

On the Marital Status of U. S. Slaves:
Evidence from Touro Infirmary, New Orleans, Louisiana

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Abstract:

We estimate marriage rates for enslaved African Americans using unique hospital records that report marital status for both free and enslaved patients. We find that marriage rates increased with age, that females had higher marriage rates than males, and that relatively more enslaved African Americans than whites were married, a result we partly attribute to the demographic composition of the hospital population. In addition, the admission records allow us to identify those slaves owned by slave traders. Overall, we find relatively high marriage rates among enslaved African Americans but low marriage rates for those slaves owned by traders, a result we attribute to the demographic composition of traded slaves and marital disruption caused by the slave trade. Comparisons with other postbellum sources provide suggestive support for the antebellum marriage patterns found in these hospital data.

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“The Marriages of slaves are not noted in the Census. They take place, upon the average, much earlier than those of the whites or free colored, and are probably more productive than either. But no exact information on an extended scale exists upon this point”

-J. D. B. DeBow, Statistical View of the United States (1854, p. 92)

Introduction

How did slavery affect marriage? Activists and scholars have debated the question for generations because the answer is crucial to understanding not only the lives of slaves but the residue left by the institution on post-emancipation experiences. Controversy persists because few sources of information were ever collected, and even fewer have survived, to support reliable conclusions about the extent of slave marriage. We contribute significant new information to the debate using admission records from a New Orleans hospital that happened to list the contemporaneous marital status of slaves, which we link to ownership status provided by other sources. The results open a window not only on slave marriage in the antebellum era, but also on ways that the slave trade imposed on slave marriage patterns.

In this project, we estimate the frequency of marriages for a sample of free and enslaved patients admitted to Touro Infirmary, a private hospital in New Orleans, Louisiana. The primary advantage of this source is the commonality of the admission forms – both enslaved and free patients used the same form, which included a question regarding marital status. We find that the likelihood of marriage increased with age, that conditional on the patient’s age, females were more likely to marry than males, and that the marriage rate for slaves was higher than that for comparable whites, which we partly attribute to the higher sex ratio of white patients.¹ Overall, we find that white

¹ Most Touro patients were male. For patients aged 15 years and older, the sex ratio was 3.4 for slaves and 7.3 for whites. Because females were more likely to marry and because more enslaved patients were female, relatively more enslaved patients were married.

patients and enslaved patients had similar likelihoods of marriage and similar marriage patterns by age and gender.

The admission records also allow us to identify those slaves who were owned by slave traders. Using information on ownership by a trader, we make headway in addressing a fundamental question regarding the role of slavery on family formation: Were traded slaves less likely to be married? We find that slaves owned by traders had a significantly lower likelihood of being married relative to other enslaved patients.² The results are consistent with relatively high marriage rates among enslaved African Americans and low marriage rates for those actively in transport via slave traders. Taken together, the evidence is the first from contemporaneous sources to quantify how involvement in the slave trade altered marriage patterns among enslaved African Americans in a significant way.

American Slavery and Slave Marriage

While marriage among the enslaved was regularly practiced and acknowledged in the antebellum era, the forcible separation of husband and wife through the slave trade was one of the worst aspects of the institution of slavery (Fogel and Engerman 1974, Gutman 1976, Blassingame 1972, Trussell and Steckel 1978, and others). Contemporary attempts to prevent such separations or to recognize marriage contracts were opposed by slaveholders because such restrictions could lower slave prices and adversely affect slaveholder wealth. Indeed, slave marriages were neither legally recognized nor were they recorded in legal documents. When spouses were sold together, they might be recorded as husband and wife but the frequency of such occurrences was exceedingly rare.³ Not only did the U.S. decennial census fail to record the marital status of slaves, the names of slaves were omitted making it

² Singles comprised 83 percent of the traders' slaves and only 66 percent of the non-traders's slaves, a statistically significant difference of 17 percent.

³ Contemporaneous sales records in New Orleans indicate that approximately 2 percent of slaves, aged 15 + years, were sold with their spouse. See Table 4 in the text.

difficult to establish marital status, parentage, or lineage, complicated by the fact that some marriages existed across plantations (Kaye 2007). Although some plantation records include birth lists with the names of parents, most omit information on slave marriages. Cultural histories of the antebellum period also caution against the use of parentage to infer monogamous relationships (Gutman 1976; Engerman 1978).

Previous research used postbellum records to reconstruct the frequency of slave marriages. One widely used source are the pension claims by the widows of African American Civil War veterans. In addition, the Union Army registered the marriages of ex-slaves immediately after Emancipation, which have been analyzed by Gutman (1976), Blassingame (1972), and others. The WPA interviews of the 20th century provide retrospective evidence of marriage rates for slaves (Crawford 1992). Finally, Blassingame notes that southern churches recorded many marriages of slaves (in some cases, the frequency was higher than that for whites). Despite their usefulness, these sources lack information on the marital status of the entire population, or for that matter, a sizeable subset of the population where one could reasonably infer some population *rates* of marriage. Consequently, most researchers have been unable to estimate the fraction of the enslaved population that was married. In general, knowledge of slave marriage rates has been based on conjecture or qualitative evidence.

Substantial variation in the form and function of slave marriages might have affected the likelihood of reporting one's self as married in existing sources. Blassingame finds numerous examples of church weddings for slaves. In other cases, a white preacher performed the ceremony at the plantation followed by a large celebration involving both the black and white populations. Some marriage ceremonies were performed by elder slaves whereas others were done by the owner. Based on her analysis of slave narratives, Dunaway (2003, p. 117) estimates that three-fourths of slave marriages were "by de marster's word," usually in an informal ceremony. She finds that one in eight

married slaves had no ceremony at all -- simply the verbal consent of their owner. Without legal or religious recognition of their marriage, some cohabitating slaves might have reported themselves as single and others in similar circumstances as married. Ultimately, the importance of the marriage ceremony depends on how it was perceived by the spouses and the enslaved community rather than the white slaveholders. For most slaves, marriage was seen as a binding contract (Parry 2015), although others have argued that the institution in slavery made marriage more malleable than among free persons (Gutman 1976).

For unmarried slaves living on small plantations, the number of potential marriage partners was quite limited.⁴ Under such circumstances, slaves might seek permission from their owners to marry slaves from other plantations. Slaveholders might object to such requests for fear that tardy spouses would be absent from work following conjugal visits to neighboring plantations. Spouses (usually husbands) sought passes for such visits and would sometimes risk capture by slave patrols when such passes were denied. Runaway advertisements attest to the strength of marital bonds and would often describe the slave's motivation for running away as an attempt to reunite with spouse and family (Fogel and Engerman 1974, Crawford 1992, West 1999, Steckel 1985). Following the Civil War, former slaves searched for family members and separated spouses, as evidenced by advertisements placed in postbellum newspapers (Williams 2012).

