

Diverging family structure and “rational” behavior:
The decline in marriage as a disorder of choice

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I. Introduction

The past fifty years have witnessed a growing divergence in family structure by race and social class. This paper attempts to understand these dramatic trends. It argues that this dispersion can best be explained as the product of growing differences in styles of thinking about partner choice and reproductive behavior. Drawing on the work of psychologists Richard Herrnstein and Gene Heyman, the paper presents a model that contrasts two distinct types of “rational” choice: “global” and “local.” It then demonstrates that average disparities by race and class in the adoption of local or global decisionmaking methods can account for the significant demographic variations now observed in rates of marriage, divorce, and out of wedlock childbearing. The paper then suggests that this diversity emerged in the wake of the normative deregulation of the sexual revolution. The demise of strong heuristic mores and institutional constraints, and the rise of ad hoc individualism and moral improvisation, facilitated the development of contrasting decisionmaking styles in intimate relations.

II. The demographic dispersion in family structure

The past fifty years have seen dramatic changes in sexual behavior, patterns of reproduction, and family life. Fewer people are getting married, cohabitation is on the rise, divorce is commonplace, extra-marital sex is pervasive, and out-of-wedlock childbearing has

grown steadily for decades.¹ These general developments mask important trends well known to professional demographers: the composition of families has diverged dramatically by social class, income, education, and race. This segmentation is the product of three interrelated trends. First, although marriage rates have dropped across the board and people are marrying later, the retreat from marriage is far more pronounced among the less privileged and some minorities, especially blacks. As a general matter, “[t]he higher the level of education, the more likely people [are] to wed, and the less likely they [are] to live together.”² Between 1950 and 2008, according to one estimate, the percentage of 40-year old white female high school dropouts who were married declined by 13%, while the percentage of white female married colleges graduates increased by 16% – a reversal of historic trends.³ For white men, the percentage of married 40-year olds declined twice as fast among high school graduates as among the college educated.⁴ For blacks the retreat from marriage was more significant and affected every social class. During this period, rates of marriage for college educated black women under 40 decreased by 10 percent, but by 44 percent for high school dropouts; for men, the corresponding declines were

¹ See, e.g., Andrew Cherlin, *The Marriage-Go-Round* (2009); Stephanie Coontz, *The Way We Never Were* (2000).; Amy L. Wax, “Engines of Inequality: Class, Race, and Family Structure,” 41 *Family Law Quarterly* (Fall 2007); June Carbone, *From Partners to Parents: The Second Revolution in Family Law* (2000); Larry Bumpass and Hsien-Hen Lu, “Trends in cohabitation and implications for children’s family contexts in the United States,” 54 *Population Studies* (2000) 29-41.

² Nicholas Bakalar, “Education, Faith, and a Likelihood to Wed,” *New York Times Science Times* D7, March 23, 2010. See Goldstein and Kenney, “Marriage Delayed or Marriage Forgone? New Cohort Forecasts of First Marriage for U.S. Women” 66 *American Sociological Review* (2001) 506-519 (stating that “[w]omen with a college education are marrying more than ever, but those with less education are increasingly remaining single.”). See also Adam Isen and Betsey Stevenson, *Women’s Education and Family Behavior: Trends in Marriage, Divorce, and Fertility* (unpublished report on file with author).

³ Adam Isen and Betsey Stevenson, *Women’s Education and Family Behavior: Trends in Marriage, Divorce, and Fertility* (unpublished report on file with author). See also Goldstein and Kenney, *supra*.

⁴ Isen and Stevenson, *supra*.

20% and 55%, respectively. Currently, only 65% of black male high school graduates are married by age 40, and marriage rates among black high school dropouts have fallen to half their previous rates over this period.

Likewise, patterns of divorce have shifted decisively. After an initial surge in divorce across the board starting in the 1960s, recent data reveals widening disparities in the risk of divorce by level of education, with divorce rates among college educated white women dropping steadily since 1980, and rising among less educated whites and blacks in all social groups.⁵ Although the divorce rate among whites in the early part of this decade stood at 47% overall, the rate was 60% for high school dropouts as compared to 36% among college graduates. Although blacks marry less often than other major American groups, they also divorce more frequently, with divorce rates increasing among all educational groups over the past 50 years. About 70% of black women's first marriages now end in divorce, with rates remaining high across the board.⁶

⁵ See R. Kelly Raley and Larry Bumpass, "The Topography of the Divorce Plateau: Levels and Trends in Union Stability in the United States after 1980," 8 *Demographic Research* (2003) 245-160; Steven P. Martin, "Trends in Marital Dissolution by Women's Education in the United States," 15 *Demographic Research* 537-560 (2006); Megan M. Sweeney & Julie A. Phillips, "Understanding Racial Differences in Marital Disruption: Recent Trends and Explanations," 66 *Journal of Marriage and Family* 639, 643 (Aug. 2004). In summarizing Martin's findings, Sarah McLanahan explains that "[i]n his examination of divorce rates for marriage cohorts of college-educated and non-college-educated women, [Steve] Martin found that divorce rates increased for both groups (although slightly more for less-well-educated women) from the early 1960s through the late 1970s. After 1980, however, the trends diverged, with divorce rates *falling* among college-educated women and continuing to rise among less well-educated women." Sara McLanahan, *Diverging Destinies*, Demography, at 612. See also Adam Isen and Betsey Stevenson, Women's Education and Family Behavior: Trends in Marriage, Divorce, and Fertility (unpublished report on file with author) (noting declining divorce rates for better-educated couples). See, e.g., R. Kelly Raley, and Larry Bumpass, "The topography of the divorce plateau: Levels and trends in union stability in the United States after 1980." *Demographic Research*, 2003: 245 - 259.

⁶ See R. Kelly Raley and Larry Bumpass, "The Topography of the Divorce Plateau: Levels and Trends in Union Stability in the United States after 1980," 8 *Demographic Research* (2003) 245-260, 256 ("We estimate that 70 percent of black women's first marriages will end in

The drop in marriage rates has fueled a shift to single motherhood, with 40% of all births in 2007 to unmarried women. This figure masks significant sociodemographic disparities, with “the least educated women . . . six times as likely as the most educated women to have a baby outside of marriage.”⁷ Those ratios are primarily the product of a rapid increase in single motherhood among the less-privileged. There has been little change since 1965 in the rate of extra-marital births for women with a college degree or more, with the percentage of children born to unmarried white college educated mothers remaining under 5%.⁸ The rise in single parent families among blacks has been even more dramatic, with lower marriage rates in this group generating an explosion in extra-marital births. The most recent census figures reveal that about 72% of black children are now born out of wedlock.⁹ Finally, family disintegration is proceeding apace among Hispanics, with extra-marital births now standing at 45% overall, and the trend towards single parent families accelerating faster than for other racial groups.¹⁰

divorce [as compared to] 47% of white women’s.”) See also R. Kelly Raley and Megan Sweeney, “What Explains Race and Ethnic Variation in Cohabitation, Marriage, Divorce, and Nonmarital Fertility,” unpublished working paper on file with author.

⁷ Haskins and Sawhill, *supra*, at 208. See 2007 National Vital Statistics Report, Volume 57 #12, Births: Preliminary Data.

⁸ Andrew Cherlin, *The Marriage-Go-Round*, at 167; see also Lynn White & Stacy J. Rogers, “Economic Circumstances and Family Outcomes: A Review of the 1990s,” 62 *Journal of Marriage and Family*, 1035-1043 (Nov. 2000) (noting that the percentage of women bearing children out of wedlock in the past fifty years has “hardly changed among the well-educated.”). See also Ron Haskins and Elizabeth Sawhill, *Creating an Opportunity Society* (2009) 203-231; David T. Ellwood & Jonathan Crane, “Family Change Among Black Americans: What Do We Know?,” 4 *Journal of Economic Perspectives* 65, 68-69 (Autumn 1990); David T. Ellwood & Christopher Jencks, “The Spread of Single Parent Families in the United States Since 1960,” in *The Future of the Family* 12 (Moynihan, ed); David T. Ellwood and Christopher Jencks, “The Uneven Spread of Single-Parent Families: What Do We Know? Where Do We Look for Answers?” in Kathryn M. Neckerman, Ed., *Social Inequality* 3-77 (New York: Russell Sage Foundation).

⁹ See 2007 National Vital Statistics Report, Volume 57 #12, Births: Preliminary Data.

¹⁰ See Amy Wax, *Engines of Inequality*, at 575

These developments, which have been exhaustively documented by demographers and social scientists, are confirmed by recent data gleaned from the 2006-2007 Current Population Survey (CPS). These are analyzed and summarized in the attached figures.¹¹ As these show, large differences in women's marital and reproductive behavior persist by race and class. White female college graduates are significantly more likely to be married than women from less educated groups.¹² Correspondingly, the percentage of never married women among the least-educated (those with no more than 12 years of education) is far higher than for those with a bachelor's degree or more. (See figures a & b). For white women who had children in this period, the ratio of married to single mothers increases dramatically with more years of education. Although married mothers are a significant presence in every group, the contrasts are stark: about half of all white mothers without a high school degree are unmarried, whereas white mothers with a college degree almost always marry before having children. Even in this recent cohort, almost 95% of white mothers who completed college were married at the time of their child's birth. (See figures c & d).

For black women, out-of wedlock childbearing is more evenly distributed by level of education than among whites, with the ratio of single to married women higher for all levels of education (see figures e & f), and the proportion of women giving birth outside of marriage uniformly larger (see figures g & h). In contrast with white women, never-married women are in the majority regardless of level of education, with black high school graduates more likely to be married than women with more or less schooling, and only a small percentage of high school dropouts ever getting married. It is not surprising, then, that giving birth outside of marriage is the most common pattern for all black women except the most educated, with the percentage of

¹¹ U.S. Census Bureau, 2006 American Community Survey, Sex by Marital Status by Age for the Population 15 Years and Over.

¹² Goldstein and Kenney, 66 *American Sociological Review*, at -. See also Adam Isen and Betsey Stevenson, Women's Education and Family Behavior: Trends in Marriage, Divorce, and Fertility (unpublished report on file with author)

extra-marital births well over 50% for women without a college degree. Even among black college graduates, almost a third were unmarried, in contrast with about 7% of similarly educated white mothers – a ratio of almost 5 to 1.

Hispanics likewise have relatively high rates of out of wedlock childbearing, with 45% of births to single mothers.¹³ Although most Hispanic mothers are currently married, over one-third of Hispanic mothers in 2006-2007 with 12 or fewer years of schooling were single. (See figures I & j). The combination of higher birth rates and lower college attendance rates for Hispanic women has fueled a rapid increase in the rate of extra-marital births in this group.¹⁴

The result of these developments is that well-off whites have largely maintained traditional patterns of family, while the less privileged and minorities live in less stable arrangements. (See figures k and l). Fatherless or blended families are relatively uncommon for women who have completed four years of college or more, and the children of white college educated parents are significantly more likely to spend their childhood living continuously with their married biological parents.¹⁵ In contrast, only a small percentage of black children are raised by married biological parents.¹⁶ As Jonathan Rauch has noted, marriage is now a significant marker as well as a powerful predictor of social inequality. “America’s families and children may be splitting into two increasingly divergent and self-perpetuating streams – two social classes, in other words – with marriage as the dividing line.” Some children will “grow up in a culture where marriage is taken for granted,” whereas others will find themselves “in a

¹³ See Heather MacDonald, “Hispanic Family Values,” *City Journal* Autumn 2006.

¹⁴ *Ibid.*

¹⁵ See Amy L. Wax, *Engines of Inequality: Race, Class, and Family Structure*, 41 *Family Law Quarterly*, at 576; See Andrew Cherlin, *The Marriage-Go-Round*, at 167 (“Over the past few decades, the family lives of the college-educated have changed much less than among people with less education.”).

¹⁶ See Wax, *Engines of Inequality*, at 577.

culture where marriage is a pipe dream and deadbeat dads and impoverished kids are the norm.”¹⁷ III. Changes in Family Structure: Existing explanations and why they don’t work

Why has family composition evolved in the observed direction? Social scientists who have struggled to make sense of demographic developments have adopted some variant of a rational actor model, which assumes that individuals seek to maximize their own benefit, utility, happiness, or well-being in light of economic constraints and social circumstances. This approach often implicitly assumes that there is a single best, or maximizing choice for any given set of circumstances. Thus, regardless of group membership and cultural background, persons will do the best they can within the constraints they face and will respond to similar conditions by adopting predictable patterns of behavior. It is not surprising, then, that social scientists prefer to explain demographic changes as a “rational” response to evolving circumstances. Since people will not voluntarily engage in self-defeating, dysfunctional, or maladaptive behavior, the choice to forgo marriage must be rooted in social and economic circumstances that limit choice or that render marriage and bearing children outside of wedlock an optimal strategy.

Along these lines, the chief explanations offered for the dispersion in reproductive behavior look not to group differences in attitudes, outlook, or decisionmaking styles, but rather to economic factors and broad social trends. Economists who analyze marriage focus on money, resources and gains from cooperation. They predict that the primary determinants of marriage rates will be male and female earning power and the availability of marriageable men, where that category is defined mainly in economic terms. Because they are more desirable mates, men with better employment prospects and higher incomes will more often get married, whereas women with higher earnings (who have less need of male resources) will tend to remain single. Male unemployment, low or declining male earnings, and high crime rates (which take men out of the

¹⁷ Jonathan Rauch, “The Widening Marriage Gap: America’s New Class Divide,” *The National Journal* (May 19, 2001). See also Sara McLanahan, “Diverging Destinies: How Children Are Faring Under the Second Demographic Transition” 41 *Demography* 607, 607 (Nov. 2004).

running through premature death, incarceration, and un-employability) will drive down marriage rates among groups who suffer these dislocations.¹⁸

In keeping with these predictions, William Julius Wilson has attributed the decades-long decline in black marriage to a shrinking pool of marriageable men – a theory that has come to be known as the “Wilson hypothesis.”¹⁹ According to Wilson, the departure of the black middle class from the inner city in the wake of the civil rights revolution, combined with the disappearance of manufacturing jobs that urban black men had previously performed, led to a shortage of black men who could support a family.²⁰ Black women responded by bearing and raising children outside the confines of traditional marriage.

Yet another attempt to explain surging extra-marital childbearing among blacks identifies early childbearing as an optimal strategy for dealing with economic hardship and social constraint. According to Arline Geronimus, unmarried teen motherhood makes sense for black women because this group suffers poorer health and higher neonatal mortality than other women throughout their prime childbearing years. Moreover, by comparing sisters and women from similar backgrounds, she argues that the economic prospects of black women are not significantly depressed by teenage motherhood. In light of these considerations, she concludes

¹⁸ For a more detailed discussion, see Amy Wax, *Engines of Inequality*, supra, at 582-583. For a review of work on the economics of marriage, see Nancy R. Burstein, “Economic Influences on Marriage and Divorce,” 26 *J. of Policy Analysis and Management* (2007) 387-429.

¹⁹ See, e.g., Robert Wood, *Marriage Rates and Marriageable Men: A Test of the Wilson Hypothesis*, *J. Of Human Resources* Vol. 30, No. 1 (Winter, 1995), pp. 163-193. See also, e.g., William Julius Wilson, *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*.

