planer. In 1980, it was listed in the National Register of Historic Places because of its significance for agriculture, social history, industry, architecture, and engineering (National Register of Historic Places 2006).

Reckart's Mill has always been privately owned. It is located in a remote area with poor quality roads and no nearby recreational opportunities or tourist destinations (such as stores and restaurants). A lack of visitors, financial difficulties, and increasing insurance payments forced the owners to close the mill to the public in 2004 (Hardesty 2004). A non-profit organization, Friends of Reckart's Mill, was created by the owners to restore the historic mill, but the group was not successful in raising enough funds to keep the mill open.

In order to keep the mill located within its native Preston County, a relocation proposal has been put forth by the owner and a local historical society (Hinchliffe 2005). This proposal would involve moving the mill's working parts (the water wheel and grinding millstones) to a former mill site located close to an interstate highway in Bruceton Mills, West Virginia. Relocation of Reckart's Mill has been promoted on the basis of restoring a former mill and providing economic opportunities by increasing the number of visitors at this new location compared to the former location. Both the Bruceton Mills town council and Preston County Commissioners have supported relocation of the mill (Plum 2003a, 2003b).

Theoretical Framework

Previous research has assessed the value of heritage places with local, national, or international significance. Navrud and Ready (2002) compiled
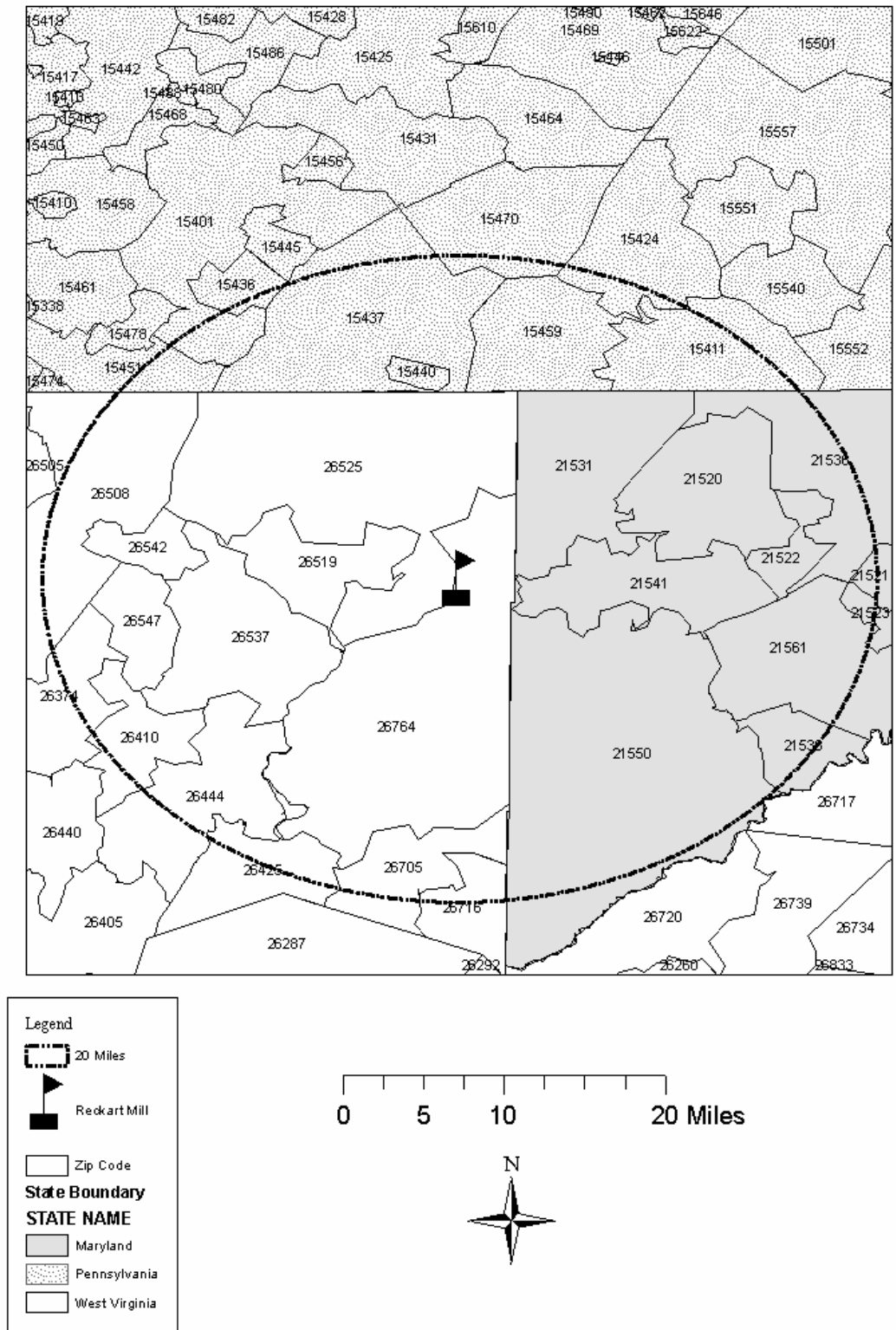
Figure 1. Location of Sample Population around Reckart's Mill, West Virginia