Slaveholders faced conflicting incentives regarding the marriage of their slaves. Some slaveholders encouraged marriage on religious or moral grounds, whereas others may have promoted marriage to increase fertility rates, the size of their labor force, and to stabilize interpersonal relationships on plantations. In addition, marriage may have promoted slave health, enforced labor

⁴ Some males preferred to marry spouses from other plantations to avoid the prospect of watching their spouse being punished by their owner (Blassingame 1972, p. 164). Gutman (1976, p. 88) finds that African American culture discouraged marriage between first cousins, further limiting the number of available partners on a specific plantation.

discipline, and reduced flight risk (Calomiris and Pritchett 2009; Hudson 1977). Despite these potential benefits, slaveholders denied legal standing to slave marriages for fear of compromising their property rights in man. A marriage contract that prevented the separate sale of spouses would have reduced the number of potential buyers and lowered the overall price of slaves (Russell 1996). Because traders preferred teenagers and young adults for distant markets since they were the most highly valued, the slave marriages most at risk were those at prime ages of first marriage (Pritchett and Chamberlain 1993). Indeed, the willingness of whites to exercise their property rights provides an indication of their attitude towards slave marriage. Although slaves could not enter into legal marriage contracts, some owners may have nonetheless recognized slave marriages and refused to destroy them through the separation of spouses—the evidence is unclear if this was due to genuine concern or incentive effects for effort.

One contentious issue in the historiography of American slavery is the number of slave marriages destroyed by the separation of spouses. Previous studies have attempted to estimate the number of broken marriages using sales records. Unfortunately, these estimates suffer from a basic data deficiency. Although sales records commonly indicate the number of married couples sold together, they do not provide adequate information about the slaves who were sold singly. Fogel and Engerman (1974) impute the marital status of a woman by the presence of a child at the time of sale. In particular, if a woman, aged 20 to 24 years, was sold with a child (and without her husband), then they assume that the woman was previously married. If the woman was sold without a child, they assume she was unmarried. Fogel and Engerman recognize that some women were widows (and lost their husbands prior to sale) whereas other married women were childless (either because they never bore a child or because they bore a child who died prior to sale). After adjusting for these possibilities, Fogel and Engerman (1974, p. 49) conclude “that more than 84 percent of all sales over the age of fourteen involved unmarried individuals.”

Gutman and Sutch (1976, p. 118) criticized Fogel and Engerman's conclusion that most slaves sold by traders were single. In particular, they objected to Fogel and Engerman's assumption that living children were always sold with their mothers. If the child was separated from his mother in the exporting areas or sold separately to another buyer, then the sale of a childless woman would be a poor indication of her marital status. Fogel and Engerman interpret evidence that most women were sold without children as indicating that slave traders preferred to purchase single slaves. In contrast, traders may have preferred to purchase and sell single adult slaves, where children would be reared by others on the selling plantation. Indeed, Tadman (1989, p. 152) suggests that the paucity of mothers sold with children indicates that the slave traders were largely indifferent to slave family relationships. Fogel and Engerman (1974) and Tadman (1989) arrive at different conclusions because they make different assumptions about the same underlying data. Indeed, without observing the marital status of the slaves prior to sale, one cannot determine if owners preferred to sell, and traders to purchase, single rather than married slaves.

Data Description

Data used for this study were derived from the admission records of Touro Infirmary, a small private hospital located in New Orleans, Louisiana. The hospital was established in 1852 and admitted 1,580 patients between 1855 and 1860.⁵ Although Touro Infirmary was established as a charitable institution, most patients were charged for their hospital care (Burnett 1979, p. xiii). An expectation of payment for hospital care was especially true for the enslaved patients. Since they owned valuable assets (the slaves themselves), most owners were financially capable of paying their hospital bills. With few exceptions, the hospital charged owners a uniform rate of \$1 per day for the care of their slaves, in

⁵ The 1860 population of New Orleans included 14,479 slaves and 149,063 whites (U.S. Bureau of the Census 1864). Although previous authors have used the Touro dataset (Bankole 1998, Bankole 2001, Lander and Pritchett 2009, Pritchett and Yun 2009, Kenny 2010, Kenny 2011), we are the first to analyze the marital status of the enslaved patients.

addition to charges for any surgeries or medical procedures.⁶ In addition to billing information, a clerk entered the patient's personal information in the hospital admission records. These admissions records serve as the primary data source for our project.

Information about the marital status of slaves is available due to the commonality of the hospital admission records and the uniformity of reporting. The admission clerk recorded personal information about the patient, including name, malady, date of admission, and marital status. Most important, all patients used the same form and the clerk recorded the marital status of the slaves.⁷ (The uniformity of handwriting suggests that the same person recorded this information.) We do not know who provided information to the clerk. We suspect that it was the patient although it could have been the person financially responsible for paying the hospital bill. Regardless of the source, all parties had a keen interest in providing accurate information to the hospital.⁸

Although the exact number cannot be determined, approximately half of the Touro patients were enslaved. Under a column entitled "occupation" found in the admissions book, 679 patients (or approximately 43 percent of the total) were explicitly recorded as slaves. Beginning in 1859, the occupations of some slaves were recorded rather than their enslaved status. Using the recorded occupations of the patients to identify their status would result in the misclassification of some of these slaves. Fortunately, we have an alternative method for identifying these misclassified patients. Because the surnames of most slaves were not recorded in the admissions book, the absence of a recorded

⁶ Touro Hospital advertised terms of \$1 a day for slaves (Cohen 1855, p. 229). For slaves with recorded rates, 96 percent were charged \$1 per day. One slave and 108 white patients were admitted as charity cases.

⁷ We found two cases where husbands and wives were admitted together (all of whom were free).