²⁰ William Julius Wilson, *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*; Robert D. Mare & Christopher Winship, “Socioeconomic Change and the Decline of Marriage for Blacks and Whites,” in *The Urban Underclass* 175, 175 (Christopher Jencks & Paul E. Peterson eds., 1991); See also David T. Ellwood & Jonathan Crane, “Family Change Among Black Americans: What Do We Know?,” 4 *Journal of Economic Perspectives* 65, 68-69 (Autumn 1990).

that “early fertility-timing distributions among extremely disadvantaged populations, rather than being irrational as is often supposed, may have an underlying cultural rationale.”²¹

Ethnographers Katherine Edin and Maria Kafalas, in contrast, attribute low marriage rates among poor women generally to an interplay between the recent economic position of the poor and working class and a general cultural shift to higher expectations for marriage across the board.²² From their ethnographic study of 162 single mothers in Philadelphia, these researchers conclude that economic conditions, in combination with pervasive social trends, thwart less advantaged women’s strong desire to marry. They observe that emerging norms now dictate that success must precede marriage, with a stable job, a home, a savings account, and enough money for a nice wedding as prerequisites for matrimony. Because unskilled women and their potential mates had trouble making good on this goal (in part because the income of the least educated has not kept pace with higher earnings of college graduates), they postpone matrimony while accepting the “second best” option of early motherhood. Although almost all hope to find a husband eventually, the majority fail to marry at all. Edin and Kafalas echo these women in acknowledging the behavioral shortcomings of their prospective mates, including habitual drug use, domestic violence, poor work records, and law-breaking. But the authors largely attribute these patterns to bad schools and lack of economic opportunity. In short, poor women’s (and men’s) inability to meet the current high standards for marriage is a product of circumstances. Early, extra-marital childbearing is perceived as an rational response to structural forces and external constraints.

Finally, an influential paper published in 1996 by three economists looks to technological change as the principal source of rising extra-marital birthrates and the recent retreat from

²¹ Arline T. Geronimus, Teenage Childbearing and Social and Reproductive Disadvantage: The Evolution of Complex Questions and the Demise of Simple Answers,” 40 Family Relations (October 1991) 463-471, 466.

²² Kathryn Edin and Maria Kafalas, Promises I Can Keep.

marriage. Akerlof, Yellin, and Katz,²³ argue that the invention of the birth control pill in the early 1960s, followed by the legalization of abortion shortly thereafter, constituted a significant “technological shock” that unsettled prior conventions and radically shifted patterns of sexual behavior. By reducing the chance of unwanted pregnancy, these developments, dramatically increased women’s willingness to engage in extra-marital sex. This made sex more available to men, and men less willing marry women they impregnated. The demise of the “shotgun marriage convention” meant that pregnant women who hoped to marry and become mothers had no choice but to go it alone. The paradoxical result was a surge in extra-marital childbearing.

All of these explanations have severe limitations and none succeed in explaining most of the growing divergence in marital and reproductive behavior by class and race.²⁴ Changes in male wages, sex ratio imbalances, and a paucity of marriageable men fail to account for most of the decades long decline in marriage among persons with lower earnings and less education. Although marriage rates undeniably respond to economic conditions and some non-marriage can be attributed to a shortage of marriageable men, there is a consensus among demographers that only a small portion of the decades long-retreat from marriage and the current dispersion by race and social class can be attributed to these factors. Rather, people with profiles similar to those who have frequently married in the past are now marrying less often. As two prominent researchers in the field have observed, although “male earnings and sex ratios clearly influence marriage,” variations in these factors are “not enough to explain the bulk of recent changes” in family structure. That is because “the economic position of men has not changed enough to explain most of the changes in marriage patterns.”²⁵

²³ George Akerlof, Janet Yellin, and Michael Katz, “An Analysis of Out-of-Wedlock Childbearing in the United States,” 111 *Quarterly J. of Economics* (1996), 279.

²⁴ For an extended discussion, see Wax, *Engines of Inequality*, supra, 582-599.

²⁵ David T. Ellwood and Christopher Jencks, “The Uneven Spread of Single-Parent Families: What Do We Know? Where Do We Look for Answers?” supra at 60, 68.

What is true across the board also applies to blacks. The decline in black marriage rates has been studied intensively, with social scientists citing incarceration, unemployment, and educational underachievement as creating a shortfall in the pool of marriageable black men, especially at the extremes of the socioeconomic distribution. However, the data reveals that this shortfall, and economic factors in general, account for a small portion of the drop in marriage among blacks over the past 50 years.²⁶ As noted by Dan Lichter, the overall economic and social condition of blacks improved over this period, even as marriage rates relentlessly decreased. Indeed, “strict economic explanations are difficult to reconcile with evidence that marriage rates for blacks in the 1930s were very high – higher than those of whites – despite the fact that black men had significantly higher rates of unemployment and poverty than they do today.”²⁷ In addition, marriage among blacks has declined across the board, regardless of education, employment, and economic circumstances.²⁸ Specifically, “the most affluent black men now less likely to have ever been married than their lower earning but economically stable African American counterparts.”²⁹ In addition, marriage rates for black and white men with similar

²⁶ See, e.g., David T. Ellwood & Christopher Jencks, “The Spread of Single Parent Families in the United States Since 1960,” in The Future of the Family 13 (Moynihan, ed.); David T. Ellwood and Christopher Jencks, “The Uneven Spread of Single-Parent Families: What Do We Know? Where Do We Look for Answers?” in Kathryn M. Neckerman, Ed., Social Inequality 3-77 (New York: Russell Sage Foundation) at 60, 68.

²⁷ Dan Lichter, Diane McLaughlin, George Kephart, and David Landry, “Race and the retreat from marriage: a shortage of marriageable men?” 57 *American Sociological Review* (Dec. 1992) 781-799, 784-785.

²⁸ See, e.g., Robert Lerman, Employment Opportunities of young men and family formation, 79 *American Economic Review* (1989) 62-66; R. Kelly Raley and Megan M. Sweeney, “Explaining Race and Ethnic Variation in Marriage: Directions for Future Research,” 1 *Race Soc. Probl.* (2009) 132-142, 133 (noting that significant racial differences in family patterns also exist “among individuals with relatively high earnings and education.”)

²⁹ R. Richard Banks and Su Jin Gatlin, “African American Intimacy: The Racial Gap in Marriage,” 11 *Michigan J. Of Race & Law* 115, 124 (acknowledging drops in marriage rates for marriageable men). See also David T. Ellwood & Jonathan Crane, “Family Change Among Black Americans: What Do We Know?,” 4 *Journal of Economic Perspectives* 65, 68-69, 76

education and incomes differ significantly and are growing, with “[b]lack men at every income level . . . substantially less likely than their white counterparts to have ever been married”³⁰ (In the same vein, it is also notable that Hispanics complete fewer years of schooling than blacks, but have significantly higher marriage rates.) Based on these observations and other evidence, demographers estimate that, at most, about a fifth of the current black-white difference in marriage rates is due to a shortage of marriageable men, with some estimates far lower.³¹ In short, demographic evidence conclusively repudiates the Wilson hypothesis: economic circumstances and other variables thought to bear on the number of marriageable men do not account for most of the decades-long decline in marriage among blacks, nor do they explain the

(Autumn 1990) (noting that declines in marriage “have been almost as great for better-educated [black] men as for the less well-educated.”)

³⁰ Banks and Gatlin, *supra*.

³¹ See Dan Lichter, et al, *57 American Sociological Review*, at 785; Lynn White & Stacy J. Rogers, “Economic Circumstances and Family Outcomes: A Review of the 1990s,” *62 Journal of Marriage and Family* 1035, 1043 (Nov. 2000) (noting that more than 80% of the decline in black marriage rates is unexplained by economic and demographic factors); Heather Koball, “Have African American men become less committed to Marriage? Explaining the twentieth century racial cross-over in men’s marriage timing, *35 Demography* (1998) 251-258, – (explaining that ‘employment does a poor job of explaining . . . differential racial patterns in the timing of marriage across the twentieth century.’); Robert Wood, *Marriage Rates and Marriageable Men: A Test of the Wilson Hypothesis*, *J. of Human Resources* Vol. 30, No. 1 (Winter, 1995) (estimating that a decline in the number of black marriageable men explains only about 5% of the recent decline in black marriage rates); Robert Schoen and James R. Kluegel, “The Widening Gap in Black and White Marriage Rates: The Impact of Population Composition and Differential Marriage Propensities,” *American Sociological Review* 53 (1988): 895 (estimating that the relative shortage of black marriageable men accounts for between 10 and 25% of black-white difference in marriage rates); Scott South and Kim Lloyd, “Marriage Opportunities and Family Formation – further implications of imbalanced sex-ratios,” *54 J. of Marriage and the Family* (1992) 440-451, 449 (noting that “significant racial differences in marriage rates persist even after racial differences in mate availability are taken into account”); R. Kelly Raley and Megan M. Sweeney, “Explaining Race and Ethnic Variation in Marriage: Directions for Future Research,” *1 Race Soc. Probl.* (2009) 132-142, 133 (same). See also Madeline Zavodny, “Do Men’s Characteristics Affect Whether a Non-marital Pregnancy Results in Marriage,” *61 J. Of Marriage and Family* (August 1999) 764-773 (noting large unexplained ethnic differences in the probability of marriage after the birth of a child).

large disparity in marriage rates between blacks and other groups. Rather, “a complete explanation of racial differences in marriage behavior will clearly require consideration of nondemographic variables.”³²

Likewise, Arline Geronimus’s assertion that early extra-marital childbearing is a “rational” strategy for disadvantaged black women has been attacked as unsupported by the facts.³³ Her analysis also fails to explain reproductive patterns overall. Geronimus’s observations are based on a very disadvantaged cohort of mostly black women. Her sample does not represent the spectrum of black single mothers, most of whom are better educated, wealthier, and older. In addition, her analysis is based on a restricted counterfactual: she compares teen mothers to otherwise similar women who delay non-marital childbearing a few years. She does not consider the possibility of postponing childbearing until after marriage, and does not compare her population to black women who marry before bearing children. Therefore, her work fails to address whether extra-marital childbearing, whether either early or late, is better or worse than a more conventional path. This oversight ignores strong contrary evidence that marriage carries significant benefits, both economic and otherwise, for women in every sociodemographic group. According to Robert Lerman, for example, the decline in two-parent families accounted for “almost half the increase in child income inequality and more than the entire rise in child poverty rates” observed between 1971 and 1989.³⁴ Although the breakdown hurt all children, black children were most affected. According to Lerman’s estimate, pairing

³² See South and Lloyd, “Marriage Opportunities and Family Formation – further implications of imbalanced sex-ratios,” 54 *J. of Marriage and the Family* (1992) at 449

³³ See, e.g., Frank R. Furstenberg, “Teen age Childbearing and Cultural Rationality: A Thesis in Search of Evidence,” 41 *Family Relations* (1992) 239-243, 242 (citing data showing that early childbearers have lower educational attainment and poorer economic prospects than poor women who delay childbearing).

³⁴ Robert I Lerman, “The Impact of the Changing US Family Structure on Child Poverty and Income Inequality,” 63 *Economica* (1996), S119-139, S137

black single mothers in 1989 with the existing population of black males would move “80% of the children . . . out of poverty as a result of the pooling of incomes and the marriage-induced earnings.”³⁵ Other studies also suggest that marriage is effective in lifting many mothers and children out of poverty.³⁶

The empirical data thus suggests that the economic benefits of marriage are available across the earnings spectrum. It also contradicts the notion that the educated and affluent marry more often because they can expect outsized benefits from joining forces – an explanation that ignores both existing data and basic economic logic. Individuals with modest earning power can improve their position by finding a partner with similar prospects. That marriage can significantly boost well-being regardless of social class stands to reason. First, marriage gives

³⁵ Robert I Lerman, “The Impact of the Changing US Family Structure on Child Poverty and Income Inequality,” 63 *Economica* (1996) at 136. This estimate incorporates a marital earnings premium of the magnitude that is currently observed for black men. But even without factoring in that boost in earnings, the estimate is that 43% of black children would escape poverty.

³⁶ See, e.g., Audrey Light, “Gender Differences in the Marriage and Cohabitation Income Premium, 41 *Demography* May 2004, 263-284 (women experience substantial financial gains from marriage and stable cohabitation); Steven Nock, “The Consequences of Premarital Fatherhood,” 63 *American Sociological Review* (1998), 250-263 (concluding that men who have children before marriage obtain less education and lower earnings, and have higher poverty rates than comparable men who did not father children outside marriage); Robert I. Lerman, *How Do Marriage, Cohabitation, and Single Parenthood Affect the Material Hardships of Families With Children?* 9-10 (Urban Institute and American University, July 2002).

See also Paul Amato and Rebecca Maynard, “Decreasing Non-marital Births and Strengthening Marriage to Reduce Poverty,” 17 *The Future of Children* (Fall 2007) 117-141; David Eggebeen and Daniel Lichter, “Race, Family Structure, and Changing Poverty among American Children,” 56 *American Sociological Review* (1991) 801-817; Robert I. Lerman, “The Impact of the Changing US Family Structure on Child Poverty and Income Inequality,” 63 *Economica* (1996), S119-139; Ron Haskins, “Getting Ahead in America,” *National Affairs* (Fall 2009) 36-52; Adam Thomas and Isabel Sawhill, “For Love and Money? The Impact of Family Structure on Family Income,” 15 *The Future of Children* (Fall 2005) 57-74; John Iceland, “Why Poverty Remains High: The Role of Income Growth, Economic Inequality, and Changes in Family Structure, 1949-1999,” 40 *Demography* (2003) 499-519; Ron Haskins and Elizabeth Sawhill, *Creating an Opportunity Society* (2009).

households two potential workers instead of one. Indeed, the basic principles governing the marginal utility of money dictate that the added earnings of working class men have as much or greater value to women of modest means than large male incomes have for women who also can also command high salaries.³⁷ Thus, marrying someone of roughly equal earning capacity, regardless of skill level, is an effective way for men and women to improve their economic prospects and increase their standard of living. In addition, couples in every social class can take advantage of economies of scale, shared responsibilities, and efficient divisions of labor. Although cohabitation would appear to serve these purposes as well, the data indicates that cohabiting unions are less stable than marriages. In general, “cohabitation does not signify the same degree of commitment as does marriage, and is in fact usually less durable.” The evidence confirms that cohabiting unions are marked by fewer long-term investments and planning, produce less specialization and pooling of resources, are associated with a smaller wage premium for men, and provide a less cohesive and stable setting for children.³⁸

Discussions of declining marriage rates among the less advantaged in all ethnic groups, including whites, often point to rising inequality in male earnings. The divergence is due mostly to a decades-long surge in the economic returns to college and advanced education, which has greatly enhanced the incomes of men with college or professional degrees. In contrast, the economic position of working class men has not kept pace. Although estimates vary based on methodology and reveal some fluctuations, most calculations indicate that earnings for men with

³⁷ See Amy L. Wax, *Engines of Inequality*, at 585-586

³⁸ See, e.g., Adam Thomas and Isabel Sawhill, “For Love and Money? The Impact of Family Structure on Family Income,” 15 *The Future of Children* (Fall 2005) at 61; see also Larry Bumpass and Hsien-Hen Lu, “Trends in Cohabitation and implications for children’s family contexts in the United States,” 54 *Population Studies* (2000) 29-41 (noting the greater instability of cohabiting families, and implications for children).

high school or less have stagnated or declined somewhat over this period.³⁹ Even though some men in this category have struggled, and some well-paying working class jobs have disappeared, the question nevertheless remains as to how much of the retreat from marriage among less educated men can be attributed to changes in their earning power over time. Answering this question requires a precise and systematic comparison of the marital profiles of similarly situated men over time. This requires comparing the behavior of men today with men who had comparable earnings in the past, when marriage rates were significantly higher. Is a man who makes, say, \$28,000 per year in today's dollars – or any similar working class wage – as likely to be married now as a man who made a comparable, inflation adjusted amount in 1950 or 1970? Inexplicably, there appears to be no study in the literature that makes this precise comparison across the spectrum of earnings.⁴⁰ However, the limited research available suggests that men who were once regarded as marriageable and were routinely married– including many men with

³⁹ See, e.g., David Autor, Lawrence Katz and Melissa Kearney, "Trends in U.S. Wage Inequality: Revising the Revisionists, 90 *Review of Economics and Statistics* (May 2008), 300-323; Claudia Goldin and Lawrence Katz, "Long-Run Changes in the U.S. Wage Structure: Narrowing, Widening, Polarizing, Brookings Panel on Economic Activity, Sept. 2007, unpublished paper on file with author, (noting that enhanced returns to education beyond high school have been a "key component of the rise in wage dispersion since 1980"); Lawrence Katz, and David H. Autor, "Changes in the Wage Structure and Earnings Inequality," in Orley Ashenfelter and David Card, eds., *Handbook of labor economics*. Vol. 3A. Amsterdam: Elsevier Science, North- Holland, 1999, pp. 1463-1555 (noting evidence that earnings and compensation for the least educated men stagnated or declined from the 1970s through the 1990s). Compare Marvin H. Koster, "Schooling, Work Experience, and Wage Trends," *The American Economic Review*, Vol. 80, No. 2, Papers and Proceedings of the Hundred and Second Annual Meeting of the American Economic Association (May, 1990), pp. 308-312, 310 (stating that after stabilizing during the 1970s, wages for high school educated men declined by approximately 12% during the 1980s.) In general, see U.S. Census Bureau, *Historical Income Tables: Tables P32-P35: Educational Attainment and Years of School Completed-Full-Time, Year-Round Workers 18 Years Old and Over by Mean Earnings, Age and Sex: 1974-2008* <http://www.census.gov/hhes/www/income/histinc/incpertoc.html> (last visited Apr. 9, 2010) (showing a modest decline followed by a stabilization in earnings of male workers with a high school education over 33 year period).