case studies completed over a 30-year period that assigned values to cultural heritage based on non-market valuation techniques. Empirical research ranges from local goods like a historic hotel in Ft. Collins, Colorado (Kling, Revier, and Sable 2004) to World Heritage Sites such as Fes Medina (Carson, Mitchell, and Conaway 2002) and Stonehenge (Maddison and Mourato 2002). Economic valuation studies using the contingent valuation method (CVM) have been conducted to value art, historical sites, theaters, museums, heritage, archaeological sites, broadcasting, sports, and libraries (Noonan 2002).

CVM is considered a useful technique for policy-relevant issues, such as benefit-cost analysis of investment for public programs, and as a policy instrument for privately supplied public goods where efficient supply of the public good requires that the sum of individuals' marginal willingness to pay equals the marginal cost of producing the public good (Santagata and Signorello 2002). Chambers, Chambers, and Whitehead (1998) conclude that CVM is a valid and reliable method for valuing a local historic building as part of a benefit-cost analysis regarding its preservation.

In CVM, respondents are assumed to react to a described hypothetical market in a way that is comparable to an actual market (Mitchell and Carson 1989). In this study, CVM was used to measure household-level value for maintaining the historic integrity of Reckart's Mill by preserving it at its original location. This value can be measured either in terms of willingness to pay (WTP) or willingness to accept (WTA), depending on the property right assignment. Since the general public was assumed to not have any property rights to the mill, a WTP measure was used. WTP for this qualitative change in the mill can be represented by the compensating surplus, which is measured as the difference between two conditional expenditure functions, $e*(\cdot)$:

(1) $$\text{WTP} = e*(p, q_0; U_0, Q, T)$$
$$- e*(p, q_1; U_0, Q, T),$$

where p is a vector of prices for market goods, q_0 is pending relocation of the mill to a new location (with loss of historic integrity), q_1 is maintaining the historic integrity of the mill by preserving it at its original location and enabling it to be open to

the public, U_0 is the initial level of utility given relocation, Q is a vector of other public goods that is held constant, and T is a vector of individual knowledge of and attitudes towards historic preservation. The expenditure functions are conditioned because individuals are not free to choose the quality level of historic integrity from the mill.[1] Given the pending relocation, let the current conditional expenditure function at q_0 represent current income Y_0. When the level of income required to achieve U_0 at q_1 is expressed as Y_1, then $Y_0 - Y_1$ represents WTP for a change from q_0 to q_1. $Y_0 - Y_1$ can be either positive or negative depending upon whether an individual prefers historic integrity of the mill or supports mill relocation for tourism or convenience.

A WTP function for household i can be written as

(2) $$\text{WTP}_i = f(\Delta q_j; Y_i, T_i).$$

Equation (2) represents the basis for estimating a valuation function to measure Δq_j as a change from q_0 to q_1, where p has been dropped because prices do not change. When household respondents are presented with a contingent market that offers a change from q_0 to q_1, then a linear functional form for WTP for the ith household can be estimated as

(3) $$\text{WTP}_i = \beta X_i + \varepsilon_i,$$

where β is a vector of coefficients associated with a matrix of variables that includes income, knowledge, and attitude characteristics, X_i; and ε_i refers to the error term (assumed to be normally distributed with zero mean and constant variance) that reflects unobserved preferences (Mourato, Kontoleon, and Danchev 2002).