⁸ The physician needed an accurate medical history to treat the patient, and both doctor and patient sought a successful treatment. Consequently, both patient and hospital had a strong incentive to accurately record the patient's information. Some slaveholders may have falsely identified married slaves as single. New Orleans sales data indicate that married couples sold at discounted prices relative to comparable unmarried slaves (Kotlikoff 1992, p. 47). Calomiris and Pritchett (2009) suggest that the price discount for families reflects unobserved heterogeneity rather than a penalty for preserving marriages.

surname serves as a proxy for a patient's enslaved status.⁹ In the following analysis, we will use the absence of a recorded surname as an additional indication of the patient's enslaved status. Allowing for this reclassification, the number of slaves admitted to Touro equaled 831, or approximately 53 percent of the total number of patients.¹⁰

Not all observations may be used for our analysis (a summary of the dropped observations is presented in Table 1). We dropped observations for patients aged less than 15 years or with missing age information. Because the hospital did not record the patient's gender, we infer this information by comparing the patient's first name with the names recorded by the U.S. Social Security Administration (2016). We could not infer the gender for 23 patients and dropped these observations from the sample. Some patients with recurring illnesses were re-admitted to the hospital after their initial discharge date. These duplicate observations were dropped from the sample to avoid double counting.¹¹ Observations for patients without any recorded marital status were dropped from the sample.¹² Finally, we dropped observations for widows, widowers, and freemen of color, all of whom are few in number. Overall, 310 observations are removed from the initial sample, resulting in a working sample of 1270 observations.¹³

⁹ We find that 92 percent of the patients explicitly recorded as slaves were admitted without a recorded surname. Prior to April 1, 1859, the absence of a surname correctly identifies the enslaved status of 94 percent of the patients.

¹⁰ We calculate marriage rates for the sample of patients explicitly recorded as slaves and present the results in the Appendix, Table A4. The results are similar.

¹¹ Of 69 enslaved patients admitted more than once, 62 were recorded with the same marital status for every hospital admission, 5 were initially recorded as single and subsequently recorded as married, and 1 was initially recorded as married and subsequently recorded as single. One patient is harder to classify. Abraham was admitted 7 times; he was initially recorded as single, on his third admission he was recorded as married, and subsequently he was recorded as single. We identify duplicate admits using the patient's name, age, and birthplace, and the owner's name. In the analysis, we keep only the initial observation for patients who were readmitted.

¹² It appears that the admissions clerks diligently recorded the marital status of slaves. Although there were slightly more missing values for slaves than for other patients, the relative number of missing values is small (3.1 percent for whites and 4.5 percent for slaves).

¹³ In the Appendix, we consider the effect of removing almost 20 percent of the observations on the representativeness of the sample.

Results

Most patients were unmarried, young adult males (see Table 2). Among those patients aged 15 years and older, only 28 percent were married, nearly 50 percent were in their twenties, and over 80 percent were male. Surprisingly, relatively more slaves than whites were married. We find that 31.7 percent of the slaves and 24.9 percent of the whites were listed as married, a 6.8 percentage point difference in marriage rates that is statistically significant. We can attribute much of this difference to the gender composition of the hospital population. As reported in columns (4) and (5) of Table 2, females were more likely to marry than males and white patients had a higher sex ratio than enslaved patients. Once we control for patient gender, we find the marriage rates of both enslaved and free patients were similar.

The marriage rates of Touro patients by age, gender, and enslaved status are presented in Table 3. The likelihood of marriage increased with age and for both enslaved and free, relatively more females than males were married. Importantly, the marriage rates of slaves were remarkably similar to those of whites in each comparison group. For both slaves and whites, approximately 20 percent of young females (aged 15-19 years) were married. Among older patients (aged 40+ years), marriage rates were more than 50 percent for males and more than 75 percent for females. In sum, the marriage rates for slaves were similar to those for whites and the rates for both slaves and whites vary by age and gender in a similar fashion.

The hospital data allows us to estimate standard demographic properties of marriage as well. The singulate mean age at marriage (SMAM) is a convenient way to summarize the different age specific marriage rates presented in Table 3, and unlike the average marriage rate (aged 15 years and older), the SMAM is independent of the age distribution of the hospital patients (see Hajnal 1953). Because the admission records list the current marital status of the patients (and not their ever-married marital

status), we likely overestimate the age of first marriage for most patients. For both slaves and whites, we find the mean age at marriage is less for females than for males. We also find that enslaved males married at earlier ages than white males and that white females married earlier than enslaved females, a result which we attribute to the higher sex ratio for the white residents of New Orleans at the time.¹⁴

For purposes of comparison, we also present marriage rates calculated from the postbellum responses of ex-slaves to retrospective questions. As seen in Table 3, columns (5) and (6), these results are generally consistent with the marriage patterns identified in the hospital records. During the late 1930s, the WPA interviewed ex-slaves about their family experiences under slavery. Because most of these former slaves were children in 1865, only a few respondents can provide useful information about their marital status as slaves. In addition, because they were interviewed at an advanced age, one might reasonably question the accuracy of their responses. Finally, marriage rates for older adults are not available. Nevertheless, it is instructive to compare our results with the marriage rates calculated by Stephen Crawford (1992) using the WPA interviews. For men aged less than thirty years, the marriage rates reported by these former slaves were remarkably similar to those calculated from hospital records. For the female slaves, the marriage rates calculated from the WPA interviews are less than those calculated from the hospital records. In addition, both the Touro and the WPA marriage rates show similar marriage patterns by age and gender. The similar rates calculated from different sources with different potential selection effects lends further support for our empirical analysis.

Selective Hospital Admission

A slave's marital status might have influenced his owner's decision regarding hospital admission. Because a spouse could care for an ailing partner, married people might have been treated at home

¹⁴ In 1860, the sex ratio (M/F) of New Orleans slaves (aged 15 years and older) was 0.66 whereas the sex ratio for New Orleans whites was 1.15 (U.S. Bureau of the Census 1864). Because white males found it more difficult to find a marriage partner, this may account for their older age of marriage (as seen in Table 2).

rather than the hospital. If singles were more likely to seek admission, marriage rates calculated from hospital admission records will underestimate marriage rates for the general population. We test this proposition by comparing the marriage rates of patients admitted only once with those of patients who were *readmitted* to the hospital. We predict that, conditional on their initial admission to the hospital, patients with fewer alternative healthcare options would likely seek hospital readmission. In other words, if relatively more single people sought hospital admission, then relatively more single patients should have also sought *readmission* to the hospital. In fact, we find the opposite. Among readmitted patients, 33 percent were married whereas for patients admitted only once, only 28 percent were married. This result suggests that selective admission did not bias the calculated marriage rates found for Touro patients.

In addition to the availability of alternative health care, other factors may have affected the readmission of a patient. Patients suffering from chronic conditions might have sought readmission for reoccurring events. Readmission might also vary by age or gender and, indirectly, marital status. In supplementary analysis, we estimate linear probability models to control for these possible factors. These regressions are presented in the Appendix, where the dependent variable indicates that the patient was subsequently readmitted to the hospital and the primary independent variable is the patient's marital status. Regression (1) is a univariate regression whereas regressions (2) – (4) are multivariate regressions with a variety of different controls, including indicators for gender, enslaved status, age group, and maladies. For all four specifications, we find that the regression coefficient for the covariate "Married" is positive (which is the wrong sign) and not statistically significant. As an alternative specification, we also estimate the length of initial hospitalization and present the results in the Appendix. For these regressions, the dependent variable is the number of days spent in the hospital and the independent variable is the patient's marital status. Presumably, patients with home alternatives would have been discharged earlier than patients without those alternatives. Once again,

we find little support for this proposition. The regression coefficients for the covariate “Married” are small and not statistically different from zero. The duration of hospitalization was likely not driven by the availability of home alternatives. Indeed, home care need not only be provided by a spouse. Other close relatives or slaveholders could have served as substitutes for those who were unmarried. In conclusion, our regression results suggest that marital status is not the primary cause for hospital admission, and that the primary story of selection is inconsistent with the available evidence.