⁴⁰ Oral communication, Dan Lichter, Department of Policy Analysis and Management and Professor of Sociology, Cornell University.

earnings in the lower end of the distribution – are now more likely to remain single than in the past.⁴¹ Moreover, the retreat from marriage has continued through good economic times and bad, persisting through periods when working class wages stabilized or gained ground, as in the 1990s.⁴² As already noted, a similar trend is evident among women: marriage rates for high school graduates have relentlessly fallen, and college educated women are now more likely to marry than less educated women.⁴³ The reason for this pattern is not apparent. That these women’s potential partners have lower incomes than men with a college degree does not change the fact that they still bring valuable resources to the table. Yet, in contrast to the past, women

⁴¹ One paper looks at a relatively small sample of men and women partners to determine which pairs marry shortly after the birth of a child. It then compares the men in this sample with similar men in the past (e.g. with the same earnings and other sociodemographic characteristics) to determine whether their chance of marrying after the birth of a child was higher or lower. The author finds that the probability of a man marrying the mother of his child, holding male characteristics constant, has declined significantly for blacks, and less so for whites. For white men, specifically, the data indicate that lower probabilities of marriage are due in part to "a change in men's characteristics" and partly to "a change in their response to characteristics." This indicates that both culture and economics have played a role in the retreat from marriage in this situation. See Madeline Zavodny, "Do Men’s Characteristics Affect Whether a Non-marital Pregnancy Results in Marriage," 61 *J. of Marriage and Family* (August 1999) at 770-772. See also Daniel Lichter and Diane McLaughlin, "Economic Restructuring and the Retreat from Marriage," 31 *Social Science Research* (2002) 230-256 (also suggesting that changes in men’s response to their characteristics (such as education and earnings), rather than in the characteristics themselves, accounts for most of the change in the probability of marriage, albeit much more for blacks than for whites.)

⁴² See David T. Ellwood and Christopher Jencks, "The Uneven Spread of Single-Parent Families: What Do We Know? Where Do We Look for Answers?" in Kathryn M. Neckerman, Ed., *Social Inequality* 3-77 (New York: Russell Sage Foundation), at 68 (noting that "the wages of less skilled men and women rose" and "jobs became plentiful" during the 1990s, while marriage continued to decline and extra-marital childbearing to increase). See also, e.g., David Autor, Lawrence Katz and Melissa Kearney, "Trends in U.S. Wage Inequality: Revising the Revisionists, 90 *Review of Economics and Statistics* (May 2008), 300-323 (wages for less educated men stabilized and even grew modestly during the 1990s, when marriage rates continued to decline).

⁴³ Goldstein and Kenney, "Marriage Delayed or Marriage Forgone? New Cohort Forecasts of First Marriage for U.S. Women" 66 *American Sociological Review* (2001)

and men in this cohort now marry less frequently, and have less stable relationships, than people with higher education and earnings.

In sum, although the benefits of marriage are potentially available to persons across the sociodemographic spectrum, the gains are being realized selectively as behavior has diverged by race and class over time. Arguably, large numbers of people who forgo marriage are not behaving “rationally”: their choices are making them poorer, less secure, and less well off than if they joined forces, and these adversities are also being visited on their children.⁴⁴ Since the groups who are less likely to marry (including the less educated and blacks) are also at greater risk of poverty, remaining single appears to be against economic self-interest.

Of course, marriage is not simply a financial arrangement. Its potential to make people better off depends on the behavior of the partners: they must work hard and consistently, actively cooperate, and apply their income and efforts to a common enterprise. These are important caveats: marriage delivers few benefits if the partners do not live up to these standards. This suggests that how partners behave within marriage, and in preparation for it, might influence who marries and stays married. If these factors make a difference, this begs the question of whether, and how, it might account for the growing dispersion by race and class.

Are some people better socialized to marriage than others? The work of Kathryn Edin and Maria Kefalas provides some hints. As noted, these authors seek to explain declining marriage rates among low income women as the joint product of general cultural trends and economic conditions. The modest financial prospects confronting these women and their potential partners means they cannot fulfill vaunted expectations for marriage. The result is that they have children, but don't get married. The problem with this theory is that it does not square with the explanations these women offer for their own choices. They almost never complain of their potential husbands' modest earning power (which the authors themselves

⁴⁴ See Amy L. Wax, *Engines of Inequality*, *supra*.

concede has not changed much since the 1960s and 1970s, when working class marriage rates were far higher). Rather, their main quarrel is with men's behavior. Although anti-social behavior is a problem across the board, most of the women highlight their partners' repeated and flagrant sexual infidelities, which often produce children by other women. The conflicting loyalties and ill-will generated by these patterns emerge as significant obstacles to stable and harmonious relationships. In general, the overall impression gleaned from these women's accounts is that their potential marriage partners are poorly socialized to the expectations of marriage and unwilling to fulfill a husband's proper role. At the same time, however, women are somewhat complicit in their men's behavior, because they do not hold out for marriage as a condition of having children. Whether deliberately or accidentally, they routinely bear children out of wedlock by men they would not consider marrying – children who reduce their prospects of finding a mate in the future.

These patterns of behavior impede the formation of potentially economically beneficial unions. In short, this study suggest that the failure of these women's partners' to act as good husbands is the main reason for the mothers' reluctance to marry them. Likewise, women's willingness to bear children outside of marriage, and their failure to prevent pregnancy through the effective use of contraception, further impedes the formation of stable unions. No direct evidence is offered, however, on whether the standard of male behavior has deteriorated over time.

Likewise, Akerlof, Yellin, and Katz, fail to address emerging race and class differences, or to explore underlying behaviors that might give rise to these patterns. According to their theory, the wider availability of extra-marital sex after 1960 spelled the demise of shotgun marriage, which caused out of wedlock childbearing to soar. But their theory does not show why extra-marital births increased so much among blacks and less educated women, while changing little among women with more education. Nor does it explain why more privileged women continue to embrace marriage as a prerequisite to motherhood. Likewise, the model gives no

reason why upper middle class men are routinely willing to acquiesce in women's demands for marriage before motherhood, whereas less privileged men more often resist such demands.

Commentators who assign a large role to cultural norms in family life seek to address these very questions. Hymowitz speculates that a growing understanding of the central role of marriage in building and maintaining financial and human capital, both for adults and their offspring, contributes to better educated person's willingness to marry and stay married, as reflected in continuing low extra-marital birth rates and a dramatic decline in divorce rates in recent decades. According to Kay Hymowitz, educated men and women appear to appreciate the economic and non-economic benefits of marriage, including the critical importance of a stable home life and sustained parental investment to their children's future educational success and well-being.⁴⁵ But the willingness of more affluent parents to buck demographic trends in the interests of status reproduction only begs the question of why persons from other sociodemographic groups are relatively unwilling to take similar steps to *improve* their children's status. Likewise, it is a mystery why less privileged individuals, unlike their better off counterparts, either fail to appreciate that marriage can make them better off, or are unmoved by the potential advantages – to themselves and their children – of maintaining long-term relationships. To be sure, there is some evidence that people in all sociodemographic sectors revere and aspire to marriage.⁴⁶ But that just reinforces the puzzle of why fewer people now act on the insight that “their lifestyle, and the lifestyle of their children, will be markedly better if they form a long-term social and economic partnership – that is, marriage – with one person.”⁴⁷

This paper seeks to shed fresh light on this question. As noted, social scientists seeking

⁴⁵ See Kay Hymowitz, *Marriage and Caste in America*.

⁴⁶ See, e.g., Edin and Reed, “Why Don't They Just Get Married? Barriers to Marriage among the Disadvantaged,” 15 *The Future of Children* (Fall 2005) at 129 (noting that poor women have high aspirations for marriage). See also discussion, *infra*.

⁴⁷ Brad Wilcox, “Marriage, the Poor, and the Commonwealth,” in Robert George and Jean Elshtain, *The Meaning of Marriage*, at 244.

to explain demographic shifts have embraced a version of a rational actor model that traces variations in behavior to objectively measurable ambient conditions. As we have seen, however, this approach falls short of accounting for observed patterns. Financial circumstances, material constraints, and society-wide shifts in economic expectations, do not fully explain either longitudinal trends over time, or the existing cross-sectional divergence in marriage, divorce, childbearing, and family structure. The retreat from marriage among the less privileged is especially puzzling, because the benefits of a well-functioning marriage, including economies of scale and gains from cooperation, would appear to be especially valuable for individuals with less earning power and fewer skills and resources. Although marriage seems like a good choice and an optimal strategy, those who would appear to benefit most are less likely to choose it.

In sum, rational actor models that focus on responses to social conditions have shed little light on the growing divergence in behavior by class and race in patterns of marriage and parenthood. A different approach is in order. My purpose here is to propose one. In attempting to improve on the shortcomings of existing theories, my model rejects the notion that group disparities can be explained by positing a unitary “rational” response to the peculiar circumstances confronting distinct sociodemographic groups. Instead of linking choices directly to external conditions (either economic or social), this model turns inward to examine modes of thought and action that inform the decisionmaking process, and the individual and group characteristics that influence these. The proposed explanation does not turn on external conditions, but looks to what is going on in people’s heads. How people think about costs and benefits – specifically as they relate to sexual and related conduct bearing on the quality of interpersonal relationships – is what matters most. By showing how similar circumstances can issue in distinct patterns of behavior, this framework attempts to explain why people often behave very differently despite similar incentives and constraints. In tracing variations in family structure to distinct modes of response, this approach challenges a theory of unitary rationality, which predicts a standard reaction to similar circumstances and assigns a minimal role to cultural

background or individual or group attributes. In contrast, this analysis posits that different methods for processing the same information, and assessing similar costs and benefits, can decisively influence behavior. Divergent modes of thinking can give rise to dramatically different approaches to personal and family life.

III. Rational choice: local versus global decisionmaking

The model proposed here draws on an important body of work on the psychology of decisionmaking. The analysis posits alternative modes of choice, corresponding to different time-frames for assessing behavioral options. It begins with the observation that some choices that are immediately attractive will not necessarily maximize well-being in the long run. Rather, achieving the highest returns may depend on adopting an approach that anticipates and totals up the benefits of a series of choices over time. To adopt the parlance of the model, an individual may sometimes be better off with a “global” rather than a “local” approach to decisionmaking.

The account makes use of paradigm developed by Richard Herrnstein and his colleagues at Harvard, which explores the dynamics of long term and short term frameworks for choice. In a series of paper, Herrnstein explained how short time frames for decisionmaking can sometimes lead to suboptimal results. He draws on experimental observations that animals and people tend to select an immediately attractive option even if forgoing that option in favor of a different choice might produce a larger benefit over time. According to Herrnstein, a person might “credit, as it were, the immediate returns he receives to a particular response alternative, rather than to keep a global account of returns across his entire repertoire.”⁴⁸ As he explains, “[t]his limitation in mental bookkeeping entails a limitation in our general capacity to discover the optimal allocation of our behavior, although particular circumstances determine whether the

⁴⁸ R.J. Herrnstein, Behavior, Reinforcement, and Utility, 4 *Psychological Science* 217-224, 219 (1990); see also, e.g., R.J. Herrnstein, Rational Choice Theory: Necessary but not Sufficient, 45 *American Psychologist* 356-367 (March 1990).

limitation is grave, trivial, or in certain cases, nonexistent.”⁴⁹ The myopic method of assessment is designated “local choice.” This stands in contrast to an aggregative method for evaluating options, known as “global choice.”

A. Local vs. global choice: drug addiction

Gene Heyman has elaborated on Herrnstein’s decisionmaking model to argue that drug addiction is a “disorder of choice.”⁵⁰ According to Heyman, drug addiction results from the chronic failure to engage in global decision-making, which leads to suboptimal behavior. Heyman’s theory of addiction stands in contrast to the widely accepted notion of habitual drug use as a “disease” characterized by compulsions, cravings, and seemingly uncontrollable seeking and use. On the view, repetitive drug use is conduct over which addicts have no meaningful voluntary control. Therefore drug addiction is not a matter of choice, and cannot be tamed through incentives, punishment, or other conventional methods for modifying behavior. Rather, the proper response to addiction is medical treatment.⁵¹

The disease model is popular because the compulsive use of alcohol or illegal drugs seems irrational and dysfunctional. Why would someone voluntarily engage in behavior that is obviously detrimental to their well-being? In addition, many addicts deplore their habits and express the desire to quit. Yet despite understanding the terrible costs of their behavior, they fail to act on this perception.

The disease model is appealing because it helps to explain such self-defeating behaviors. The biological and physiological mechanisms behind addiction hijack the ability to weigh the costs of drug use against other benefits. Changes in the brain make drug-seeking natural and predictable – they transform drug use into “rational” behavior. In light of the overwhelming

⁴⁹ Id. at ___

⁵⁰ Gene Heyman, *Addiction: A Disorder of Choice* (Harvard University Press 2009).

⁵¹ Heyman at 18-19.

need for drugs, there is no reason to expect the addict to reform or even resist.

In fact, as Gene Heyman argues, many addicts overcome their addiction. Contrary to popular perception, many people use drugs for some period of time and quit. Or they spontaneously stop using drugs despite long periods of prior use and entrenched habits. Other people, however, do not – or they recover and relapse repeatedly. What accounts for these successes and failures? Although life circumstances have some influence, they don't fully explain observed patterns. For persons matched on background, education, financial resources, and other objective characteristics, some will kick the habit and others not. A disease model that views addiction as essentially involuntary cannot easily account for these differences. If compulsive drug use is impervious to will, incentive, and choice, then responses to addiction should not vary so much. Likewise, a choice model that posits a unitary calculus of rational decisionmaking falls short of explaining why some people engage in harmful, costly, self-destructive behavior, while others refrain or permanently abjure drugs.

Heyman's position is that, although overcoming addiction and may be difficult and requires confronting strong desires, drug use is a choice that is amenable to voluntary control. Heyman's challenge to the disease model rests on the recognition that human psychology admits of more than one method of rational choice. Heyman's picture of compulsive drug use builds on Richard Herrnstein's observation that decision-making can occur within alternative frameworks. "It is always possible to choose between available items one at a time, or to organize the items into sequences and then choose between different sequences."⁵² In keeping with Herrnstein's framework, the method of choosing between options one at a time, or piecemeal, Heyman designates as "local" choice. "In local choice, selecting the better option means choosing the item that currently has the higher value."⁵³ In making that choice, the person compares the

⁵² Id. At 119.

⁵³ Heyman, at 119.

immediate short-term benefits from the available options and ignores future consequences.