Survey Design and Data Description

In this study, a self-administered CVM mail questionnaire was used to collect data from households. While being a common data-gathering method

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[1] Historic integrity was assumed to have a zero market price associated with it. See Freeman (2003) for an example of analyzing welfare measures from quantity changes.

for CVM, mail surveys generate relatively lower response rates and less reliable information than do personal interviews (Boyle 2003). However, mail surveys can present better descriptive information than do telephone surveys while covering a larger geographic area and without the problem of interviewer effects (Boyle 2003). Personal interviews, although advocated by Mitchell and Carson (1989) and NOAA's Blue Ribbon Panel (NOAA 1993) because of their reliability, were not practical for this study due to cost. Internet and telephone surveys also were not considered due to the expense and likely samples not being representative of the general population because of lack of Internet access (Dillman 2000).

The survey instrument's design was based on the results of two focus groups, one pre-test, and a series of reviews by researchers. One focus group included residents near the mill and the other involved individuals from within 20 miles of the mill. The survey included five sections of questions in the following order: (i) attitudes, beliefs, and behavior regarding historic preservation, (ii) attitudes regarding the importance of the original location of a historic resource, (iii) questions specific to Reckart's Mill, (iv) questions related to the CVM (see Appendix A), along with reasons for not making a donation, and (v) demographic questions.

The CVM question requested a donation to preserve Reckart's Mill so that it could be open to the public at its original location. Focus group information revealed that residents near the mill were informed about mill relocation. Additionally, the survey included a question about support of the relocation plan. Thus, respondents were assumed to regard the alternative to preservation as relocation and loss of historic integrity.

As shown in Appendix A, question 12, a donation mechanism with payment card elicitation technique was used to provide data to estimate WTP. A payment card was chosen to avoid a high proportion of $0 responses, as often occurs with an open-ended question, and to avoid anchoring bias that could occur from using a dichotomous choice format (Boyle 2003). Boyle (2003) states that an adequately designed payment card where low and high bids are not excluded appears to provide more efficient statistical information than does the dichotomous choice format by narrowing the interval where the latent value resides. A

lower value of $1 was used because only respondents willing to make a donation were asked to answer this question. Following Boyle (2003), the upper limit of the payment card was left open to avoid anchoring bias.

Previous research has found that income, education, and household size have impacts on WTP for historic resources (Bille 2002, Chambers, Chambers, and Whitehead 1998, Garrod and Willis 2002, Kling, Revier, and Sable 2004, Mourato, Kontoleon, and Danchev 2002, Riganti and Willis 2002, Morey et al. 2002, Santagata and Signorello 2002). A general conclusion drawn from the studies in Navrud and Ready (2002) is that positive values for historic resources are typically held by the wealthier and more educated segments of the population (Pearce et al. 2002). Thus, education and household income were expected to increase WTP for preserving the historic integrity of Reckart's Mill. With household income, a positive relationship also supports the theoretical validity of a WTP model (Chambers, Chambers, and Whitehead 1998). Chambers, Chambers, and Whitehead (1998) found that WTP had an inverse relationship with family size, suggesting that less disposable income is available for donating for historic preservation.

Respondents' knowledge, attitudes, and behavior were expected to influence WTP. Knowledge of historic resources, previous donations made to preservation organizations, interest in cultural heritage, and belief that historic places should be preserved are often important factors in cultural valuation studies (Navrud and Ready 2002). In this study, three variables were included to reflect attitudes, commitment, and knowledge about historic preservation. Attitudes were based on a respondent's rating of how important it is to preserve local historic buildings. A respondent's commitment to historic preservation was measured by his/her stated affiliation with any historic preservation organization. Knowledge of historic resources was assessed by respondent awareness of 11 types of historic places in his/her county. All three of these variables were expected to have positive impacts on WTP.

Information about a historic resource is likely to increase WTP for its preservation (Kling, Revier, and Sable 2004). Familiarity with Reckart's Mill was included as a variable to represent this prior information. Since the donation format util-

ized a non-profit organization, the respondent's opinion regarding whether non-profit organizations should be in charge of preserving historic buildings was included in the model. A respondent who intends to use a historic resource if it is preserved should have a higher WTP than non-users, and a variable representing this intention was included.