The Role of the Slave Trade in Slave Marriage

A comparison of the age of marriage with that of the age of first birth provides insights into the frequency of out-of-wedlock childbirth. According to Fogel and Engerman (1974, p. 137, 138), the demographic evidence suggests that “the prevailing sexual mores of slaves were not promiscuous but prudish,” that “marriage altered the sexual behavior of slaves,” and that “the majority of slave children were borne by women who were not only quite mature, but who were already married.” Our estimates of the SMAM indicate a relatively old age for first marriage. As seen in Table 3 column 4, the singulate mean age of marriage for female patients was 25.8 years. Using probate records, James Trussell and Richard Steckel (1978, p. 492) estimate the singulate mean age at first birth for southern slaves as 20.6 years. The estimates are derived from different sources and a comparison should be done with caution. Caveats aside, the estimated age for first marriage exceeds the age of first childbirth by more than five years, a large difference that strongly suggests the possibility of out-of-wedlock childbirth. Alternatively, our estimate of the SMAM may be biased because it fails to account for earlier marriages destroyed by the slave trade. In the following, we analyze the role of the slave trade in family formation, stability, and continuity using New Orleans sales and hospital admissions data.

To assess the extent of trading in altering slave marriage patterns, we identify slave traders using contemporaneous sales records from the New Orleans Conveyance Offices (Calomiris and Pritchett 2016). The admissions clerk recorded the names of slaveholders responsible for paying the hospital bills of enslaved patients. In the following analysis, we compare the names of these slaveholders with those of slave sellers and classify frequent sellers as slave traders.¹⁵ We find that married patients comprised 17 percent of the traders' slaves and 34 percent of the non-traders' slaves, a statistically significant difference of nearly 17 percentage points. In other words, most slaves owned by traders were reportedly single which suggests that traders preferred unmarried slaves or that previous marriages had been broken by the time of sale in New Orleans.¹⁶

Sales records indicate that relatively few married couples were sold together. As seen in Table 4, married couples represent approximately 2 percent of total sales (for slaves aged 15 years or older). Indeed, the paucity of married couples is striking. Our sample includes the records of more than 10,000 slaves of whom only 222 were sold as married couples. What accounts for this result? Did traders avoid the purchase of married slaves or did they purchase and separate spouses at the time of sale? In addition, many mothers were sold without their husbands (Table 4). Were these women the product of broken marriages?

¹⁵ Using New Orleans conveyance records, we identify the following individuals as probable slave traders: J.A. Beard, W.L. Campbell, George Davis, T. Foster, A. Hagan, C.F. Hatcher, T. Johnston, B. Kendig, T. E. Mathews, C.M. Rutherford, and J.M. Wilson. Two traders account for 73 percent of the patients belonging to traders – T. Foster and B. Kendig. In addition to selling slaves, Thomas Foster owned a slave pen in the city and he provided "room and board" to traders and their slaves. We suspect that some of Foster's slaves may have belonged to itinerant traders who were using his pen to conduct their business. B. Kendig either refers to Bernard Kendig, a well-known slave trader (Tansey 1982), or Benjamin Kendig, an auctioneer. Both Bernard and Benjamin were heavily involved in the trade. Stephen Kenny (2011, p. 78) has also identified Touro patients owned by traders. In addition to many of the aforementioned traders, Kenny identified J. Q. Moore, G. M. Pinckard, and A. O. Sibley as traders using the names and occupations of owners listed in New Orleans city directories. Notably, we did not identify A. O. Sibley (who owned 25 Touro patients) as a slave trader. New Orleans conveyance records indicate that Cyrus Sibley, from Baldwin AL, sold 1 slave in the city in February 1857. Cyrus was represented at the sale by his son and agent, Antemas Origin Sibley. Although Kenny classified traders using information listed in city directories, we could not locate Mr. Sibley in them.

¹⁶ Using Kenny's classification, we find that 11 percent of the slaves owned by traders and 36 percent of the other slaves were married, a statistically significant difference of nearly 25 percent points.

Most slaves sold in New Orleans were sold singly, and consequently, their *de facto* marital status was “single” – they did not have a spouse (see Table 4). The presence of a child may indicate a slave’s previous marital status but it does not indicate her current marital status which, in nearly every case, was single. We find that the patients owned by traders were much more likely to be married than the slaves sold in New Orleans. Recall that married slaves comprised 17 percent of the Touro patients owned by traders and only 2 percent of the slaves sold by traders. Perhaps instead of trying to explain why so many of the patients owned by traders were reported as single, we should ask why so many of these patients were reported as married.

The demographic composition of the traders’ slaves partially accounts for their marriage rates. Using regression analysis and the Touro sample, we estimate the marginal effect of trading status on the probability of marriage, controlling for the slave’s age and gender. We estimate separate linear probability models for each gender where the dependent variable is a dichotomous indicator of marital status.¹⁷ For univariate regressions (1) and (2) presented in Table 5, the coefficient for the covariate indicating trader ownership is negative and statistically less than zero. For both males and females, ownership by a slave trader decreased the probability of being single by more than 20 percentage points. For regressions (3) and (4), we include covariates indicating the age of the patient. Consistent with the marriage rates presented in Table 3, we find that the probability of marriage increased with the age of the patient. In addition, we find that ownership by a slave trader decreased the probability of marriage by over 10 percentage points for male slaves and by 13 percentage points for female slaves (the last result is not statistically significant). Because most of the slaves owned by traders were unmarried young adult males, controlling for their age and gender increases their predicted probability of marriage by 7 to 10 percentage points. Importantly, the results also indicate that demographic characteristics alone do not solely account for the relatively large number of unmarried slaves owned by

¹⁷ Results from a logit specification are presented in the Appendix.

traders. That is, even accounting for the demographic composition of slaves owned by traders, a significant gap in the likelihood of marriage remains.