In contrast, taking into account the aggregate payoff from different sequences constitutes “global” choice. An actor makes a global choice by tallying the costs and benefits of a set of choices over time and selecting the sequence that maximizes payoff. “In global choice, the best choice is the collection or sequence of items that has higher value.”⁵⁴

How might the strategies generated by global or local choice affect patterns of drug use? According to Heyman, whether or not someone compulsively uses drugs is a function of whether that person adopts a local or global perspective on choice. As Heyman notes, “[l]ocal choice is simple,” but it has severe shortcomings. Specifically, “it ignores the dynamics that link choice and change in value.”⁵⁵ Thus, the decision to use, or to continue to use, drugs can be explained as a failure to appreciate how those choices change the value of subsequent ones, and to take that interplay into account. How do prior choices affect future choices in the case of drugs? Heyman posits that the payoffs from a particular decision to indulge in drugs depends on whether and how often drugs were used on preceding days. In particular, Heyman makes the critical assumption that a discrete episode of drug use undermines both the value of any subsequent decision to indulge and also the value of a subsequent drug-free day. As drug use increases, the “high” from more drugs decreases. Likewise, “as drug use increases, the value of the competing nondrug activities decreases.”⁵⁶ That is, drugs undermine the benefits of subsequent abstinence. That is because drug use erodes the quality of alternatives to drugs, which include the ordinary activities of life. The ability to discharge daily responsibilities, work effectively, enjoy leisure pursuits, and carry on a normal family and social life are all significantly compromised. Thus, although the decision to use drugs undeniably generates an

⁵⁴ Id. at 119

⁵⁵ Heyman at –.

⁵⁶ Heyman at 125.

attractive and immediate “high,” it has a corrosive effect on the subsequent benefits to be derived both from additional drug use and from its alternatives.

Figures 1a, 1b, and 1c demonstrate this dynamic for a stylized 30-day period. Figure 1a, which illustrates local choice, plots the value of each day (whether of drug use or abstinence) against the number of drug choices in the last 30 days. The horizontal axis represents the number of prior drug days within the 30-day period. The vertical axis shows that the current value of each discrete day of drug use (see top line), or each day of abstinence from drugs (see bottom line), decreases as the number of previous drug days increases. Thus, the value of the decision to use or abstain from drugs is seen to *decline* with prior drug use. In short, the schedule assigns a larger payoff to a drug free day if preceded by more drug-free days and a smaller payoff if preceded by more episodes of drug use. Nonetheless, the daily value of drug use always exceeds the daily value of abstaining from drugs. Therefore, the day-to-day “rational choice” is to use drugs every day, generating a pattern of 30 days of drug use and no days of abstinence. The “local choice” equilibrium is continuous and compulsive drug use.

Figures 1b and 1c, in contrast, illustrate the dynamic of adopting a global point of view. Once again, the horizontal axis represents the number of prior drug days within the 30-day period. The vertical axis in figure 1b plots the total value of the “market basket” combination of drug and non-drug days over the entire 30-day period for each discrete combination of drug and non-drug days. The vertical axis in figure 1c plots the average value of each day based on the total “market basket” value over the entire 30-day period for each combination of drug and non-drug days. (This is obtained by dividing the aggregate, or “market basket” total for each 30 day combination by 30.) As with local choice, the global choice option “reflect[s] the dynamic relationships between choice and changes in value.”⁵⁷ But computing payoffs based on a global perspective generates a very different result: “the 30 day sequence with the highest value [is] the

⁵⁷ Id. at 119

one that contains no drug days.”⁵⁸ Whereas the equilibrium for local choice is “always use drugs,” the equilibrium for global choice is “never do.”

In the case of addiction, the global perspective reveals that using drugs is always a losing strategy when considered in the aggregate and over the long term: the equilibrium pattern or optimization from a global choice perspective is complete abstinence. Although a person who takes his pleasure one day at a time will use drugs compulsively, a person who thinks globally will never use drugs, even though drugs provide more satisfaction on a day to day basis than alternatives. The key to understanding this paradox is that drug use undermines future benefits both from taking drugs and from refraining from drugs. The global value declines relentlessly with each drug day, so that the positive gains accumulated using drugs over this period can never compensate for the deterioration in the quality of non-drug days. The corrosive effect of drugs on non-drug days means that it is never worthwhile to take drugs even once.

B. Local vs. global choice: marriage and reproduction

This difference between local and global decisionmaking is critical to the observation that choices that maximize individuals payoffs in the short term – and thus are “rational” from a myopic perspective – can result in a decline in welfare when repetitively pursued over time, and thus can be regarded as dysfunctional overall. As Gene Heyman observes, there are many choice sets that exemplify this pattern. All are characterized by a typical “dynamic relationship between choice and changes in value.”⁵⁹

⁵⁸ Heyman at 127.

⁵⁹ *Id.* at 119; see also *id.* At *Id.* at 116-124. Indeed, the pattern generated by different methods of calculating costs and benefits was first described by Herrnstein and his colleagues in the context of deciding which of two restaurants (Chinese or Italian) to visit on successive nights. In that example, as with drug use, the subjective value of each choice depends on the pattern of choices that precedes it. And the gains from a strategy pursued over time is reflected in a global perspective, which takes the sequence of prior choices into account. In the restaurant example, the relative value of Chinese food versus Italian food changes over time as a function of how often each option has previously been chosen – specifically, the value of Chinese food declines and the pleasure of Italian food increases as more Chinese meals are eaten, and vice-

A similar dynamic applies by analogy to decisions about personal and sexual behavior. Because observed patterns of childbearing, marriage, and divorce are the product of myriad choices people make over their lives, decisions regarding family formation and reproduction are prime candidates for analysis as the product of alternative modes of rational decisionmaking. Important similarities between drug addiction and intimate behaviors speak to the potential relevance of this model. First, starting about 50 years ago, a significant dispersion emerged in behaviors related both to drug use and reproductive behavior. For drugs, some people reacted to the greater availability of and tolerance for drugs by engaging in compulsive drug use or becoming addicted, whereas others, despite some experimentation, kept their drug use within bounds. Likewise, for sexual and reproductive conduct, some people took advantage of looser mores in some ways (for example, by engaging in premarital sex) while continuing to adhere to traditional patterns of family life (by getting and staying married), whereas others rejected past practices in all respects. In both cases, patterns of response were not evenly distributed throughout the population.

Second, in both arenas, significant numbers of people routinely and repeatedly appear to engage in “irrational,” self-defeating, or maladaptive behaviors. Their decisions often appear contrary to their own best interests and harmful to family and loved ones. In addition, there exists a disjunction between professed ideals and behavior. Persons from groups with low marriage rates and fragile partnerships often express reverence for traditional relationships and purport to hold marriage in high regard. And they aspire to marriage for themselves.⁶⁰

versa. A strategy informed only by considering the nightly relative dining pleasure generates a different pattern of selection than a “market-basket” approach that asks which sequence of dining generates the most dining pleasure overall. See also R.J. Herrnstein, *Rational Choice Theory: Necessary but not Sufficient*, 45 *American Psychologist* 356-367 (March 1990) at 360 (developing a parallel dynamic example of deciding between using two types of tennis shots over the course of a tennis game).

⁶⁰ Ethnographers report on repeated affirmations by unmarried mothers and fathers of the importance, desirability, and value of marriage and an expressed aversion to divorce. See, e.g.,

Although the evidence is sketchy and mainly anecdotal, poor women – and men – frequently say they desire to marry “some day.”⁶¹ Nonetheless, significant and growing numbers fail to do so.

The combination of vaunting goals and the failure to achieve them is often cited as evidence that attitudes towards marriage do not differ significantly across social groups. As discussed already, social scientists point to economic barriers and resource-based impediments as the primary causes of disparate marriage rates. On this view, adverse circumstances, not variations in values, account for the gap between stated objectives and their achievement. In fact, however, the observed disjunction invites comparison with addiction. Like the desire to be drug free, the desire to achieve a stable and enduring marriage often fails to translate into the steps needed to reach that goal. Although the poor and less educated claim to venerate

e.g., Edin and Reed, “Why Don’t They Just Get Married? Barriers to Marriage among the Disadvantaged,” 15 *The Future of Children* (Fall 2005); Renata Forste, “Maybe Someday: Marriage and Cohabitation among Low-Income Fathers,” in L. Kowaleski-Jones and N. Wolfinger, eds., *Fragile Families and the Marriage Agenda* (Springer 2006) 189-209. Some commentators believe that less educated persons are especially driven by a fear of divorce, with the high failure rate of marriages within this group fueling a greater reluctance to enter into marriage in the first place. See, e.g., Edin and Reed, “Why Don’t They Just Get Married? Barriers to Marriage among the Disadvantaged,” 15 *The Future of Children* (Fall 2005) at 129 (“Policymakers must realize that one reason why poor men and women may hold the economic and relationship bar to marriage so high is that they are strongly averse to divorce and are convinced that divorce makes a mockery of an institution they revere.”)

⁶¹ See Edin and Reed, *supra*; Renata Forste, *supra*. In fact, the evidence suggests a more complex picture. As Andrew Cherlin observes, “women in low-income neighborhoods . . . don’t think having children early will hurt their chances of marrying later and don’t think it’s embarrassing.” Moreover, almost half the women Cherlin surveyed agreed that “it is not important for a woman to get married,” a statement that the author observes represents a “cultural sea change since the mid-twentieth century.” Andrew Cherlin, *The Marriage-Go-Round*, at 166. For men, the ethnographic picture is similarly mixed, with some working class men claiming to aspire to marriage, while others, especially in disadvantaged, inner city neighborhoods, expressing reluctance to commit to monogamy and a macho desire to “play the field.” See, e.g., Renata Forste, “Maybe Someday: Marriage and Cohabitation among Low-Income Fathers,” in L. Kowaleski-Jones and N. Wolfinger, eds., *Fragile Families and the Marriage Agenda* (Springer 2006) 189-209. See also, e.g., Elijah Anderson, *Code of the Street: Decency, Violence, and the Moral Life of the Inner City*; Orlando Patterson, *Rituals of Blood: Consequences of Slavery in Two American Centuries*.

traditional family life, these ideals are abstract.⁶² The connection between intentions and the conduct that makes good on them will not necessarily be obvious even to persons who sincerely embrace conventional objectives. Lofty sentiments need not translate into the more particularized perceptions, inclinations, and actions that help sustain long-term relationships. Because goals may prove otiose absent the daily habits of thought and action needed to execute them, persons who venerate marriage will not necessarily appreciate how their own decisions can frustrate their objectives. They may not see how to get from where they are to where they wish to be.

The analysis proposed here helps address this dissonance and the puzzle of family collapse. The contention here is that the patterns of marital and reproductive behavior observed today reflect a disparity in the propensity of individuals from different sociodemographic groups to adopt local or global methods of decisionmaking in the conduct of their intimate lives. The decisions that people make in this sphere routinely confront them with the option of adopting a myopic, or “local” perspective involving a short term assessment of costs and benefits, or a “global” framework for evaluating choices more broadly in light of an overall life plan. The dynamic described below demonstrates how these two different modes of choice can generate starkly disparate in patterns of family formation and reproduction, ranging from high rates of marriage, marital longevity, and traditional two-parent families to seemingly “dysfunctional” patterns of unstable, short-lived, and often simultaneous liaisons, single parenthood, and fatherless families.

In trying to develop an explanation for observed behaviors, the analysis below posits two stylized scenarios that face individuals seeking to form and maintain intimate relationships. In both, an individual is assumed to embark on an initial relationship with a person of the opposite sex. The person then encounters an opportunity to cheat on that relationship by forming another “illicit” liaison. In the first (the simultaneous relationship scenario), the person will decide

⁶² See note – supra.

whether and how to carry on both relationships simultaneously. In the second (the switching scenario), he (or she) will decide whether and when to abandon the first relationship and form an alternative relationship with the new partner.

a. Simultaneous partners: the decision to be faithful or unfaithful

The model starts with an exclusive sexual relationship. This relationship may have recently formed or may have endured for some fixed period. This initial partnership is marked by mutual attraction and is fundamentally satisfying to both parties. The relationship may increase in value for both partners as trust and intimacy builds, or it may fluctuate over time.⁶³

The simultaneous partnership model posits a 30-day period in the life of this initial relationship. Whether newly minted or of longer duration, the relationship reaches the point where it offers each partner a designated daily benefit. As depicted on Table 2, the partners begin the relevant period with 28 units each of “relationship capital,” or value to each. (For simplicity, it is assumed that each partner enjoys the same payoff for each day. Although many relationships will deviate from this premise, it is not essential to the model and can be varied in further refinements, as noted below). At the beginning of the period in Table 2, however, one partner (or the other) confronts the option to “defect” from the relationship by being sexually unfaithful or embarking on an affair. For simplicity, the chart looks at the choices facing one of the partners over a 30-day period. Each day within the period, the potentially unfaithful partner must decide whether to succumb to the temptation of the illicit liaison on that day. Table 2 reveals a

hypothetical pattern of payoffs that guides the partner’s choices over the course of a 30-day period.

Table 2 lists possible combinations of faithful and unfaithful days over a 30 day period.

⁶³ For example, after the first thrill and an idyllic period, the relationship may lose some value as partners work out areas of conflict or tension. It should also be noted that this version of the model does not rest on the assumption that sexual exclusivity *enhances* relationship quality over time, although that may often be true.

The choice to be faithful (F-day) or unfaithful (un-F day) on any given day yields a net benefit or payoff, reflecting the immediate value of each option as listed in the third and fourth columns, respectively, of Table 2. This schedule of benefits from each choice over the 30-day period is graphed in Figure 2. The schedule has two key features. First, on a day by day basis, being unfaithful always promises more benefits than remaining faithful. The assigned values reveal that the prospect of engaging in an illicit sexual encounter on any particular day is always more attractive than the alternative: the initial episode of infidelity yields 30 units of benefit for the defecting partner, which exceeds that day's payoff of 28 units from remaining faithful, and so on for the possible permutations over the 30 day period. A second key element of the schedule is that the value of each choice for each day is dynamically related to the partner's prior conduct – that is, the number of times within the period that the partner has already chosen to be unfaithful. To paraphrase Gene Heyman, each daily decision “reflects the dynamic relationships between choice and changes in value.”⁶⁴ (In modeling this dynamic, it is assumed, as with the drug example, that the actual sequence of faithful and unfaithful days within the period does not matter – all that matters is the frequency of each. Thus, for simplicity, the table represents the combination of x days of infidelity and (30-x) days of fidelity as an initial sequence of x days followed by the choice whether to continue that sequence, or not). In keeping with the parallel dynamic of addiction, the yield from a day of fidelity, or a day of infidelity, declines as the decision to be unfaithful is made more frequently and the total numbers of episodes of infidelity within the pertinent period increase.

These features of the payoff scheme generate a situation in which how a person will “rationally” choose among available options depends on the framework for choice. As with the drug example, the course of action will vary with whether the decision-maker adopts a local or global perspective. As an initial matter, the affair is desirable: the extra-curricular love interest is more attractive than the initial partner. Indeed, that is the case on each and every day. Thus,

⁶⁴ See Heyman at 119.

on a day-to-day basis, embarking on this extra-marital adventure, and continuing it, is unquestionably the strategy of choice. It is obvious that a “local” perspective – which assesses the relative payoffs from the options day by day – dictates a “rational” decision to defect from the relationship and indulge in an episode of infidelity. Indeed, on each day, the choice is clear: The value of being unfaithful exceeds the value of maintaining exclusivity, and the payoff from the affair dominates the payoff from fidelity. As with the drug use example, “[i]n local choice, choosing the better option means choosing the item that currently has the higher value.”⁶⁵ On the fifth day of the sequence, for example, the value of an “unfaithful” day is 28, and of a faithful day is 25.5, so being unfaithful is better. Looking only at the payoff for that day, a rational “local” decision-maker will elect to continue the liaison. The same is true for every day. Thus, the “equilibrium” for a local choice perspective is to maintain the illicit relationship and cheat on the spouse continuously.

Viewed from a global perspective, however, the choice set is radically different. As Table 2 and Figure 2 reveal, the “global” payoff – or total value to the choosing partner over a 30-day stretch – declines relentlessly as the number of illicit episodes increases. Thus, a pattern of four days of infidelity and 26 faithful days out of 30 yields a total payoff to the defecting partner of 788 units, or an average of 26.3 per day. In contrast, consistent fidelity over this period yields 840 total units of value, with a daily average of 28. Maintaining the secondary (or illicit) liaison over the entire period generates a total benefit (listed at the bottom of the table) of only 420 units, or an average of 14 per day, which is half the yield from consistent fidelity (listed at the top). Indeed, as with the drug example, complete “abstinence” – or refraining from extra-curricular involvements altogether – is the globally rational strategy of choice. From this perspective, the watchword is “Just say no.”