Unique to this study is the consideration of moving the historic building from its original location to a place more convenient for tourism. A respondent's attitude towards relocation of historic resources was likely to influence his/her WTP to preserve this building at its current location as opposed to letting it be moved. Two variables were included to account for these attitudes: (i) the respondent's opinion regarding the importance of preserving a historic building at its original location, and (ii) the respondent's opinion regarding whether it is acceptable to move a historic building to make it more convenient to visit.

Table 1 describes and presents descriptive statistics for the variables used for the analysis. The dependent variable (*Donation*) was the stated amount to preserve Reckart's Mill at its original location by enabling it to be open to the public. Respondents who stated a positive response to making a donation were assigned a WTP from their circled monetary value on the payment card.[2] Respondents who declined to make a donation to preserve Reckart's Mill were assigned a zero WTP.

Ready and Navrud (2002) suggest that unless a global cultural heritage good is being considered, study populations should be restricted to a relevant regional level. As Reckart's Mill represents a local historic resource, only those households within a 20-mile radius of the mill were considered relevant. This area includes Preston, Mineral, and Monongalia Counties in West Virginia, along with adjacent counties in Maryland and Pennsylvania. Zip codes within 20 miles of Reckart's Mill were determined using ArcGIS software (Figure 1). With a purchased residential household mailing list, a sample of households within this 20-mile radius was obtained based on zip code populations. A total of 1,000 surveys were mailed on April 10, 2006, followed by a

postcard reminder two weeks later. To improve the response rate, a small West Virginia University sticker (a locally popular logo) was included in the first mailing as an incentive to return the survey. A second mailing of the questionnaire to non-respondents was sent on May 17, 2006.

Model Estimation

A censored Tobit model was used to explain factors influencing the *Donation* variable. Donation was considered censored data because respondents were not asked whether they would be willing to pay to ensure that Reckart's Mill is relocated rather than that it remain in its current location. By using a censored Tobit model with a lower limit of zero, respondents who potentially have a WTP of less than zero to preserve the historic integrity of Reckart's Mill (i.e., they prefer that the mill be relocated for tourism and/or accessibility) were included in the WTP estimation. Thus, respondents included in estimation of the Tobit model were those with a positive value for *Donation* and those who were assigned a zero value for *Donation* because they chose not to donate. Use of a censored Tobit model assumed that the decision to donate and donation level were determined by the same relationships and characteristics (Mourato, Kontoleon, and Danchev 2002). This assumption was evaluated using a Cragg specification test for the Tobit model (Greene 2002).

The Tobit model as represented by Greene (2002) is

$$(4) \qquad \text{WTP}_i^* = \beta' X + \varepsilon \; ; \; \varepsilon \sim N(0, \sigma^2),$$

$$(5) \qquad y_i = 0 \text{ if } \text{WTP}_i^* \leq 0,$$
$$y_i = y_i^* \text{ if } \text{WTP}_i^* > 0,$$

where WTP_i^* is the true, unobserved WTP for the ith household, X represents a matrix of explanatory variables from equation (3), ε is the error term, and y_i is the observed donation level from the payment card. This model was tested for joint significance of all the variables using the Neyman-Pearson test. As suggested by Greene (2002), the following goodness of fit and power of prediction measures were examined: correlation between actual and predicted values for the non-

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[2] Positive responses to the donation question could have been analyzed with a grouped Tobit model, but this would have excluded the negative responses from model estimation.