Most imported slaves sold in New Orleans were single, either because they were selectively purchased by traders or because they were previously married and separated from their spouses by sale (see Table 4). Consistent with these sales data, the hospital patients owned by traders were less likely to be married than other patients. We suspect, however, that the relationship between ownership by a slave trader and marital status may have diminished over time as the slaves adjusted to their new environment, found new partners, and married. We consider this possibility by introducing an additional covariate to the regression analysis. Possibly for diagnostic purposes, the Touro admissions clerk recorded the patient's length of residence in New Orleans. As seen in Table 5, regressions (5) and (6), slaves who resided in the city for 5+ years were more likely to marry than other slaves. For males, the predicted effect of long-term residence increases the probability of marriage by almost 14 percentage points. Long-term residence has a smaller effect for female slaves, increasing their probability of marriage by approximately 5 percentage points (this result is not statistically significant). These results suggest that the disruptive effects of the slave trade, and forced migration in general, tend to diminish over time. They also help to account for the relatively large number of married patients owned by traders (as compared to the relatively few married slaves sold together in New Orleans). Although the interregional slave trade may have separate spouses, the separated slaves may have remarried over time.

If a trader purchased a married slave and separated him from his spouse, did the slave consider himself unmarried? The answer to this question directly affects the interpretation of our empirical results. The fact that most slaves owned by traders were listed as unmarried need not imply that traders selectively purchased single slaves. Indeed, the recorded status of an enslaved patient may

simply reflect his current situation as a single (and previously married) individual.¹⁸ In this respect, the Touro admission records share a common deficiency with the New Orleans sales records. They provide information about the current marital status of the slaves admitted to the hospital. They do not provide information about their marital status prior to their purchase by a slave trader. If traders separated married spouses and declared them to be single, then we overestimate the trader's propensity to purchase single slaves. In addition, such declarations by traders might suggest that we underestimate the marriage rates of slaves. Under such circumstances, the marriage rates presented in Table 3 would reflect the current marital status of the slaves and would not include previous marriages that might have been destroyed by the slave trade.

Discussion and Conclusion

Despite a lack of legal recognition, enslaved African Americans readily practiced and reported themselves as married. For this project, we introduced a new source of data that enables us to estimate the marriage rates of enslaved adults by age and gender. We find a great similarity in the marriage rates of whites and slaves and that the same factors, such as age or gender, influenced the probability of marriage. Other things equal, females were more likely to marry than males, and marriage rates increased with age. Among older patients (aged 40 years and older), approximately one-half of males and three-fourths of females reported themselves as married. We discuss possible bias created from the use of hospital admissions data, such as selective admissions due to the availability of alternative caregivers, and suggest that the possible effect of such bias is to underestimate the proportion of slaves

¹⁸ A total of 9 observations of widows or widowers were dropped from our working sample. Nearly all of these patients (89 percent) were white. Consequently, the hospital admission records provide few examples of slave marriages that were destroyed by the death of a spouse.

who were married, thus reinforcing our main conclusion that enslaved African Americans readily accepted the institution of marriage.

Although slaveholders had economic and religious reasons for promoting slave marriage and the formation of families, slaves also represented a highly liquid (and moveable) form of financial asset. Despite the benefits of maintaining slave marriages, some slaveholders wanting to adjust the size of their labor force or simply in need of ready cash may have been tempted to sell and separate slaves from their spouses. The hospital admission records allow us to identify those slaves who were owned by slave traders, and who we suspect were recent arrivals to New Orleans via the slave trade. Compared to other slaves, we find that most of the slaves owned by traders were single. Similar to the previous estimates of Fogel and Engerman (1974, p. 49), we find that 83 percent of the enslaved patients owned by traders were unmarried. Regression analysis that controls for age and gender also indicates that slaves owned by traders were unmarried. We note, however, that the hospital clerks recorded the current marital status of the Touro patients and not their previous marital status. Consequently, the large number of singles owned by traders *may* reflect the purchase of married slaves, their separation from spouses, and their consequent reclassification as single slaves.

New Orleans was the site of the largest slave market in the southern United States and the vast majority of adult slaves were sold singly. Regardless of their previous marital status, the introduction of these single slaves would have lowered marriage rates in New Orleans. Using regression analysis, we find that marriage rates increased with duration of residence in the city, indicating that single slaves adjusted to their new home by seeking out new partners and marrying them. As such, the slave trade appears to have played a significant role in altering marriage patterns among enslaved African Americans in the antebellum era.

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Table 1
Data observations dropped from the sample

	Sample	Dropped Observations
Original Sample	1580	
Missing value for age		51
Age less than 15 years		67
Unknown gender		23
Hospital re-admissions		106
Widow or widower		9
Missing value for marital status		49
Freeman of color		5
Total		310
Working Sample	1270	

Source: Touro Infirmary Archives.

Table 2
Descriptive statistics, means and standard deviations
Touro patients, whites and slaves, aged 15 years and older

Covariate	(1) All patients	(2) whites	(3) slaves	(4) females	(5) males
Married	0.283 (0.450)	0.249 (0.433)	0.317 ^A (0.466)	0.493 ^C (0.501)	0.238 (0.426)
Slave	0.491 (0.500)	0	1	0.647 ^C (0.479)	0.459 (0.499)
Male	0.826 (0.379)	0.879 ^B (0.326)	0.771 (0.421)	0	1
Aged 15 to 19 years	0.112 (0.315)	0.110 (0.313)	0.114 (0.318)	0.186 ^C (0.390)	0.096 (0.295)
Aged 20 to 24 years	0.254 (0.435)	0.293 ^B (0.455)	0.213 (0.410)	0.258 (0.438)	0.253 (0.435)
Aged 25 to 29 years	0.235 (0.424)	0.223 (0.417)	0.248 (0.432)	0.190 (0.393)	0.245 (0.430)
Aged 30 to 34 years	0.143 (0.350)	0.144 (0.351)	0.141 (0.348)	0.113 (0.317)	0.149 (0.356)
Aged 35 to 39 years	0.104 (0.305)	0.091 (0.288)	0.117 (0.322)	0.104 (0.306)	0.104 (0.305)
Aged 40 or more years	0.153 (0.360)	0.139 (0.347)	0.167 (0.373)	0.149 (0.357)	0.153 (0.361)
Observations	1270	646	624	221	1049

Source: Touro Infirmary Archives.

Note: Standard deviations are listed in parentheses.

^A indicates that the mean value for enslaved patients is statistically greater than that for white patients at the 5 percent level.

^B indicates that the mean value for white patients is statistically greater than that for enslaved patients at the 5 percent level.

^C indicates that the mean value for female patients is statistically greater than that for male patients at the 5 percent level.