The assumptions behind this model help explain what at first appears to be a counterintuitive result: that it is better to stay the course than give in to temptation. This is

⁶⁵ Heyman, at 119.

especially jarring in light of the manifest attractions of the illicit dalliance. Indeed, by definition, the extracurricular relationship has a higher payoff each day than the primary relationship – else the cheating partner would not be tempted to stray in the first place. And, anyway, aren't two women better than one? These intuitions only carry weight in the short term, however.

Assessing the payoff for the entire time frame yields a contrary result.

As with drug use, the contrast between local decisionmaking and global decisionmaking in intimate relationships could not be more stark. One says “Do it every day.” The other counsels “Never do.” What explains the paradox? The result depends on the assumption that cheating will ordinarily have a negative effect on the value of the primary relationship: by hypothesis, each episode of infidelity erodes the quality of the first partnership. As the episodes continue, the erosion will at first be gradual, but then may proceed at an accelerating pace as growing complications strain the bond. What complications might result? The betrayed partner will likely suffer from the distracted partner's neglect or sense that something is amiss. If an affair is suspected or revealed (and because clandestine relationships are hard to maintain, most likely it will eventually out), there will be jealousy, anger and recriminations, or even open hostility. In addition, such liaisons may – and in some quarters routinely do -- result in pregnancy and the birth of one or more extra-marital children.⁶⁶ These developments can seriously undermine the quality and emotional value of the initial relationship. The model assumes that these effects are incremental and build over time.

But what of the value of the illicit relationship? The model rests on the premise that cheating offers a compelling temptation: in the short term, the value of taking a lover exceeds the benefits of remaining faithful. But the satisfactions of an illicit relationship are also dynamic

⁶⁶ See, e.g., Mary Sinkewicz and Irwin Garfinkel, Unwed fathers' ability to pay child support: new estimates accounting for multiple partner fertility, 46 *Demography* (May 2009) (finding in a large urban cohort that, for nearly 60% of unmarried couples with a new baby, one or both of the parents also had a child by a previous partner.) See also Andrew Cherlin, *The Marriage-go-round*, at 95; and research cited in Amy Wax, *Engines of Inequality*, 41 *Family Law Quarterly* at ___.

over time, and depend on the previous pattern of conduct. The schedule in table 2 rests on a prediction that the payoffs from cheating will also gradually slide. Why assume this? A secondary love interest may be fun and sexually compelling, and can offer novelty, companionship, and enjoyment. But, in most cases, these novel pleasures will either gradually decline or will be overbalanced by the downside costs. The need to maintain secrecy and the fear of the entanglement becoming known may start to chafe and take their toll. If the primary bond is simultaneously maintained (which this example assumes), it will be difficult for the love interest to develop into a fully satisfying, “serious” monogamous relationship. There will be little compensatory “upside” in deepening emotional ties, uninterrupted time together, and shared activities and projects. Also, the lover may put increasing pressure on the unfaithful partner to abandon his or her primary relationship or, at the very least, to pay less attention to the other partner. All these vexations can undermine the benefits from an illicit affair. To be sure, not all secondary love interests will follow this pattern. However, the evidence – which reveals the fragility and short-lived nature of many of the liaisons within some sociodemographic groups and the tensions caused by “cheating” – suggests that a significant number do.⁶⁷

In sum, the decline in the value of the primary relationship, combined with the stresses on the secondary liaison, creates a situation in which the global value of infidelity over the entire 30-day period is always less than remaining consistently faithful. The model assumes that each additional day of infidelity so undermines the value of the primary relationship for the cheating partner that it is never worth cheating on that relationship even once. The upside value of the

⁶⁷ On the point that some liaisons do not follow this model, see discussion *infra*. As for infidelity with multiple partners, these relationships represent variations on a theme, with the strategy assumed to follow the same basic template as a single affair, or more so: the payoff from each liaison begins as relatively high, but eventually starts to erode as it encroaches on existing relationships. Simultaneous relationships can be expected to have smaller absolute payoffs in the short and long term, due to diminishing returns, greater complications, and the relative paucity of time and attention. As for repetitive serial monogamy, an alternative model of failed relationships that focuses on episodic switching rather than simultaneous liaisons is set out below. See *infra*.

illicit liaison – which also declines over time in this example – cannot compensate for this deterioration in the value of the initial partnership.

It is notable that the optimality of the global strategy does not depend on never encountering an individual who is more attractive than one's current partner, nor does it require that the current relationship be more desirable than any rival opportunity that might appear on the scene. That the superiority of fidelity is not a matter of selecting the perfect partner is fortunate, or else few people would marry or remain married! Rather, success depends on adopting a particular framework for decisionmaking: thinking about one's life as a whole – that is, considering consequences overall and in the longer term -- rather than focusing more narrowly on immediate benefits. Nonetheless, the reality is that sexual temptation is everywhere. The opportunity to choose between relatively desirable options does routinely confront people from all sociodemographic groups who must navigate the world of interpersonal relations. None can avoid asking the question: why stick with the present partner if something better comes along? Local thinking provides no good reason to stay the course. Rather, local choice dictates that the “rational” choice is to cheat.

In contrast, global choice provides a different answer. The common thread that ties together addiction and personal relationships is the corrosive effect of the immediately gratifying choice on the alternatives to that choice. It is critical to the explanatory power of this model, and its ability to account for observed demographic patterns, that the relentless decline in the quality of the primary relationship will not only reduce the total benefits of engaging in this strategy, but will in many cases cause the primary relationship's demise. At some point, the cheating encouraged by local choice will so erode the benefits of the initial partnership to one or both participants that it will no longer be worthwhile to stay together. The relationship will break down and the partners will go their separate ways. That result does not necessarily follow simply from the schedule of payoffs depicted. Those payoffs do not in themselves reveal the lower limit on what either party will tolerate, or when calling it quits will become the preferred

outcome.⁶⁸ It does predict, however, that local choice will interfere with marriage primarily by destabilizing relationships and hastening their pre-marital demise, or fostering the premature break-up of marriages that do occur by increasing the incidence of divorce.

In sum, the assumptions of this model operate to create the context in which individuals confront the ongoing choice whether to maintain an exclusive relationship or to give in to the temptation to be unfaithful. The contrast between local and global choice reveals that the “rational” strategy depends on the frame of reference. For those who take the global view, a relationship that looks attractive and compelling in the short run (and continues to be so) may prove unwise overall. In the end, the decision to be unfaithful will often make the decision-maker worse off, and the best strategy is to eschew this choice altogether. The global value declines relentlessly because the thrill of the unfaithful episodes can never compensate for the deterioration of the primary relationship. In contrast, assuming that the primary relationship is fundamentally sound, global value is maximized by sticking with the initial partner and staying the course.

Indeed, it can be anticipated that global thinking will often encourage individuals to engage in behaviors that further enhance the payoffs from a global framework. Partners who apprehend and appreciate the benefits of successful long-term relationships may shape their behavior to realize these advantages. They may, for example, try harder to resolve differences or achieve compromise. These behavioral effects may compound the value of long-term commitments. The point is, however, that these benefits are only available if the participants adopt a global perspective. It is only on this view that resisting temptation becomes a rational strategy. And it is only if temptation is resisted that the long term benefits are forthcoming.

⁶⁸ See Amy L. Wax, *Bargaining in the Shadow of the Market*, Va. L. Rev. (1998). Indeed, the model is incomplete in not supplying the value of the payoffs to the betrayed partner, which will of course affect the relationship’s dynamics. The model implicitly indulges the conceit that the value for each partner is similar and will vary in the same way depending on one partner’s choices. Even if the payoffs do not match precisely, it is probably safe to assume that they are highly interdependent. See discussion *infra*.

Is the analysis here plausible in light of what we know about the dynamics of ordinary opposite-sex relationships?⁶⁹ Although the model builds in some simplifying assumptions that may not be universally valid,⁷⁰ it nonetheless comports with common sense and predicts what we see. A critical assumption is that infidelity undermines existing relationships. In fact free love has not yet proved workable and non-exclusive sexual liaisons tend to be unstable. Despite a dramatic evolution of sexual mores over the past 50 years, norms regarding sexual fidelity have remained remarkably durable over time. Sexual exclusivity remains a central aspect of serious sexual relationships, with most people expecting and demanding it as a condition of romantic partnership.⁷¹ In light of this, fidelity or a pledge of fidelity is probably a prerequisite to marriage and critical to marital longevity. These goals are seriously compromised by a myopic, local perspective on relationships.

In contrast to the posited corrosive effects of infidelity on the primary relationship, the assumption that prolonged infidelity will erode the value of the illicit relationship may strike some as more dubious. The example assumes that the secondary relationship will decline in value over time, in part because of a lover's escalating demands or the limitations inherent in carrying on two relationships. But this may not always be the case. The value of the alternative relationship need not decline, and may even improve somewhat with time. One or both lovers may not be seeking a deep and intense emotional bond, and the absence of such entanglements may be viewed as a positive benefit.

Alternatively, an affair may proceed from grand passion and flower into a durable long-

⁶⁹ This paper restricts consideration to opposite sex relationships, and does not take on the question of how homosexual partnerships might or might not differ.

⁷⁰ See discussion *infra* and *supra*.

⁷¹ See, e.g., See, e.g., Judith Treas and Deirdre Giesen, "Sexual Infidelity among Married and Cohabiting Americans," 62 *J. Of Marriage and the Family* (Feb. 2000) 48-60, 48 ("Virtually all American couples, married or cohabiting, expect sexual exclusivity of one another . . . Couples' agreements about sexual exclusivity are a contractual condition of their unions.").

term partnership, superior in every way to the one it replaced. Or lovers may invest deeply in their relationship or fall genuinely in love, which greatly enhances its value. In those cases, the liaison may be worth embarking upon and continuing regardless of whether the primary relationship deteriorates to the point of a break up. That is, even a global perspective would appear to counsel divorce and remarriage. Indeed, these scenarios generate a not unfamiliar phenomenon: the one-time serial monogamist, who forsakes a poor match for a better one. By hypothesis, however, this variation does not issue in an endless series of new entanglements and break-ups. The switch will presumably be a one-off as the new relationship now takes on the characteristics of the primary partnership in our example: global decisionmaking should by rights inure it to the routine temptations the inevitably arise. Thus, although global thinkers are not wholly immune from lapses or failed relationships, those failures will not necessarily repeat themselves or become a way of life. Moreover, the model assumes that most affairs will be the product of local thinking, which will not produce stability in the long run. Thus affairs that produce stable second marriage will be atypical.

As noted, the model also rests on the assumption that infidelity ordinarily erodes the value of the cheated-on relationship to the point of collapse. But the prediction that the initial partnership will inevitably suffer need not always be valid. It is possible to imagine a liaison with a very different structure of payoffs – one that would stabilize in a long-running extra-marital affair. The primary relationship may not deteriorate much or at all, because the affair remains a secret, or the betrayed spouse accepts it. Alternatively, the relationship deteriorates, but not to the “breaking point,” which allows the unfaithful spouse to continue cheating without destroying the initial partnership. The secondary relationship may improve in value enough, and/or the primary relationship suffer so little erosion, as to make some degree of infidelity optimal even on a global calculus. In all these cases, the pattern of payoffs, or the consequences for the initial relationship, will clearly differ from those depicted in our example. But, once again, it is assumed that such a scenario will be exceptional.

In sum, the assumptions of this stylized model will not apply in all cases, and the predicted outcomes admit of exceptions. Not all “local choice” scenarios will issue in the repeated failure to form or maintain stable monogamous relationships, nor will all two-timing prove undesirable or destabilizing from a global choice perspective. The prediction here is not all of nothing, but rather more or less. Local thinking will tend to lead to relatively high levels of relationship instability, and a global approach will, on balance, generate significantly more stability.

Indeed, further examples below show, these predictions will hold good within a fairly wide range of conditions, with considerable variations on the theme possible. For example, a decline in the value of the secondary relationship is not essential. As Tables 3 & 4, and Figures 3 & 4 illustrate, even if the secondary relationship plateaus or improves over the course of a liaison, avoiding illicit involvements can still be globally optimal in many cases, so long as the value of the primary relationship is significantly undermined by infidelity. In Figure 3 (which depicts the values in Table 3), the secondary relationship holds its value better, declining from 30 daily units of satisfaction to 18. As in Figure 2, the illicit partner remains comparatively more attractive than the initial partner as the relationship continues, but the gulf is even larger than for Figure 2. Nonetheless, the global equilibrium remains the same. Likewise, in Figure 4 (corresponding to the values in Table 4), the illicit relationship stabilizes and then improves as it proceeds, with a final daily payoff of 21 units. Once again, the global equilibrium is unchanged. Indeed, on a wide range of initial assumptions, the global point of view yields the same lesson: don’t do it. That is because the benefits of the illicit relationship will fail to compensate for its corrosive effect on the primary relationship, and thus the global payoff from infidelity will fall short of the equilibrium value of fidelity. Global thinkers will eschew infidelity over a substantial range of conditions.

b. Switching partners: the decision to stay or go

The scenarios examined so far posit an initial relationship of variable duration – either

one that has recently formed or that has been ongoing for some time. In response to the possibility of sexual infidelity, one partner confronts the choice of whether to cheat on the relationship or not. Either the partner remains faithful, or he embarks on two simultaneous relationships. But carrying on two relationships at once is not the only possible response in this situation. Instead of two-timing the initial partner, a person could instead decide to abandon that partner for another. In playing out the options represented by this scenario, the choice is between sticking with the original partner, or switching to a new partner. Which of these strategies represents the “rational” strategy in turn implicates the contrast between local and global choice.

In this scenario, an individual is assumed to meet an attractive person and start a relationship. After some period of cultivating the relationship, the person encounters another potential partner who seems more attractive at the moment. He or she must then make a decision whether to “switch” – that is, abandon his initial partner and start a new relationship – or stick with his initial partner. Will the individual succumb to the new person’s charms and abandon the first partner?

A possible payoff structure informing this choice is reflected in the Tables 5 & 6. Table 5 (and Figure 5) depicts stylized daily payoffs from a relationship over the first half of a 30-day period. The payoff at day 1 is 26. The relationship has its ups and down as the partners get to know each other, but it eventually improves and stabilizes at a daily (local) value of 38, or total (global) relationship-specific payoff for the entire period of 459, on day 15. Now consider Table 6 (and Figure 6). Assume another potential partner comes along a few days after the commencement of the first relationship. That partner seems more attractive, as reflected in an initial (local) value of 27. That value exceeds the coincident value of the relationship with the first partner (25). A person who “thinks locally” will jump ship and switch to the new partner, because the payoff that day is greater than from the original partner. But a person who is thinking globally about present and future payoffs during entire period will make a different

decision. Having already invested in the first relationship and anticipating that its value will increase and eventually stabilize (but only if the relationship remains exclusive), the global thinker will stay the course. Comparisons of the schedules in Tables 5 & 6 (and Figures 5, 6, and 6A) illustrate that someone who remains faithful can expect a greater overall, and thus average, payoff for the entire 15 day period by staying with the first partner rather than switching to the second. If a person stays with the initial relationship for 15 days, he can expect to achieve a stable partnership value of 38, with a total payoff from this period of 459 and an average daily payoff of 30.6. But if he embarks on a new relationship four days into this period, and that liaison follows the usual stylized pattern (initially wavering as partners work out the kinks, then stabilizing and starting to grow in value), the partnership will achieve a total daily value of 34 at the end of the initial 15-day period, with a total payoff during that period of 423, averaging 28.2 units per day. That is significantly less than the payoffs from the initial partnership if continued for the entire period. Thus, even assuming the alternative partner is consistently more attractive locally than the person she replaces, a global calculus reveals that staying with the first partner is the value-maximizing strategy. See Figures 6 and 6A (depicting the global average payoff from switching partners vs. staying with partner #1)

This exercise assesses the global value of switching partners midstream from the start of the first relationship. But why not reset the clock again upon meeting a new partner, on the assumption that the relationship with the more attractive person will follow a trajectory similar to that anticipated with the first? Indeed, since the new relationship commences from a better starting point, won't it accumulate more value over a similar interval? As Table 7 and Figure 7 illustrate, projecting ahead 15 days from the initiation of the second relationship could be expected to generate more benefits than a similar period for the first relationship, with the same trend presumably continuing for 30 days and beyond. Thus, the decision to switch partners would appear to make sense not only on a local choice frame, but also from a global point of view.