Table 1. Description of Variables Used in the Models

Variable Name	Description	Expected Sign
DEPENDENT VARIABLE		
Donation	Donation amount to preserve Reckart's Mill by opening it to the public at its original location (mean = $25.22, SD = 163)	
DEMOGRAPHIC VARIABLES		
Education	1 = college and/or post graduate degree, 0 = otherwise (mean = 0.30)	(+)
Income ($1,000)	Household income: Under $10 = $10; midpoint of four survey categories: $17.5, $37.5, $75, $150; over $200 = $250 (mean = $45.52, SD = 37.81)	(+)
HouseholdSize	Number of people living in the household (mean = 2.42, SD = 1.19)	(-)
ATTITUDE AND KNOWLEDGE VARIABLES		
HistPresImport	1 = belief that it is very important to preserve historic places, 0 = otherwise (mean = 0.59)	(+)
Affiliation	1 = affiliated with any historic preservation organization, 0 = not affiliated (mean = 0.09)	(+)
Aware	Awareness of historic places in county, count from 0 to 11 (mean = 4.49, SD = 2.54)	(+)
FamiliarReckart	1 = familiar with Reckart's Mill, 0 = otherwise (mean = 0.63)	(+)
Nonprofit	1 = belief that a private non-profit should be in charge of preserving historic buildings, 0 = otherwise (mean = 0.49)	(+)
VisitIfPreserv	1 = will visit Reckart's Mill after being preserved at current location, 0 = will not visit (mean = 0.40)	(+)
OriginalLocatn	1 = belief that it is very important to preserve a historic building at its original location, 0 = otherwise (mean = 0.36)	(+)
Convenience	1 = belief that it is acceptable to move a historic building for convenience to visit, 0 = otherwise (mean = 0.21)	(-)

limit observations, Pseudo-R^2, and R^2 Decomposition. The model also was tested for multiplicative heteroskedasticity and normality of the error term with a conditional moment test (Pagan and Vella 1989). The software package LIMDEP was employed for the Tobit estimation (Greene 2002).

From the Tobit model, both the predicted WTP [equation (6)] and uncensored WTP* (βX_i) were used in computation of the sample and population mean WTP:

$$(6) \quad E[y_i \,|\, X_i] = \Phi\left(\frac{\beta' X_i}{\sigma}\right)(\beta' X_i + \sigma\lambda_i),$$

where

$$\lambda_i = \frac{\phi(\beta_i X_i / \sigma)}{\Phi(\beta_i X_i / \sigma)},$$

and $\phi(\cdot)$ and $\Phi(\cdot)$ are the standard normal and cumulative standard normal density functions, respectively. Since predicted WTP was censored at zero, this value was used to estimate WTP for those respondents with a positive value for *Donation*. Uncensored WTP* was used to estimate WTP for respondents with a zero value for *Donation* who supported relocation because this value could be positive or negative. Respondents with a zero value for *Donation* who opposed or were unsure about relocation were assigned a zero as their "true" WTP.

The sample mean WTP was computed as a weighted average over the three groups of respondents (positive donation, zero donation and support relocation, and "true" zero WTP). For the population WTP within 20 miles of Reckart's Mill, a weighted average between respondents and non-respondents was computed. Differences

between respondents and non-respondents were accounted for by the use of demographic data from the most recent U.S. Census. Non-respondent predicted WTP and uncensored WTP[*] were computed from the estimated Tobit model using a combination of Census and survey data.

Results and Discussion

A 26 percent response rate for the survey was achieved. Table 2 presents descriptive statistics for the respondents compared to statistics for the population within 20 miles of Reckart's Mill, weighted by zip code from U.S. Census data. While household size and gender for the sample were similar, average age, education level, and household income were all higher for the sample than for the population. It is not unusual for sample respondents to be older, have higher incomes, and be more educated than the relevant population (Kling, Revier, and Sable 2004).

The survey questions were designed to reveal the underlying attitudes, knowledge, and motivations towards historic preservation and integrity. Most respondents were aware of historic houses (86 percent) and mills (60 percent) within their county; however, fewer than half (39 percent) were aware of any historic building being relocated. Almost two-thirds (63 percent) of the respondents were familiar with Reckart's Mill, and 52 percent had visited the mill. In terms of attitudes towards historic preservation, 59 percent of respondents believed that preserving historic places in their area was very important. Survey responses also suggested that the main reason for preserving historic places was for the benefit of future generations (82 percent) and for educational purposes (76 percent). More than half (57

Table 2. Comparison of Sample to the Local Population

Variable	Sample	Population
Male (%)	48	49
Average age (years)	54	38
Education (% Bachelor's degree or greater)	30	12.49
Income ($1,000)	45.57	29.73
Household size (number)	2.34	2.52

percent) of the respondents believed tourism was an important reason for preservation. A majority (70 percent) believed that it was important or very important to preserve a historic building at its original location but that it was acceptable to relocate a historic building in order to protect it (68 percent). Fewer than one-third of respondents (29 percent) thought that it was never acceptable to relocate a historic building. When asked whether they support the move of Reckart's Mill, the vast majority responded either no (41 percent) or that they were unsure (43 percent).