Table 3
Percent married by age, gender, and enslaved status
New Orleans Touro Infirmary (1855-1860)

Age group	<u>Touro Infirmary</u>				<u>WPA Interviews</u>	
	<u>Whites</u>		<u>Slaves</u>		<u>Slaves</u>	
	(1) Males	(2) Females	(3) Males	(4) Female	(5) Males	(6) Female
15 to 19 years	0.017 (0.129) [60]	0.182 ^B (0.405) [11]	0.073 (0.264) [41]	0.233 (0.430) [30]	0.017 [59]	0.157 [51]
20 to 24 years	0.055 (0.228) [164]	0.400 ^B (0.500) [25]	0.079 (0.271) [101]	0.438 ^C (0.504) [32]	0.068 [59]	0.299 [27]
25 to 29 years	0.119 (0.325) [126]	0.444 ^B (0.511) [18]	0.214 ^A (0.412) [131]	0.417 ^C (0.504) [24]	0.244 [41]	0.346 [26]
30 to 34 years	0.329 (0.473) [82]	0.636 ^B (0.505) [11]	0.338 (0.476) [74]	0.571 (0.514) [14]	N.A.	N.A.
35 to 39 years	0.472 (0.504) [53]	1.000 ^B (0.000) [6]	0.411 (0.496) [56]	0.647 (0.493) [17]	N.A.	N.A.
40+ years	0.542 (0.501) [83]	0.857 (0.378) [7]	0.526 (0.503) [78]	0.769 ^C (0.430) [26]	N.A.	N.A.
15+ years	0.215 (0.411) [568]	0.500 ^B (0.503) [78]	0.266 (0.442) [481]	0.490 ^C (0.502) [143]	N.A.	N.A.
Singulate Mean Age at Marriage	30.2	24.0	28.6	25.8	N.A.	N.A.

Source: Columns (1) – (4), Touro Infirmary Archives. Columns (5) & (6), Crawford (1992, p. 344).

Note: Standard deviations are listed in parentheses and the number of observations are listed in brackets. N.A. refers to statistics that are not available.

^A indicates that the mean value for enslaved males is statistically greater than that for white males at the 5 percent level.

^B indicates that the mean value for white females is statistically greater than that for white males at the 5 percent level.

^C indicates that the mean value for enslaved females is statistically greater than that for enslaved males at the 5 percent level.

Table 4
 Percent sold in groups, by age and gender
 New Orleans Sales Records (1856-1860)

Age group	(1) Male, Sold with wife	(2) Female, Sold with husband	(3) Female, Sold with child	(4) Female, Sold with husband and/or child
15 to 19 years	0.1 [1109]	0.3 [1407]	8.0 [1407]	8.1 [1407]
20 to 24 years	0.7 [1633]	2.7 [958]	30.2 [958]	31.3 [958]
25 to 29 years	2.4 [834]	2.4 [666]	35.3 [666]	36.0 [666]
30 to 34 years	3.8 [495]	4.0 [618]	38.8 [618]	40.5 [618]
35 to 39 years	5.7 [370]	2.8 [566]	34.5 [566]	35.2 [566]
40+ years	5.9 [644]	2.3 [977]	18.2 [977]	19.1 [977]
15+ years	2.2 [5085]	2.1 [5192]	24.1 [5192]	24.8 [5192]

Source: New Orleans Conveyance Office (Calomiris and Pritchett 2016).

Note: The number of observations are listed in brackets.

Table 5
 Linear Probability Model of Marriage
 Touro enslaved patients, aged 15 years and older

Covariate	(1) Males	(2) Females	(3) Males	(4) Females	(5) Males	(6) Females
Intercept	0.282 (0.021)	0.550 (0.047)	0.099 (0.045)	0.288 (0.090)	0.059 (0.049)	0.269 (0.103)
Owned by slave trader	-0.203* (0.049)	-0.268* (0.092)	-0.107* (0.051)	-0.137 (0.100)	-0.092 (0.048)	-0.099 (0.107)
20 to 24 years			-0.009 (0.050)	0.201 (0.116)	-0.003 (0.052)	0.138 (0.124)
25 to 29 years			0.123* (0.056)	0.157 (0.129)	0.095 (0.057)	0.192 (0.138)
30 to 34 years			0.244* (0.070)	0.303 (0.156)	0.200* (0.074)	0.231 (0.181)
35 to 39 years			0.315* (0.078)	0.367* (0.143)	0.259* (0.082)	0.389* (0.165)
40+ years			0.428* (0.072)	0.481* (0.122)	0.395* (0.076)	0.432* (0.153)
5+ years residence in New Orleans					0.137* (0.044)	0.049 (0.108)
Observations	481	143	481	143	481	143
R ²	0.015	0.050	0.134	0.144	0.164	0.134

Source: Touro Infirmary Archives.

Note: The dependent variable equals 1 if the patient is married, zero otherwise. Heteroskedastic consistent standard errors listed in parentheses. The omitted category is age group 15-19 years.

* indicates the regression coefficient is statistically different from zero at the 5 percent level.

APPENDIX – For Online Publication Only

A1. Dropped Observations

Our original dataset consists of all patients admitted to Touro Infirmary between the dates January 3, 1855 and March 29, 1860. As previously discussed, not all observations could be used for our analysis (a summary of the dropped observations is presented in Table 1). Here we consider the effect of removing almost 20 percent of the observations on the representativeness of the working sample. For Table A1, we cross-tabulate the original sample by the enslaved status and marital status of the patients. Relatively more slaves than whites were dropped from the original sample which we attribute to the prevalence of hospital readmissions and missing values for age. The patient’s age, especially for slaves, was measured imperfectly. Many slaveholders professed ignorance about the ages of their slaves, often reporting them as ‘about’ so many years. Even the slaves might not have known their own ages (the most famous example being Frederick Douglass).¹⁹ We find that the records of approximately 5 percent of the slaves and 2 percent of the whites omit information on the patient’s age.

Another observed difference between free and enslaved patients is the higher frequency of hospital readmissions for slaves. Of the 106 patients readmitted to the hospital, we find that 90 were enslaved patients. Relatively more slaves were long-term residents of the city which might account for the higher frequency of readmissions. In addition, relatively more whites were admitted with acute ailments such as yellow fever (for which there is little possibility of reoccurrence). Overall, we omit approximately 25 percent of the observations for slaves and 14 percent of the observations for whites from the original sample.

We also allow for different classification for those observations with missing values for marital status. In columns (1) – (4) in Table A5, we assume that patients with a missing value for marital status were single and recalculate the marriage rates by age, gender, and enslaved status. In columns (5)–(8)

¹⁹ An indication of possible measurement error is a tendency to report age as an even number or a number that is divisible by 5. Such age “heaping” is especially prevalent for the enslaved patients. We find that the ages of 74 percent of the slaves and only 66 percent of the free patient were reported as an even number or divisible by 5.

in Table A5, we assume that these same patients were married and recalculate the marriage rates. As expected, the marriage rate for each category is higher under the assumption that patients with missing values for marital status were married. We find, however, that the marriage rates calculated using the different assumptions are similar, perhaps not a surprising result because the total number of missing values for marital status is relatively small (less than 4 percent of the working sample).