This appearance is misleading. First, starting from square one fails to take account of the investments made in the first relationship. Starting the talley over from the beginning of each new relationship fails to capture the lost value of the partnerships (or partnerships) left behind. But the more serious problem with the “new day” scenario is that it is inherently unstable. On this view, a rational actor will abandon the second relationship immediately if someone more attractive comes along who promises immediate (and, on the “new day” assumption, long-term) payoffs greater than the first partnership. And such prospects can be expected to appear with regularity. The arrival on the scene of each prospect will cause the protagonist to jump ship, generating a series of scenarios like the one described above. But this creates an infinite regress: because each relationship is vulnerable to the same calculus, each will not be the last. A pattern of chronic instability is the result. (It is interesting to note, however, that resisting temptation and staying with the original partner for a longer period would, as often as not, reduce the incentive to switch, as that partner’s local value will eventually exceed the payoff from the hypothetical new partner. But local thinking all but obviates such a development.)

This stylized example assumes that many opposite sex relationships will grow more valuable with time, and that rewards from exclusivity will often take time to accrue. (In contrast the “two-timing” model in the previous section does not rest on the premise that long-term partnerships steadily improve: it only assumes that infidelity will undermine a competing relationship.) Both examples assume, however, that the virtues of fidelity are hard for some to apprehend, and temptation is everywhere. By switching partners, a person never realizes the benefits of an enduring bond nor reaps the long-term rewards of stable family life. Of course, as already noted, not all relationships follow this trajectory and not all deliver rewards in the long term. Some are beyond salvage, turn irretrievably sour, or lose their value altogether. There may sometimes be good reasons, on any “rational” view, to leave a partner or abandon one relationship for another. The premise here, however, is that those cases are the exception rather than the rule. Assuming a reasonably successful match, the functional default for global thinkers

is staying with what you have. The point is that local thinking can disrupt relationships that, even if far from ideal, might prove viable in the long term and ultimately yield substantial rewards.

C. Explaining changes in family structure: Does the model fit?

A difference in the propensity to make local or global choices in the personal sphere goes a long way towards accounting for the dispersion in demographic patterns. As noted, significant disparities have emerged by race and social class in patterns of family formation and stability. Transient or short-lived liaisons, sometimes involving periods of cohabitation but infrequently resulting in marriage, are rapidly becoming the norm in for less educated cohorts and already dominate in the black community. Out-of-wedlock birth rates are significantly more common in these demographic groups, and their marriage break up more often. In contrast, persons with more education, and especially white college graduates, still marry at very high rates. Their risk of divorce has declined significantly since the 1980s and they rarely have children outside of marriage.

By leading people to take advantage of new and seemingly better opportunities, local choice generates a pattern of infidelity, short-lived liaisons, and fragile partnerships. These in turn interfere with the development of enduring long term bonds and undermine the prospects for stable marriages. The expected results would include lower marriage rates, a rise in short-term cohabitation, more multiple partner fertility, higher numbers of extra-marital births, and children growing up in fatherless families. And these patterns are in fact seen more often in some demographic groups than in others.

In contrast, global thinking can be expected to lead to less cheating on current relationships – or a greater propensity to exercise care and discretion in doing so – so as not to jeopardize existing partnerships. These tendencies can be expected to foster successful long-term relationships, stable marriages, traditional nuclear families, and low rates of multi-partner fertility and extra-marital births. These patterns are in fact observed among more educated and

affluent members of the population.

One potential limitation of this model is that, by contrasting local and global decisionmaking about sexual conduct, it focuses on only one aspect of behavior. But sexual infidelity is not the only factor that determines whether a relationship endures. A range of behaviors surely come into play. Do habits of thought and action about other aspects of personal relationships vary by sociodemographic group?

The ethnographic work of Kathryn Edin and Maria Kefalas is revealing in this regard. As already noted,⁷² the single mothers the authors interview complain most consistently about their male partners' infidelity, which often leads to the birth of children outside the relationship. But infidelity is only one factor impeding the formation of lasting unions. The women also describe a range of other shortcomings, including poor impulse control, violence, financial profligacy, drug use, and poor work effort. These women's observations strongly suggest that their failure to marry, despite a professed desire to do so, is a function of their men's anti-social behavior – what Edin and Kefalas dub the “crummy boyfriend” problem.

This study, and other portraits of low income families,⁷³ suggest that unstable relationships in disadvantaged populations are linked to anti-social behaviors in many dimensions. It can be argued that what makes boyfriends crummy is a tendency to think locally. The decision to engage in many of the complained-of behaviors would appear to involve a tradeoff between satisfying immediate desires and securing long-term benefits. The choices may minimize costs in the short run, but often wreak destruction in the long run.

Likewise, many of the woman in this study make decisions that undermine their ability to maintain long-term relationships with men, and otherwise compromise their economic position. Although having a child out of wedlock yields immediate benefits, it erodes future

⁷² See discussion at — *supra*.

⁷³ See, e.g., Adrian Nicole LeBlanc, *Random Family: Love, Drugs, Trouble and Coming of Age in the Bronx*.

marriageability and creates obstacles to harmonious relationships with men who are not the child's father. Becoming a single parent also seriously interferes with work and education, and saddles a woman with onerous responsibilities that are difficult to bear alone. One key behavior that affects reproductive patterns is the effective use of contraception. Although the failure to use birth control may not directly undermine relationship stability, conscientious contraception is critical to reducing out of wedlock childbearing. The evidence suggests that different patterns of contraceptive use are a critical component of observed class differentials in extra-marital childbearing. Birth control use is one of a cluster of behaviors that can be subject to local or global patterns of choice. Because effective contraception requires anticipating the long-term costs of unprotected sex, groups that think globally can be expected to use it more effectively and conscientiously, and those that think locally less so. Nonetheless, group differences in effective contraception cannot be the whole story. It is still the case that most women want children and the vast majority of women will have children at some point in their reproductive lives. The key question is when and in what context those children will be born and raised. But that is a function of whether their mothers are married or unmarried, which in turn depends on the formation of stable and cohesive relationships. Where such relationships are in short supply, many more children will be born and grow up in fatherless families.

In sum, men and women in groups with low marriage rates are observed to adopt strategies that promise short term rewards rather than benefits that unfold slowly over time. Those strategies may also foreclose beneficial options down the road. In contrast, the traits that make men and women good marriage partners are most likely associated with the restraint and long-term planning that require a global perspective. This analysis suggests that the model of sexual choice proposed here is a good proxy for a broader array of behaviors conducive to enduring partnerships.

Another possible shortcoming of this model is that it focuses too narrowly on thinking styles. The behaviors that impede relationship stability appear to reflect dysfunctions in both

thought and action. Thinking globally is not enough. To be sure, adopting a global perspective is an important element. A person must be able to view life as a whole and project into the future. He must notice and assign value to future consequences. He must be able to anticipate the potential benefits from maintaining a long-term relationship, but also the eventual consequences of failing to do so. Specifically, he must somehow appreciate that the choice to cheat on an existing partner, although promising immediate pleasures, will progressively erode that relationship, and then factor this understanding into his calculations. But failure to adopt a global perspective is not purely a cognitive problem; one must also be able to act on these realizations. This requires the development of the habits of mind and heart that enable people to refrain from behaviors that interfere with long-term goals, and to pursue those that promote them. A person must possess the necessary abilities and inclinations, including the restraint and self-control to make good on their perceptions.

In sum, to get and stay married, a person must anticipate the long term rewards and consequences of personal relationships, resist short-term temptations, and guide behavior to realize those rewards. What determines whether someone succeeds in doing this? A host of factors surely come into play, affecting both cognition and conduct. Individual characteristics are doubtless important, with attributes like IQ, risk aversion, personal discount rate, intertemporal preferences, ability to defer gratification, conscientiousness, impulsiveness, self-control, and executive functioning, affecting the tendency to engage in global or local modes of decisionmaking.

Does this model take these attributes into account? One way to take account of personal discount rates is to vary the values individuals assign to remote as compared to immediate rewards. Because this framework does not assign distinct payoffs to different individuals or lower values for remote rewards, it does not directly incorporate individual discount rates. Nonetheless, the model takes this factor into account indirectly: the choice between local and global thinking reflects the ability and willingness to assign weight to distant payoffs in making

immediate decisions and to think of one's life as a whole. Hence, high discount rates can be expected to fuel local thinking, and low discount rates to facilitate global choice. Likewise with risk profiles: risk averse people will find it easier to think globally, whereas risk seekers are more likely to think locally.⁷⁴

D. Moral deregulation and local vs. global choice: the demise of “simple rules for simple people”

Although individual endowments and propensities are important, they cannot be the whole story. Despite exemplifying a range individual characteristics, most people behaved differently (and more uniformly) 50 years ago. Dramatic changes in marital and reproductive behavior over time suggest that other factors loom large. The contention here is that the evolution of social norms and the weakening of institutional structures over the past 50 years have changed the way people think about their conduct in the personal and sexual sphere. Although norm changes may in turn affect individual characteristics that influence choice (by, for example, shaping childrearing practices or other aspects of individual development), they are important in themselves and exert an independent influence.

In support of his assertion that social norms and personal values affect drug addiction and recovery, Heyman notes that drug use soared as the stigma attached to drugs declined in the 1960s. Nonetheless, patterns of addiction were not uniform. Whether Vietnam veterans who had used heroin in wartime continued to use drugs postwar was observed to vary with the dominant norms of the communities to which they returned. From his investigations, Gene Heyman concludes that the expectations created by prevailing social norms – including “ideas, values and attitudes” that “depend on social traditions”-- exert a powerful influence. Individuals who recover from addiction or decide to give up drugs repeatedly cite their desire to live up to role responsibilities and fulfill social expectations as critical to their decisions. They express a

⁷⁴ See discussion of empirical work on executive control, time discounting, and other attributes, *infra*.

sense of shame and self-disgust at falling short of dominant standards and point to their deep regret at disappointing those around them.⁷⁵ In sum, they rely on “socially transmitted proscriptions” that set limits on behavior, and on “social roles, ideals, and shared understandings that emphasize restraint.”⁷⁶

What lessons do these observations hold for encouraging the adoption of a global perspective on personal relationships? What conditions tend to foster the habits of restraint, compromise, and mutual problem solving that make for harmonious relationships, and enhance the prospects for stable marriage? The propensity to think globally about intimate relationships, and to act on those thoughts, may critically depend on what Kay Hymowitz calls “reproductive life scripts,” which prescribe guidelines for the most desirable course of behavior over a lifetime.⁷⁷ Where do such scripts come from? The high rates of marriage in past decades, when dominant mores channeled reproduction into that context, suggest an underappreciated role for embodying behavioral guidelines in traditional institutions. Indeed, the universal expectation of marriage would appear to operate as a heuristic on more than one level. Marriage sets out well-defined roles and embodies prevailing expectations. A strong marriage norm shapes the habits of mind necessary to live up to its prescriptions, while also reducing the need for individuals to perform the complicated calculations necessary to chart their own course. To be sure, the success of social mores in shaping behavior will vary depending on circumstances, individual characteristics, and group culture. Nonetheless, by replacing a sophisticated exercise with simple prudential rules, a strong expectation of marriage will make it easier – and easier than in a *laissez faire* environment – for individuals to muster the restraint necessary to act on long-term thinking. In short, the conventions and customs surrounding marriage are designed to bridge the

⁷⁵ Ibid.

⁷⁶ Heyman at 161-162

⁷⁷ Kay Hymowitz, *Marriage and Caste in America*, at 9, 29.

gap between aspirations and the mundane steps necessary to achieve them.

This analysis reveals why preserving a “marriage culture” is not just a matter of ideological commitment. Its most important effects are in encouraging the daily habits of thought and action that foster lasting relationships. Strong marriage norms help guide and shape decisions that lead to optimal choices. And the institutionalization of marriage may reinforce itself in other ways. Marriage influences child-rearing practices and provides a setting in which children grow up. There is evidence that the familiar hallmarks of effective socialization (such as restraint, moderation, emotional control, trustworthiness, persistence, and sobriety) are best developed when children live with their biological parents within stable marital homes.⁷⁸ These attributes, in turn, make it easier to think globally and maintain stable personal relationships. By strengthening the structure – the traditional nuclear family– that helps foster these attributes, marriage builds on itself. In addition, it may be easier for persons who have grown up in conventional families to reproduce them. Without exposure to successful long term relationships, thinking globally does not come naturally.

There is no doubt that the sexual revolution has weakened marriage. The prescriptive culture of marriage has gradually been supplanted by the rise of an individualism that invites people to make immediate tradeoffs and to look to personal desires to guide sexual and reproductive choice. Instead of “nudging” people towards the results favored by such a perspective, a norm of individualism leaves people to satisfy their own immediate preferences. In the absence of strong prescriptions, people faced with a menu of options from which they must choose engage in a personal calculus of choice. This leads some to the default of local choice.

Does the rise of individualism and the deinstitutionalization of marriage help explain observed sociodemographic patterns? One question is why well-educated cohorts – which tend to embrace the culturally dominant individualistic view of sexual mores – still marry and stay

⁷⁸ See Amy Wax, *Engines of Inequality*, *supra*.

married at relatively high rates. Why have their ideological commitments not translated into weaker or more transient relationships? Likewise, why has the sexual revolution had more pronounced – and destructive – effects on the less educated and minorities? In sum, the question remains as to why some segments of society still maintain stable and enduring relationships – the pattern that was more pervasive in the past – whereas others do not.

The analysis here suggests that these developments are best understood as the product of moral deregulation. The rise of individualism in the wake of sexual liberation and the weakening of the moral and institutional conventions that used to govern personal conduct before the 1960s have thrown people back on their own devices. These normative strictures that prevailed before this period were designed to guide most people to stable choices. More likely they functioned not so much by encouraging global thinking as such, but rather by obviating the need to engage in complicated calculations. They relieved people from having to think, or to think very much about how to conduct their personal or sexual lives. Thus, sexual norms enshrined a set of “simple rules for simple people” – a set of basic, transparent, and easy-to-follow precepts that could be understood by everyone.⁷⁹ By imposing uniform standards on everyone, strong norms of sexual conduct effectively obviated the need for individualized calculations in the sphere of family formation and sexual choice. All that was necessary was to follow the script, and the script was a simple one. In deciding how to conduct their personal, sexual, and reproductive life, people were confronted with authoritative expectations. To be sure, these expectations were enforced by a complex of formal and informal sanctions. The stigma attached to non-marriage, divorce, and out of wedlock childbearing were far greater 50 years ago than now, and deviation from expected behaviors was more costly. Some of those sanctions were concrete, but others were grounded in social disapproval. Deviations from expectations viewed as irresponsible, unacceptable, undesirable, socially destructive, and – well – deviant. In addition, many of these norms were internalized through inculcation, moral

⁷⁹ See, e.g., Richard Epstein, *Simple Rules for a Complex World*

education, and pervasive reinforcement. But the hypothesis here is that norms did not function solely through sanction or through internalized prescription backed by cultural authority. They also functioned as effective heuristics. Clear, easy to follow prescriptions relieved people of the need to make complex calculations. The decision to get married, for example, did not require foresight, accurate projection, complex calculations or self-control. It only required doing what was expected and rejecting alternatives. In the wake of the upheavals of the sexual revolution, however, there is now no script to follow. The result is a regime of every man for himself. The deregulation, or “disestablishment,” of traditional family forms⁸⁰ throws people back on their own devices. Confronted with a plethora of “acceptable” options, life plans, and “lifestyles,” people must determine their own course. They must now make their own choices, unguided by clear and authoritative expectations. So individuals will draw on their own inclinations and habits, or those that dominate within their group. Taking a global approach is one option, but local decisionmaking may be the path of least resistance.