There were 247 valid responses[3] to the donation question. More than half of respondents (58 percent) chose not to make a donation to preserve Reckart's Mill and open it to the public at its current location. The main reason given by those declining to donate was that they did not have the money to make a donation. Of the 42 percent who chose to donate, responses ranged from $1 to $200 as specified in the payment card (see Appendix A). The most common responses were $10 and $20.

The coefficient estimates from the Tobit model are represented in Table 3. A test for multiplicative heteroskedasticity rejected the null hypothesis of homoskedastic disturbances. *Income* and *Householdsize* variables were used to correct for heteroskedasticity. The heteroskedasticity-corrected model depicts similar results in terms of statistical significance, with the exceptions of the coefficient for *Householdsize* becoming insignificant and familiarity with Reckart's Mill (*FamiliarReckart*) becoming significant.

The heteroskedasticity corrected model was statistically significant based on the Neyman-Pearson test ($\chi^2_{11} = 440.8$) In addition, the null hypothesis of the Cragg specification was not rejected ($\chi^2_{11} = 11.4$) . However, the assumption of error term normality was not accepted using a conditional moment test. Violations of the normality assumption may result in inconsistent coefficient estimates (Arabmazar and Schmidt 1982).

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[3] There were seven non-responses to the CVM question, and two donation observations ($500 and $2,500) were discarded as outliers due to violation of construct validity. According to Stomberg, Barenklau, and Bishop (2001), willingness-to-pay validity can be checked by comparing whether the reported willingness to pay is greater than 1 percent of the respondent's household income. The donation of $2,500 was approximately 3 percent of the household income of the respondent, while the $500 response was approximately 1 percent. Thus, both responses were removed.

Table 3. Coefficient Estimates for the Tobit Model

Variables	Original Model			Model Corrected for Heteroskedasticity		
	Coefficient	P-value	Marginal Effect	Coefficient	P-value	Marginal Effect
Constant	**-50.59** (13.11)	0.000	-20.68	**-61.72** (12.03)	0.000	-25.47
Education	-0.89 (7.84)	0.991	-0.41	-3.34 (9.21)	0.715	-1.54
Income	**0.31** (0.93)	0.001	0.13	**0.25** (0.13)	0.059	0.10
HouseholdSize	**-9.33** (3.08)	0.003	-3.81	-3.40 (3.19)	0.286	-1.40
HistPresImport	**28.84** (9.02)	0.001	12.97	**26.34** (10.10)	0.009	12.12
Affiliation	-9.92 (11.81)	0.401	-4.45	-8.09 (13.08)	0.536	-3.72
Aware	1.99 (1.48)	0.180	0.82	1.53 (1.41)	0.277	0.63
FamiliarReckrt	8.90 (8.00)	0.266	4.01	**15.39** (7.61)	0.043	7.08
Nonprofit	**18.50** (7.20)	0.010	8.32	**18.49** (6.55)	0.005	8.51
VisitIfPreserv	**31.42** (7.74)	0.000	14.14	**24.48** (7.64)	0.001	11.26
OriginalLocatn	-5.97 (7.65)	0.435	-2.69	-3.08 (7.80)	0.693	-1.42
Convenience	**-17.20** (8.89)	0.053	-7.74	**-14.71** (7.93)	0.063	-6.77
Log-likelihood		-429.65			-422.98	
Sigma		36.89			58.62	
N		169			169	

Notes: Standard errors are in parentheses. Bold indicates a statistically significant parameter estimate at the 0.10 level or higher.

The assumption of a normal distribution was not changed, however, as a result of a visual inspection of the residual histogram for the heteroskedasticity corrected model, which revealed a "normal-like" distribution.