Because the observations of patients aged less than 15 years were omitted from the sample, we drop relatively more single than married patients. Approximately 15 percent of the single patients, and approximately 12 percent of the married patients, were omitted from the sample. With the exception of the younger patients, the marital status for the dropped observations are similar to those for the kept observations. These results suggest that the sample construction process did not systematically delete observations from our working sample.

A2. The Role of the Slave Trade in Slave Marriage: Logit Regression results

For purposes of comparison, we also estimate the patient's probability of marriage using logistic models. We estimate separate regressions for each gender and present the results in Table A6. For both Logits (1) and (2), the regression coefficients for ownership by a slave trader are positive and statistically significant. As seen in Logit (1), the estimated odds ratio is 0.218 indicating that slave traders were approximately one-fourth as likely to own a married male than an unmarried one. For Logit (2), the estimated odds ratio indicates that traders were approximately one-third as likely to own a married female than an unmarried one. For logits (3) and (4), we include additional covariates for the patient's age. The estimated regression coefficients for the patient's age are positive, indicating that older slaves were more likely to be married. Importantly, the estimated regression coefficients for ownership by a slave trader are negative but no longer statistically significant. In addition, the estimated odds ratios are less than one, indicating that traders likely owned single rather than married slaves.

Table A1
Data observations dropped from the sample

	<u>Enslaved Status</u>		<u>Marital Status</u>	
	Free	Slave	Single	Married
Original Sample	749	831	1083	408
Dropped Observations				
Missing value for age	12	39	23	9
Age less than 15 years	27	40	61	2
Unknown gender	13	10	20	3
Hospital re-admissions	16	90	64	34
Widow or widower	8	1	0	0
Missing value for marital status	22	27	0	0
Freeman of color	5	0	4	1
Total	103	207	172	49
Working Sample	646	624	1011	359

Source: Touro Infirmary Archives.

Table A2
 Linear Probability Model of Hospital Readmission
 Touro patients, aged 15 years and older

Covariate	Regression (1)	Regression (2)	Regression (3)	Regression (4)	Means and Standard Deviations
Readmitted					0.065 (0.247)
Intercept	0.061 (0.008)	-0.024 (0.019)	-0.063* (0.020)	-0.045 (0.029)	1
Married	0.014 (0.016)	0.014 (0.016)	0.005 (0.018)	0.011 (0.018)	0.283 (0.450)
Male		0.046* (0.018)	0.040* (0.018)	0.021 (0.020)	0.826 (0.379)
Slave		0.096* (0.014)	0.096* (0.014)	0.079* (0.015)	0.491 (0.500)
20 to 24 years			0.055* (0.017)	0.051* (0.017)	0.254 (0.435)
25 to 29 years			0.051* (0.018)	0.044* (0.018)	0.235 (0.424)
30 to 34 years			0.030 (0.019)	0.032 (0.020)	0.143 (0.350)
35 to 39 years			0.050* (0.024)	0.050* (0.025)	0.104 (0.305)
40+ years			0.073* (0.025)	0.077* (0.025)	0.153 (0.360)
Accident				-0.015 (0.028)	0.082 (0.274)
Diarrhea				0.083* (0.035)	0.106 (0.308)
Yellow				-0.010 (0.018)	0.241 (0.428)
Respiratory				0.065 (0.043)	0.062 (0.242)
Malaria				0.055 (0.043)	0.049 (0.216)
Digestive				-0.052* (0.026)	0.045 (0.207)
STD				0.079 (0.052)	0.039 (0.195)
nervous				-0.045 (0.032)	0.028 (0.166)
maternity				-0.065* (0.026)	0.024 (0.154)
skin				-0.021 (0.048)	0.018 (0.133)

Table A2
 Linear Probability Model of Hospital Readmission
 Touro patients, aged 15 years and older

Covariate	Regression (1)	Regression (2)	Regression (3)	Regression (4)	Means and Standard Deviations
				0.028	0.017
fever				(0.067)	(0.128)
rheumatism				-0.047	0.020
tuberculosis				(0.043)	(0.142)
typhoid				-0.043*	0.020
debility				(0.018)	(0.139)
dropsy				-0.061*	0.022
Cholera				(0.018)	(0.147)
intemperance				0.045	0.013
measles				(0.084)	(0.112)
Observations	1270	1270	1270	1270	1270
R ²	0.001	0.040	0.046	0.077	

Source: Touro Infirmary Archives.

Note: The dependent variable equals 1 if the patient is married, zero otherwise. Heteroskedastic consistent standard errors listed in parentheses. * indicates the regression coefficient is statistically different from zero at the 5 percent level.

Table A3
Regression Results for Duration of Initial Hospital Stay
Touro patients, aged 15 years and older

Covariate	Regression (1)	Regression (2)	Regression (3)	Regression (4)	Means and Standard Deviations
Initial Days in hospital					14.096 (17.254)
Intercept	13.662* (0.557)	16.663* (1.829)	17.573* (2.163)	22.770* (2.951)	1
Married	1.543 (1.172)	-0.449 (1.150)	-0.567 (1.270)	-0.639 (1.199)	0.281 (0.450)
Male		-7.244* (1.784)	-7.229* (1.805)	-6.618* (1.824)	0.826 (0.379)
Slave		7.144* (0.931)	6.988* (0.940)	4.304* (1.131)	0.496 (0.500)
20 to 24 years			-1.778 (1.591)	-1.363 (1.417)	0.254 (0.435)
25 to 29 years			0.466 (1.897)	0.575 (1.722)	0.237 (0.425)
30 to 34 years			-2.892 (1.714)	-3.104 (1.616)	0.142 (0.350)
35 to 39 years			-2.133 (1.962)	-2.452 (1.818)	0.103 (0.304)
40+ years			1.059 (2.302)	0.036 (2.247)	0.151 (0.359)
Accident				1.035 (2.728)	0.078 (0.269)
Diarrhea				-9.342* (1.637)	0.107 (0.309)
Yellow				-9.512* (1.650)	0.239 (0.426)
Respiratory				-7.093* (1.960)	0.064 (0.245)
Malaria				-10.228* (1.560)	0.050 (0.218)
Digestive				-6.417* (2.217)	0.046 (0.210)
STD				8.740* (3.355)	0.041 (0.199)
nervous				5.755 (5.871)	0.026 (0.160)
maternity				-1.469 (5.659)	0.024 (0.153)
skin				-1.368 (3.379)	0.017 (0.130)

Table A3
Regression Results for Duration of Initial Hospital Stay
Touro patients, aged 15 years and older

Covariate	Regression (1)	Regression (2)	Regression (3)	Regression (4)	Means and Standard Deviations
				-9.439*	0.016
fever				(2.155)	(0.127)
				-0.533	0.021
rheumatism				(2.902)	(0.142)
				-0.828	0.019
tuberculosis				(2.995)	(0.136)
				0.215	0.023
typhoid				(3.018)	(0.150)
				-4.329	0.013
debility				(3.349)	(0.114)
				15.584*	0.010
dropsy				(7.802)	(0.099)
				-6.865*	0.012
Cholera				(2.423)	(0.107)
				-5.726	0.010
intemperance				(3.305)	(0.099)
				-7.073	0.007
measles				(4.426)	(0.081)
Observations	1215	1215	1215	1215	1215
R ²	0.002	0.076	0.083	0.185	

Source: Touro Infirmary Archives.