The evidence suggests that, when it comes to personal relationships, the propensity to think globally or locally is not evenly distributed across the population. Rather there appear to be systematic differences in recourse to these strategies. Global choice seems to dominate in some sociodemographic groups, and local choice in others. What accounts for the discrepancies? One possibility is that more educated and advantaged individuals are by and large better equipped to do for themselves what strong institutional and normative expectations used to do for everyone. Because privileged cohorts are more likely to engage in global thinking, they will have a less volatile response to the moral deregulation of the sexual revolution.

⁸⁰ See Alice Ristroph and Melissa E. Murray, *Disestablishing the Family*, UC Berkeley Public Law Research Paper No. 1567867, forthcoming *Yale Law Journal* (2010). For exploration of the adverse consequences of the legal and social deregulation of sexual conduct and the family see, e.g., Brenda Almond, *The Fragmenting Family* (Oxford 2006); David L. Tubbs, *Freedom’s Orphans, Contemporary Liberalism and the Fate of American Children* (Princeton 2007); Jane Lewis, *The End of Marriage? Individualism and Intimate Relations*, (Edward Elgar 2001).

Affluence and education are now highly correlated. But obtaining an advanced education requires certain cognitive and personal attributes. The ability to think long term, to anticipate consequences, and to project complex scenarios are needed to succeed in school. Likewise, self-control and the ability to act on prudential insights are also valuable. Higher education both requires these capacities, and fosters them. Education, in turn, is an important ticket to well-paying jobs,⁸¹ which often draw on similar attributes. Although education helps cultivate these capacities, selection effects are also at work: more intelligent and better socialized people find it easier to think ahead and to exercise the restraint needed to succeed in multiple spheres of life, including the personal, educational, and professional. They are probably also more adept at compromise and mutual problem-solving, which are also essential for harmonious relationships. In sum, if left to self-regulate, better organized people can be expected more often to achieve more orderly intimate relationships and a better organized family life. It is therefore not surprising that well-educated whites and Asians disproportionately benefit from the educational route to affluence, and are also the most married groups in society today.

Family composition and marital behavior do not just differ by class, however. These patterns also dramatically differ by race. Disparities by race (as well as class) in sexual behavior and relationship stability have existed for some time, but have until recently been relatively small. The patterns have diverged more widely over the past fifty years. Income and schooling account for some of the disparity (as blacks tend to be poorer and less educated than their white and Asian counterparts), but not for most: even after controlling for these factors, racial and ethnic differences are substantial and continue to widen.⁸² One possibility is that blacks are more vulnerable to moral deregulation, and more likely to think locally about personal

⁸¹ See discussion, *supra*.

⁸² On marriage rates, see *supra*. On education completion, see, e.g., U.S. Dept. of Education, National Center for Education Statistics, *Digest of Education Statistics 2007*, and U.S. Census Bureau, *Current Population Survey, March 2007*

relationships. Background cultural norms no doubt play a role, with reactions to the rise of individualism and the loosening of sexual restrictions reflecting group attitudes and attributes that are poorly understood. The source of these observed differences, whether grounded in culture, or individual characteristics, warrants further investigation.⁸³

In short, this analysis suggests that the decline in the enforcement of a uniform code of sexual morality, both formal and informal, has enshrined individual choice as the dominant principle in intimate relations. The ethos of sexual liberation and autonomy, the celebration of individualism and self-determination, the virtual disappearance of collectively enforced stigma, the decline of strong norms of behavior, and the fading of an expectation of conformity to roles within established institutions, have all contributed to the demise of conventions that effectively compensated for many people's inability to make optimal choices. Although advanced education, and the personal endowments that enhance its advantages, still help the privileged manage these challenges, those who are less well endowed are also less able to self-regulate. "Natural" inequalities now dominate over the leveling influence of moral precepts designed to keep everyone's behavior in check. On this view, the sexual strictures that have eroded significantly in the past 50 years were highly paternalistic: they enforced a set of life-course decisions that many people were too weak to enforce for themselves. Whereas expectations as well as behavior used to be uniform across society, the dominant practices of more privileged cohorts now no longer "trickle down" to less well-off or vulnerable minority populations. Simple precepts – get married, stay faithful – have been supplanted by case by case judgments. Bright line rules have given way to a process of ad hoc, moral improvisation that is vulnerable to being hijacked by local thinking. It is not surprising that growing numbers of people are succumbing to this perspective.

Related cultural trends help fuel this development. Individualism promotes an ethos of non-judgmentalism, in which sexual life belongs to the realm of personal autonomy and

⁸³ See further discussion below.

discretion. This favors a laissez faire regime in which sexual conduct is a private matter that should not be judged by others and is none of anyone's business. Indeed, the evidence is overwhelming that sexual freedom – and sexual activity -- has increased throughout society over past decades. The taboo against premarital sex has disappeared almost entirely, with free-wheeling sexual activity for the unmarried commonplace throughout society, including on college campuses.⁸⁴ The data indicate, however, that the consequences of these patterns vary widely. Once college graduates arrive at the altar (and most do, albeit at older ages than in the past), sexual experimentation wanes. Declining divorce rates suggest that most people in this cohort settle down. And premarital relations almost never lead to out-of-wedlock childbearing in this group.

Despite their different lifestyle, however, elites appear hesitant to espouse a conventional code of conduct to the less privileged, perhaps because they are concerned to preserve their own sexual prerogatives and reluctant to endorse constraints that are not self-imposed.⁸⁵ The celebration of family diversity and the taboo surrounding candid discussions of racial and class differences in intimate conduct also discourage moral prescription or a searching inquiry into the cultural or personal sources of observed disparities. Finally, the well-educated and well-heeled may simply lack comprehension of the habits of mind that allow them to achieve family stability. They may be only dimly aware of why their relationships are more successful and sustained.

In the same vein, groups with more volatile family relations may not fully comprehend the causes and sources of their current situation. Indeed, the situation will be opaque because it

⁸⁴ See, e.g., England, Paula, Emily Fitzgibbons Shafer, and Alison C. K. Fogarty, Hooking up and forming romantic relationships on today's college campuses, in *The Gendered Society Reader*, 3rd ed., edited by Michael Kimmel and Amy Aronson (2008) 531-46.

⁸⁵ The stance of today's educated class recalls Sigmund Freud's famous assertion, in a letter to the eminent American neurologist James J. Putnam, that although he stood for a greater sexual freedom than bourgeois society thought proper, he himself had taken relatively little advantage of it. See Peter Gay, *Reading Freud: explorations and entertainments*, at 166 (Yale). Clearly elites today take advantage of sexual freedom, but only up to a point.

is complex. Local thinking will not be the only force that drives the segmentation of practices in reproduction and family life. As the incidence of non-marriage and single parent families within more vulnerable groups increases, group dynamics, such as tipping and contagion, may add to the effect of local thinking by accelerating the pace of these behaviors.⁸⁶ As these patterns become more dominant, they will in turn be considered more acceptable. Thus, the poor decisionmaking that will take over in the wake of moral deregulation will fuel a new set of norms. The resulting norm changes may further entrench these behaviors, making them more difficult to reverse.

An interesting recent paper serves as supplement to this theory by offering an economic perspective on emerging class differences in sexual mores.⁸⁷ In an attempt to explain the class gradient in out of wedlock childbearing, Jesus Fernandez-Villaverde and colleagues attempt to build on the “birth control shock” theory of Akerlof, et al,⁸⁸ which traces the rise in out of wedlock childbearing to norm shifts engendered by more effective contraception. These authors attribute widening class disparities to differential incentives for parental investment in the socialization of offspring towards norms of sexual restraint. Before effective methods of birth control became widely available in the 1960s, extra-marital sex posed a high risk of out of wedlock pregnancy. The costs of these births were borne by religious institutions, the government, and families. As a result, the government and the church invested heavily in supporting and enforcing norms of sexual continence. The authors posit that, in the wake of the contraceptive revolution, the risks of pregnancy for those targeted by norm enforcement – mainly women of childbearing age – were perceived as dramatically reduced. Policing of sexual

⁸⁶ On the dynamics of norm change see, e.g., Cass Sunstein, *Social Norms and Social Roles*, 96 *Columbia L. Review* 903 (1996).

⁸⁷ See Jesus Fernandez-Villaverde, Jeremy Greenwood, and Nezih Guner, “From Shame to Game in One Hundred years: An Economic Model of the Rise in Premarital Sex and its De-Stigmatization,” *Population Studies Center Working Paper Series*, 2010.

⁸⁸ See Akerlof, Yellin, and Katz, *supra*.

norms became more “expensive,” so investments in norm enforcement declined. Specifically, church practice and legal restrictions were liberalized, thus “privatizing” regulation to families. Paradoxically, however, and in keeping with the predictions of the Akerlof model, contraception encouraged sexual activity, which increased the number of out of wedlock births – a trend that has disproportionately affected the less affluent. The challenge is to explain this gradient. The authors posit that disparities in opportunity costs from extra-marital pregnancy differed by class, with the costs of premarital sex “lower for women stuck at the bottom of the social economic scale.” These differentials affected parental incentives to inculcate sexual restraint. Upper class children had more to lose, and so were more intensively socialized to avoid extra-marital pregnancy. Persons with fewer resources stood to sacrifice less, and so relaxed their enforcement.

This account is not without flaws. First, although the analysis purports to consider the economic costs of extra-marital pregnancy, including lower chances for upward mobility, it slights the fact that absolute losses may not be as important as effects on the margin. The marginal utility of forgone income for less well off women would seem to be greater than for the more privileged. This is especially so in light of the effect of out-of-wedlock children on a woman’s chance to marry, since marriage has the potential significantly to improve a woman’s economic position even for the less educated. Second, the authors also fail to address why rates of out of wedlock childbearing are so much higher for blacks, with even well-educated blacks having extra-marital birth rates far in excess of similarly educated whites. Third, despite making sexual restraint norms harder to enforce by lowering the risk of pregnancy per sexual encounter, the availability of effective contraception nonetheless taxed the resources of churches and government more than ever by generating an actual *increase* in the actual number of extra-marital births. In light of this surge, the authors do not clearly explain why church and state failed to explore other potentially more efficient normative strategies for reducing these costs. Sexual restraint is not the only way to minimize out of wedlock childbearing. Contraceptive use

and marriage rates also play a role. If lower birth rates among more affluent girls are due as much to more conscientious use of birth control as to fewer sexual encounters, then the critical norms to be enforced are not just sexual restraint, but also effective and conscientious contraceptive use.⁸⁹ Likewise, a strong expectation of marriage, and of deferring reproduction to marriage, may come into play. Thus, the authors fail to explain why social institutions did not step up enforcement of norms respecting contraceptive use, or in favor of marriage or childbearing within marriage.

E. Other evidence, other trends

Despite the defects in the leading theories that seek to account for growing sociodemographic disparities, the conclusion that group differences in attitudes and thinking have fueled demographic changes in reproduction and family structure is not likely to be a popular one. Likewise, the notion that groups differ systematically on these attributes and are not equally well-socialized for maintaining viable long-term relationships or for intact families is likely to meet resistance. As noted, social scientists studying family composition have shied away from accounts that look to internal processes in favor of theories that identify present economic circumstances and structural limitations. Although cultural variations among groups are sometimes acknowledged – as in ethnographic descriptions of the inner city underclass⁹⁰ – these patterns are largely viewed as rational adaptations to structural and economic deprivations rather than as systematic dysfunctions in response to commonplace life challenges

Is there additional empirical support for the analysis advanced here? Direct evidence is hard to come by. Sexual practices are notoriously hard to pin down, with patterns of fidelity or infidelity particularly elusive. There is some support for average racial differences: research

⁸⁹ See below at – (citing data that rates of sexual activity as well as rates of pregnancy conditioned on sexual activity among young women differ by class and race.)

⁹⁰ See, e.g., Orlando Patterson, *Rituals of Blood*; Elijah Anderson, *Code of the Streets: Decency, Violence, and the Moral Life of the Inner City*; William Julius Wilson, *supra*.

consistently suggests that blacks initiate sexual relations earlier, have more relaxed attitudes towards monogamy, infidelity, and extra-marital childbearing, and have greater numbers of sexual partners.⁹¹ Correlations with education and class are less well documented. Although well-educated persons claim to be more tolerant of sexual indiscretions and are more likely to report committing adultery,⁹² there is relatively little systematic data on class-related patterns surrounding the formation of stable relationships that lead to marriage. There is evidence, however, of more unwanted pregnancies and less effective contraceptive use among the persons

⁹¹ See, e.g., Blow and Hartnett, *Infidelity in Committed Relationships II: A Substantive Review*, at 224-225 (reviewing studies). Being male, black, urban, irreligious, politically liberal, very educated are all associated with more liberal attitudes towards infidelity. Although there is some evidence of a link between attitudes and infidelity, the data on the relationship and the incidence of infidelity generally is sketchy and problematic. See, e.g., Adrian J. Blow and Kelly Hartnett, *Infidelity in Committed Relationships I : A methodological Review*, 31 *J. Of Marital and Family Therapy* (April 2005) 183-216; Adrian J. Blow and Kelly Hartnett, *Infidelity in Committed Relationships II, A Substantive Review*, 31 *J. Of Marital and Family Therapy* (April 2005), 217-233.

In an effort to understand adolescent childbearing, many studies look at the sexual practices of teenagers. See, e.g., See also Lydia O'Donnell, Carl R. O'Donnell, Ann Stueve, *Early Sexual Initiation and Subsequent Sex-Related Risks among Urban Minority Youth: The Reach for Health Study*, *Family Planning Perspectives*, Vol. 33, No. 6 (Nov. - Dec., 2001), pp. 268-275; John S. Santelli, Nancy D. Brener, Richard Lowry, Amita Bhatt and Laurie S. Zabin, *Multiple Sexual Partners Among U.S. Adolescents and Young Adults*, *Family Planning Perspectives*, Vol. 30, No. 6 (Nov. - Dec., 1998), pp. 271-275 (Black and Hispanic males had more sexual partners than whites); John S. Santelli, R. Lowry, N.D. Brener and L. Robin *The association of sexual behaviors with socioeconomic status, family structure, and race/ethnicity among US adolescents*, *American Journal of Public Health*, Vol 90, Issue 10 1582-1588 (Black adolescents and children raised in single parent families have higher rates of sexual activity.); Freya L. Sonenstein, Joseph H. Pleck and Leighton C. Ku , *Levels of Sexual Activity Among Adolescent Males in the United States*, *Family Planning Perspectives*, Vol. 23, No. 4 (Jul. - Aug., 1991), pp. 162-167 (black male adolescents have more frequent sex, more sexual partners and earlier initiation into sexual activity than whites or Hispanics); Robert F. Valois et al, *Relationship between number of sexual intercourse partners and selected health risk behaviors among public high school adolescents*, *Journal of Adolescent Health*, Volume 25, Issue 5, November 1999, Pages 328-335(same).

⁹² See, e.g., Blow and Hartnett, *Infidelity in Committed Relationships II: A Substantive Review*, *supra*, at 224-225 (reviewing studies).

with less education and income, as well as among blacks.⁹³ Indeed, the data indicates that out of wedlock childbearing is a product both of different patterns of contraceptive use as well as of sexual activity. Disparities in out of wedlock childbearing rates could be driven in large part by group differentials in effective contraception. However, this model could also be extended to show how different thinking styles also could influence patterns of contraceptive use.