For the heteroskedasticity corrected model, the correlation between actual and predicted non-limit observation was computed to be 57 percent, with Pseudo-R^2 of 31 percent, and R^2 Decomposition of 51 percent. Variables with statistically significant, positive coefficients were household income (*Income*), historic preservation importance (*HistPresImport*), familiarity with Reckart's Mill (*FamiliarReckart*), a belief that non-profit

groups should be in charge of preserving historic buildings (*NonProfit*), and intention to visit Reckart's Mill in the future (*VisitIfPreserv*). Among the zero/one variables, the largest marginal effects on the likelihood to donate were found for *HistPresImport* and *VisitIfPreserv* (Table 3). A positive coefficient for *Income* provides evidence of construct validity for the CVM question (Freeman 2003). The only variable with a statistically significant negative coefficient was belief that it is acceptable to move a historic building for visiting convenience (*Convenience*). All statistically significant coefficients had their expected signs. Knowledge variables (*Affiliation* and *Aware*),

attitude about original location (*OriginalLocatn*), and demographic variables (*Education* and *House-holdSize*) had coefficients that were not statistically different from zero.

From the sample, WTP was estimated using the predicted WTP from the Tobit model for respondents with a positive *Donation* response (mean = $23.07 in Table 4). Uncensored WTP[*] from the Tobit model (mean = -$13.52) was used for respondents with a zero value for *Donation* who supported relocation[4] (Table 4). This negative value was interpreted as the compensation that would be required by supporters of relocation if the mill were kept in its original location as presented in the CVM question. The weighted average WTP, including zero WTP responses for the sample, was $8.45, with a 95 percent confidence interval of $5.91 to $10.99. Thus, the average sample household WTP was $8.45 as a one-time donation to preserve Reckart's Mill at its original location by enabling it to be open to the public.

Predicted WTP and uncensored WTP[*] for non-respondents were computed from the Tobit model using Census data to reflect population demographic variables for *Income*, *Education*, and *HouseholdSize*. Sample averages were used for the other variables. Predicted WTP for non-respondents was about one-third of the sample mean, mainly due to lower median household income for the population, while uncensored WTP[*] was only about $1 lower than the sample mean (Table 4). Correspondingly, the weighted average WTP among non-respondents was 73 percent smaller than the sample.

The population WTP was computed by assuming that 26 percent of the population within 20 miles of Reckart's Mill (23,304 households) were represented by the sample (U.S. Census Bureau 2006) and 74 percent were represented by non-respondents (based on the response rate to the survey). By multiplying the weighted average WTP from the sample and non-respondents by 26 percent and 74 percent of households, respectively, a population WTP of just over $91,000 was computed. This population WTP estimate ranged from $35,000 to $212,000 when low and high confidence intervals were used for the sample WTP along with zero and the sample-weighted average WTP for non-respondents.

Conclusions

Survey results revealed attitudes, knowledge, and behavior regarding historic places within a community where relocation of a historic mill was being considered. Although 60 percent of survey respondents believed that it is very important to preserve historic places, only 35 percent believed it is very important for that preservation to be at the building's original location. In regards to Reckart's Mill, fewer than half of the respondents (42 percent) were willing to donate to preserve the mill and enable it to open at its original location. The majority of the sample had either a zero WTP for preserving the historic integrity of Reckart's Mill, mainly due to a lack of income, or a negative WTP due to support for relocation. Thus, survey results confirm that a majority of the community does not disagree with the approval that local elected officials gave to the private owner's proposal to relocate Reckart's Mill.

A Tobit model was estimated because donations were censored data. Those households with a positive WTP were strongly influenced by a belief that it is very important to preserve historic places and an intention to visit Reckart's Mill if it is preserved at its current location. Despite positive WTP values being in the minority, the population WTP to preserve the historic integrity of Reckart's Mill was estimated to be positive ($91,000, with a likely range of $35,000 to $212,000). This estimated economic value was

Table 4. Sample and Non-Respondent Mean WTP

Variable	Predicted WTP	Uncensored WTP*	Weighted Average[a]
Sample	$23.07	-$13.52	$8.45
	($\pm$ 4.09)[b]	($\pm$ 8.80)	($\pm$ 2.54)
Non-respondents	$8.74	-$14.97	$2.29

[a] From the sample of 247 valid responses, weighting was based on 104 positive donation responses, 120 "true" zero WTP responses, and 23 responses with a zero donation but support of relocation.