Note: The dependent variable equals 1 if the patient is married, zero otherwise. Heteroskedastic consistent standard errors listed in parentheses. * indicates the regression coefficient is statistically different from zero at the 5 percent level.

Table A4
 Percent married by age, gender.
 Different classifications of enslaved status
 New Orleans Touro Infirmary (1855-1860)

Age group	Occupation = "Slave"		Patient with no recorded surname + Occupation = "Slave"	
	(1) Males	(2) Female	(3) Males	(4) Females
15 to 19 years	0.056 (0.232) [36]	0.222 (0.424) [27]	0.073 (0.264) [41]	0.233 (0.430) [30]
20 to 24 years	0.061 (0.241) [82]	0.433 (0.504) [30]	0.079 (0.271) [101]	0.438 (0.504) [32]
25 to 29 years	0.183 (0.389) [109]	0.476 (0.512) [21]	0.214 (0.412) [131]	0.417 (0.504) [24]
30 to 34 years	0.321 (0.471) [56]	0.600 (0.516) [10]	0.338 (0.476) [74]	0.571 (0.514) [14]
35 to 39 years	0.366 (0.488) [41]	0.647 (0.493) [17]	0.411 (0.496) [56]	0.647 (0.493) [17]
40+ years	0.433 (0.500) [60]	0.762 (0.436) [21]	0.526 (0.503) [78]	0.769 (0.430) [26]
15+ years	0.224 (0.417) [384]	0.492 (0.502) [126]	0.266 (0.442) [481]	0.490 (0.502) [143]
Singulate Mean Age at Marriage	26.7	24.4	28.6	25.8

Source: Touro Infirmary Archives.

Note: Standard deviations are listed in parentheses and the number of observations are listed in brackets.

Table A5
 Percent married by age, gender.
 Treatment of Missing Values for Marital Status
 New Orleans Touro Infirmary (1855-1860)

Age group	Missing value = "Single"				Missing value = "Married"			
	Whites		Slaves		Whites		Slaves	
	(1) Males	(2) Females	(3) Males	(4) Female	(5) Males	(6) Females	(7) Males	(8) Females
15 to 19 years	0.016 (0.127) [62]	0.167 (0.389) [12]	0.071 (0.261) [42]	0.226 (0.425) [31]	0.048 (0.216) [62]	0.250 (0.452) [12]	0.095 (0.297) [42]	0.258 (0.445) [31]
20 to 24 years	0.054 (0.226) [168]	0.400 (0.500) [25]	0.076 (0.267) [105]	0.438 (0.504) [32]	0.077 (0.268) [168]	0.400 (0.500) [25]	0.114 (0.320) [105]	0.438 (0.504) [32]
25 to 29 years	0.115 (0.320) [131]	0.421 (0.507) [19]	0.209 (0.408) [134]	0.400 (0.500) [25]	0.153 (0.361) [131]	0.474 (0.513) [19]	0.231 (0.423) [134]	0.440 (0.507) [25]
30 to 34 years	0.321 (0.470) [84]	0.583 (0.515) [12]	0.321 (0.470) [78]	0.533 (0.516) [15]	0.345 (0.478) [84]	0.667 (0.492) [12]	0.372 (0.486) [78]	0.600 (0.507) [15]
35 to 39 years	0.455 (0.503) [55]	1.000 (0.000) [6]	0.383 (0.490) [60]	0.611 (0.502) [18]	0.491 (0.505) [55]	1.000 (0.000) [6]	0.450 (0.502) [60]	0.667 (0.485) [18]
40+ years	0.517 (0.503) [87]	0.857 (0.378) [7]	0.482 (0.503) [85]	0.769 (0.430) [26]	0.563 (0.499) [87]	0.857 (0.378) [7]	0.565 (0.499) [85]	0.769 (0.430) [26]
15+ years	0.208 (0.406) [587]	0.481 (0.503) [81]	0.254 (0.436) [504]	0.476 (0.501) [147]	0.240 (0.428) [587]	0.519 (0.503) [81]	0.300 (0.459) [504]	0.503 (0.502) [147]

Source: Touro Infirmary Archives.

Note: Standard deviations are listed in parentheses and the number of observations are listed in brackets.

Table A6
Probability of Marriage: Logit Analysis
Touro enslaved patients, aged 15 years and older

Covariate	Males		Females		Males		Females	
	Logit 1	Odds ratio	Logit 2	Odds ratio	Logit 3	Odds ratio	Logit 4	Odds ratio
Intercept	-0.934 (0.106)	0.393	0.199 (0.191)	1.220	-2.360 (0.606)	0.094	-0.962 (0.461)	0.382
Owned by slave trader	-1.523* (0.611)	0.218	-1.137* (0.437)	0.321	-1.034 (0.632)	0.355	-0.635 (0.476)	0.53
20 to 24 years					-0.024 (0.708)	0.976	0.941 (0.565)	2.563
25 to 29 years					1.122 (0.641)	3.07	0.750 (0.606)	2.117
30 to 34 years					1.732* (0.653)	5.652	1.342 (0.701)	3.825
35 to 39 years					2.030* (0.663)	7.616	1.607* (0.680)	4.990
40+ years					2.475* (0.647)	11.88	2.166* (0.655)	8.719
Observations	481		143		481		143	
-2 Log-L w/o covariates	557.3		198.2		557.3		198.2	
-2 Log-L with covariates (#)	548.2 (1)		190.8 (1)		488.4 (6)		176.5 (6)	
McFadden's R ²	0.016		0.037		0.124		0.109	

Source: Touro Infirmary Archives.

Note: The dependent variable equals 1 if the patient is married, zero otherwise. For logits 3 and 4, the reference category is age group 15-19 years. * indicates the regression coefficient is statistically different from zero at the 5 percent level.