[b] 95 percent confidence interval computed from sample. Non-respondent WTP were point estimates; thus, no confidence intervals are presented.

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[4] Uncensored WTP* values were positive for 15.3 percent of move supporters who had a zero donation response.

reflective of the historic integrity of Reckart's Mill because pending relocation was the alternative scenario to preservation at the current location.

Since the mill is privately owned, the ultimate decision of whether to preserve and open the mill at its original location rests with the owner. This decision will most likely be based on whether or not it is profitable to do so. Insurance costs (estimated to be $2,200 for 2004) along with limited income brought in by visitor admission charges (only a few hundred dollars a year) were the primary reasons why the owners decided to close the mill and consider relocation (Hardesty 2006). The CVM question in this research utilized a donation payment vehicle to establish an endowment fund maintained by a non-profit organization in order to preserve the mill and open it to the public. If the population WTP estimate of $91,000 were collected and placed in a certificate of deposit earning a 3 percent rate of interest, the interest generated from the endowment fund ($2,720 annually) could cover the cost of insurance, possibly keeping the mill open at its original location. However, only $1,050 would be earned at the lower range (if $35,000 were collected), in which case not even the annual insurance costs could be covered and the owners would most likely relocate the mill.

The dilemma would be in coming up with a mechanism to collect these funds from the entire population when only a minority of the population within a 20-mile radius of the mill supports preserving the mill at its original location. If a mechanism could be found, practically all of the $91,000 for preserving historic integrity would need to be collected to cover the annual insurance costs. This percentage collection rate is much higher than previous CV research that examines actual collection rates using a donation payment vehicle (Ward and Duffield 1992). Even if the mill owners were to incorporate this economic value of historic integrity for a minority of the population into the relocation decision, at best only the annual insurance costs would be covered with this value. The opportunity cost of income lost from not relocating the mill would still have to be covered by admission fees from visitors at the original location, which was a problem prior to the mill closing in 2004. Recent developments indicate the importance of these opportunity costs

as parts of the mill have recently been sold and moved to another grist mill in the area due to delays in developing the planned relocation site in Bruceton Mills.

Given a relatively low survey response rate (26 percent), the population WTP was adjusted to account for demographic differences between the sample and non-respondents. Excluding households beyond a 20-mile radius surrounding Reckart's Mill may have resulted in an underestimate of the value of historic integrity of the mill as some individuals beyond this distance may have had a positive WTP. However, this value was probably not large given existing evidence that WTP declines with distance (Loomis 1996, Pate and Loomis 1997, Bille 2002, Hanley, Schlaper, and Spurgeon 2003, Rosenberger, Collins, and Svetlik 2005). Potential areas for future research on historic integrity include conducting a benefit-cost analysis of preservation or examining the trade-offs that people are willing to make between a loss of historic integrity to the community in order to gain economic benefits of tourism and/or preservation with relocation of a historic building.

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Ward, K.M., and J.W. Duffield. 1992. *Natural Resource Damages: Law and Economics*. New York: John Wiley and Sons.

APPENDIX A: Contingent Valuation Questions

In this section, we would like to know how much you would be willing to pay to preserve Reckart's Mill and keep it open at its original location. This information is for research purposes only. The following question asks whether you would consider donating to an endowment fund that would maintain Reckart's Mill at its current location by paying the insurance costs to keep it open to the public. Even with donations, there would still be a small entrance fee to visit the mill.

This is __not__ an actual request for a donation. We would like to know how you would react if asked to make a contribution, so please only say yes if you would really be willing to write a check to such an endowment fund. Your identity will be protected and __no one will contact you__ asking for a donation.

11. Suppose a non-profit group was organized to preserve Reckart's Mill and keep it open at its original location near Cranesville. Would you be willing to make a one-time donation to an endowment fund that would pay the insurance so that Reckart's Mill could be open to the public?

    ❏ No   SKIP TO QUESTION 13 ON PAGE 7

    ❏ Yes

12. What is the highest one-time donation that you would be willing to contribute to ensure that Reckart's Mill stays open at its original location? (*Please circle __only one__ number.*)

$1	$5	$10	$15	$20	$30	$40
$50	$75	$100	$150	$200	$300	$500

Other, please specify $_____