As noted, the tendency to think locally or globally is partly influenced by time-preferences, or discount rate. These may in turn correlate with socioeconomic background, group membership, and cultural norms. The theoretical and experimental work on discounting is complex, and efforts to measure individual time preferences have not yielded consistent results.⁹⁴ However, a few studies based on empirical data suggest that discount rates vary by race, sex, and education, with less educated individuals, blacks, and persons with lower cognitive capacity

⁹³ See William D. Mosher and James W. McNally, *Contraceptive Use at First Premarital Intercourse: United States, 1965-1988, Family Planning Perspectives*, Vol. 23, No. 3 (May - Jun., 1991), pp. 108-116, 108 (Noting that the proportion of women using birth control at first premarital intercourse “varies strikingly by individual characteristics,” including race, class, ethnicity.) See also Paschal Sheeran, David White, and Keith Phillips, *Premarital contraceptive use: A review of the psychological literature*, *Journal of Reproductive and Infant Psychology*, 1469-672X, Volume 9, Issue 4, 1991, Pages 253 – 269; Catherine S. Chilman, *Data on social class and race differences in contraceptive use: Social and Psychological Research concerning Adolescent Childbearing: 1970-1980*, *Journal of Marriage and Family*, Vol. 42, No. 4, *Decade Review* (Nov., 1980), pp. 793-805 Frank F. Furstenberg, Jr., *Race Differences in Teenage Sexuality, Pregnancy, and Adolescent Childbearing*, in *The Milbank Quarterly*, Vol. 65, Supplement 2 (Part 2). *Currents of Health Policy: Impacts on Black Americans* (1987), pp. 381-403.

On pregnancy incidence, see Lawrence B. Finer and Stanley K. Henshaw, *Disparities in Rates of Unintended Pregnancy in the United States, 1994 and 2001*, *Perspectives on Sexual and Reproductive Health*, Vol. 38, No. 2 (Jun., 2006), pp. 90-96 (from 1994 to 2001, unintended pregnancy rates were higher and growing among women with less income and education and minorities, but lower and dropping among college graduates and wealthier women). For educated cohorts, sympathy and support for single-motherhood may not translate into a more relaxed attitude towards extra-marital childbearing for oneself.

⁹⁴ For a review of work on discounting, see Shane Frederick, George Loewenstein, and Ted O’Donogue, *Time Discounting and Time Preference: A Critical Review*, 40 *J. of Econ. Lit.* (June 2002) 351-401.

having higher discount rates than whites and persons with more education.⁹⁵ On the assumption that personal discount rate can potentially influence the propensity to engage in global or local thinking, observed group variations are consistent with currently observed sociodemographic patterns of marital and reproductive behavior and with the predictions of this model. Disparities in other individual characteristics, such as personality, cognitive ability (or IQ), and executive functioning, may bear on the propensity to adopt different styles of decisionmaking in intimate relations.⁹⁶ In addition, there is a need for more detailed empirical information on actual patterns of intimate behavior leading up to, or impeding, the formation of lasting bonds. Although there has been some research on attitudes and practices surrounding sexual infidelity, samples are small and selective (in, for example, focusing on married couples rather than on sexual exclusivity in courtship or cohabitation), the literature makes few distinctions between styles of

⁹⁵ See Warner and Pleeter, the Personal Discount Rate: Evidence from military Downsizing programs, 91 *American Economic Rev.* (2001) 33-53, 48 (Estimating the personal discount rates of over 65,000 individuals departing the military in the early 1990s by tracking their choice between a lump sum severance payment or an annuity, and noting that “[h]igher test scores may reflect better capacity to understand or process the information about intertemporal choices.”) See also Emily Lawrance, Poverty and the Rate of Time Preference: Evidence from Panel Data, 99 *J. Of Political Economy* (1991) 54-77. One of the first to suggest that time horizons and propensity to defer gratification differ by social class was Edward Banfield. See Banfield, *The Unheavenly City*.

⁹⁶ There is some evidence for different personality profiles on the “big five” personality traits by race and ethnicity. See, e.g., David H. Autor and David Scarborough, Does Job Testing Harm Minority Workers? Evidence from Retail Establishments, *Quarterly Journal of Economics*, 123(1)(February 2008) 219-277 (describing average ethnic and racial differences in personality profiles predicting productivity and worker success, as measured on job screening tests). On executive control, or functioning, see, e.g., Albert Bandura, *Self-efficacy: the exercise of control*; Peter Anderson, Assessment and Development of Executive Function (EF) During Childhood, *Child Neuropsychology*, Volume 8, Issue 2 June 2002, 71 - 82; Daniel Hackman and Martha Farah, Socioeconomic Status and the Developing Brain, *Trends in Cognitive Sciences* 13 (2009) 65-73. On group differences in IQ, see e.g., Sandra Scarr, *Race, Social Class, and Individual Differences in IQ* (1981).

infidelity (whether discreet or notorious), and the data is hobbled by reliance on self-report.⁹⁷

For obvious reasons, research in this area is difficult and unreliable. One area that deserves more investigation is the role of different styles of infidelity in driving rates of marriage and marital stability. At issue is how much of the demographic differential is due to the incidence of illicit liaisons, as opposed to how often involvements become known or are allowed to disrupt the status quo. A sociodemographic gradient may exist in relationships that are open and notorious, as opposed to clandestine and discreet. But maintaining discretion also requires global thinking and the willingness to act on it. Persons must anticipate the possible destructive effects of their liaisons becoming known, and exercise the restraint and self-control necessary to keep them within bounds.

Finally, this article's analysis draws support from recent developments that show striking parallels with reproductive trends. Two notable changes in behavior during the same time period are the rise in obesity, and the increase in overspending and overborrowing, as evidenced, for example, by a surge in personal bankruptcy filings.⁹⁸ Gradients by race and class in the incidence of overweight are well documented, with less privileged individuals, blacks and Hispanics more likely to exceed normal weight.⁹⁹ Interpreting group differences in thrift,

⁹⁷ See, e.g., See, e.g., Judith Treas and Deirdre Giesen, "Sexual Infidelity among Married and Cohabiting Americans," 62 *J. of Marriage and the Family* (Feb. 2000) 48-60; Adrian J. Blow and Kelly Hartnett, *Infidelity in Committed Relationships I: A Methodological Review*, 31 *J. of Marital and Family Therapy* (April 2005) 183-216; Adrian J. Blow and Kelly Hartnett, *Infidelity in Committed Relationships II, A Substantive Review*, 31 *J. of Marital and Family Therapy* (April 2005), 217-233.

⁹⁸ See, e.g., Todd Zywicki, *An Economic Analysis of the Consumer Bankruptcy Crisis*, 99 *Northwestern U. Law Rev.* 1463, 1467 (2004-2005) (noting a "stunning increase in consumer bankruptcy filing rates" from 1980 to 2005, even during periods of economic growth and rising prosperity).

⁹⁹ Jeffery Sobal, Albert J. Stunkard, *Socioeconomic status and obesity: A review of the literature*, *Psychological Bulletin*. Vol 105(2), Mar 1989, 260-275 (144 published studies of the relationship between socioeconomic status (SES) and obesity reveal an inverse relationship between SES and overweight and attitudes to overweight); Collen Rand, John Kuldau, *The*

savings, and spending is a more problematic exercise. Disparities in income and wealth, the mismatch of need and resources, and accusations of selective targeting of some groups for risky loans and credit, confound speculation about causal mechanisms.¹⁰⁰ Nonetheless, further investigations on these questions may shed light on the thesis of this article and provide additional support for its conclusions.

F. Gender

Finally, the model so far takes no systematic account of gender. It also focuses on one partner's choices, and does not take fully incorporate the other partner's response. Interactive effects, and differences between men and women, could well complicate the analysis. For example, the average value of engaging in illicit extra-curricular liaisons may be higher for men than for women, which might make it harder for men to adopt the global view. In addition, the benefits to men of a long-standing committed marriage may be more remote, less tangible, and less immediate than for women. Although married men live longer and are healthier and happier overall than single men, they also work harder and may not realize financial benefits from marriage in the near term.¹⁰¹ Married women, in contrast, are consistently economically

epidemiology of obesity and self-defined weight problem in the general population: Gender, race, age, and social class, 9 *International J. Of Eating Disorders* (Feb. 2006, 329-343 (finding significant race and SES differences in overweight in a random sample of 2,115 black and white adults, with 46% of black women, 28% of black men, 18% of white women, and 16% of white men overweight). See also Marc Ambinder, "Fat Nation: It's worse than you think. How to beat obesity", *Atlantic Monthly* (May 2010) 72-83, 76 ("In fact, obesity has become a marker of sorts for lower socioeconomic status. The lower your educational attainment, the more likely you are to be obese . . . Black children are more at peril of become obese than white children; black women are more than 50 percent more likely to be obese than white women.")

¹⁰⁰ See, e.g., Sheila Ards and Samuel Myers, *The Color of Money: Bad Credit, Wealth, and Race*, 45 *American Behavioral Scientist* (Oct. 2001) 223-239.

¹⁰¹ See Linda Waite and Maggie Gallagher, *The Case for Marriage: Why Married People are Happier, Healthier, and Better off Financially*; Linda Waite ed., *The Ties that Bind: Perspectives on Marriage and Cohabitation*; see also, e.g., Audrey Light, *Gender Differences in the Marriage and Cohabitation Income Premium*, 41 *Demography* (May 2004) 263-284 (using a National Longitudinal Survey of Youth sample to conclude that women gain about 55% in

better off than single women, which facilitates their short-term reproductive goals.¹⁰² On the other hand, there is evidence that some of the marital cost-benefit mismatch works the other way, with women making a greater investment in marital children and in-kind spousal support up front and reaping greater rewards, in the form of lifelong financial support, later on.¹⁰³ These potential disjunctions counsel separate consideration of men's and women's incentives and present co-ordination problems that are probably best modeled game-theoretically. Adding an interactive game-theoretic component might enrich the forgoing analysis by incorporating different schedules of payoffs for male and female partners from local or global options for choice.

IV. Conclusion

The past three decades have witnessed a growing divergence in family structure by social class, income, education, and race. The goal is to explain why significant segments of the population are moving away from the traditional patterns of family and reproduction towards a less functional mode of short term, fragile relationships. Most demographers acknowledge that external and material constraints fail to account for most of the present dispersion by class and race in marriage, divorce, family structure, and out of wedlock childbearing. Nor do these factors explain the divergence of these patterns over time. In attempting to improve on prior theories, this analysis points to an altogether different explanation – one that recognizes that the principle barriers are internal. In tracing the lack of uniformity in family structure to distinct modes of thinking, it recognizes that material conditions are not the pivotal source of

needs-adjusted income when they marry or cohabit, whereas men's income levels remain mostly unchanged.).

¹⁰² See Audrey Light, Gender Differences in the Marriage and Cohabitation Income Premium, 41 *Demography* (May 2004) at –.

¹⁰³ See, e.g., Amy L. Wax, Bargaining in the Shadow the Market: Is There a Future for Egalitarian Marriage?, 84 *Va. L. Rev.* 509 (May 1998) (noting investment disparities as creating the potential for opportunistic divorce).

sociodemographic disparities, and that changes in economic circumstances will not necessarily alter them. In fact, the evidence points strongly to the importance of what goes on “in people’s heads” – and the cultural factors that influence how people make decisions – rather than external constraints. It suggests that, in most cases, whether romantic relationships will prove durable depends on how people think about it.

This analysis proposes that the emergence of existing patterns is the product of two contrasting methods of rational decisionmaking, which differ in the temporal frame of reference for assessing personal well-being. A stylized model of the choice to be sexually unfaithful (or to engage in other behaviors that impede stable monogamy) reveals that “global” thinkers will rarely cheat on a reasonably satisfying exclusive relationship. “Local” thinkers, in contrast, will more often be unfaithful, thus undermining their prospects for forming or maintaining the long-term bonds necessary for a stable family life.

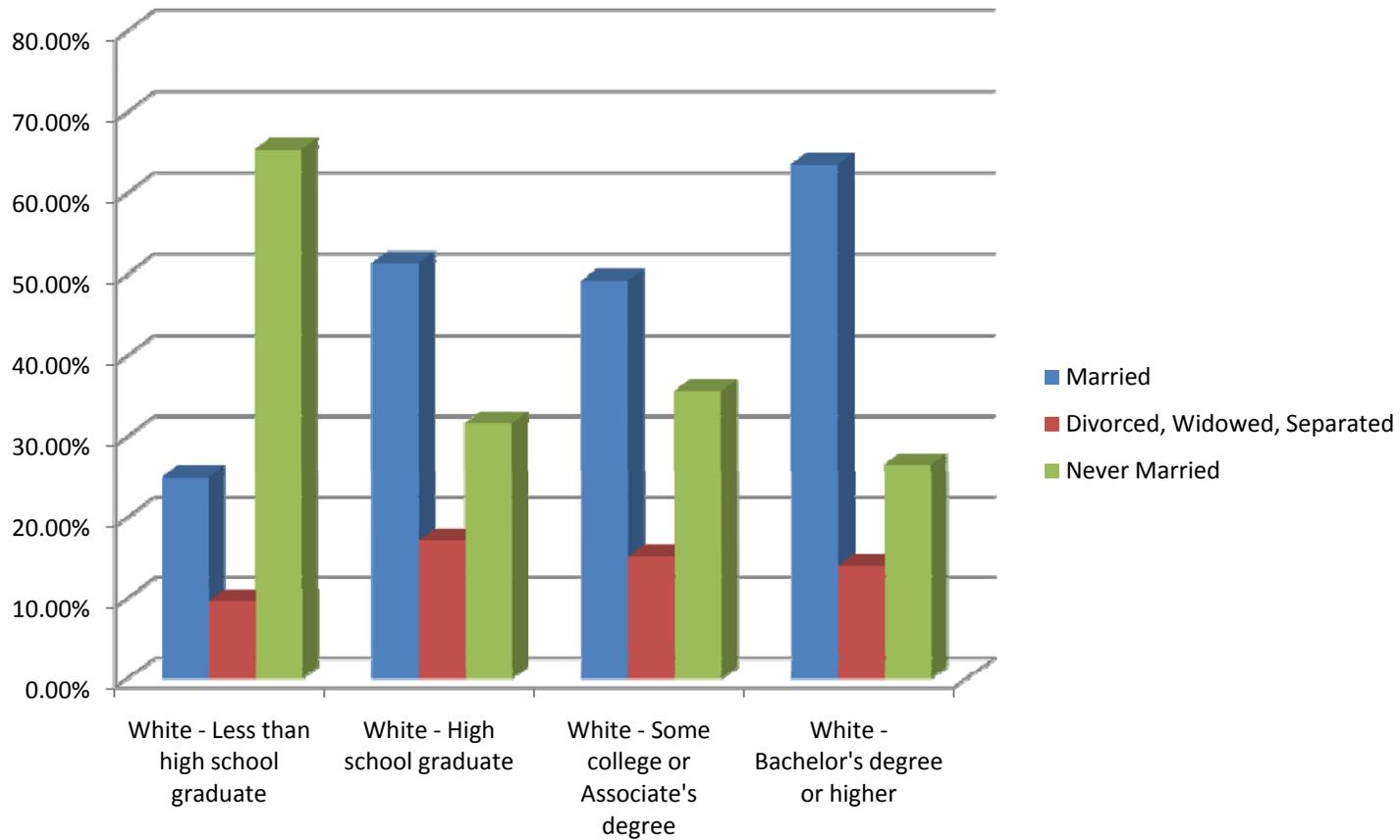
This analysis posits that the habits thought and action that secure successful, lasting intimate relationships are not uniformly distributed across society. Observed patterns suggest that sociodemographic groups differ in decisionmaking strategies, with lower income and minority persons now significantly more likely to think locally and affluent persons and non-minority group members more likely to engage in global choice. This fragmentation along lines of race and class can be traced to a society-wide deregulation of sexual behavior and family formation in the wake of the 1960s sexual revolution. Whereas strong norms of sexual conduct had previously minimized the need for individualized calculations in this sphere, the weakening of those conventions threw people back on unguided personal choices. Because relatively educated persons are better equipped to take a long view and to act on these perceptions, global decisionmaking largely dominates among the most privileged, whereas local choice is increasingly common in other segments of society. This hypothesis better explains growing disparities in family structure than existing theories that look to economic, structural, or material conditions. Further empirical work is necessary to test this thesis.

Marital Status by Education

White Women age 15-50, 2006-2007

(source: 2007 American Community Survey)

figure a

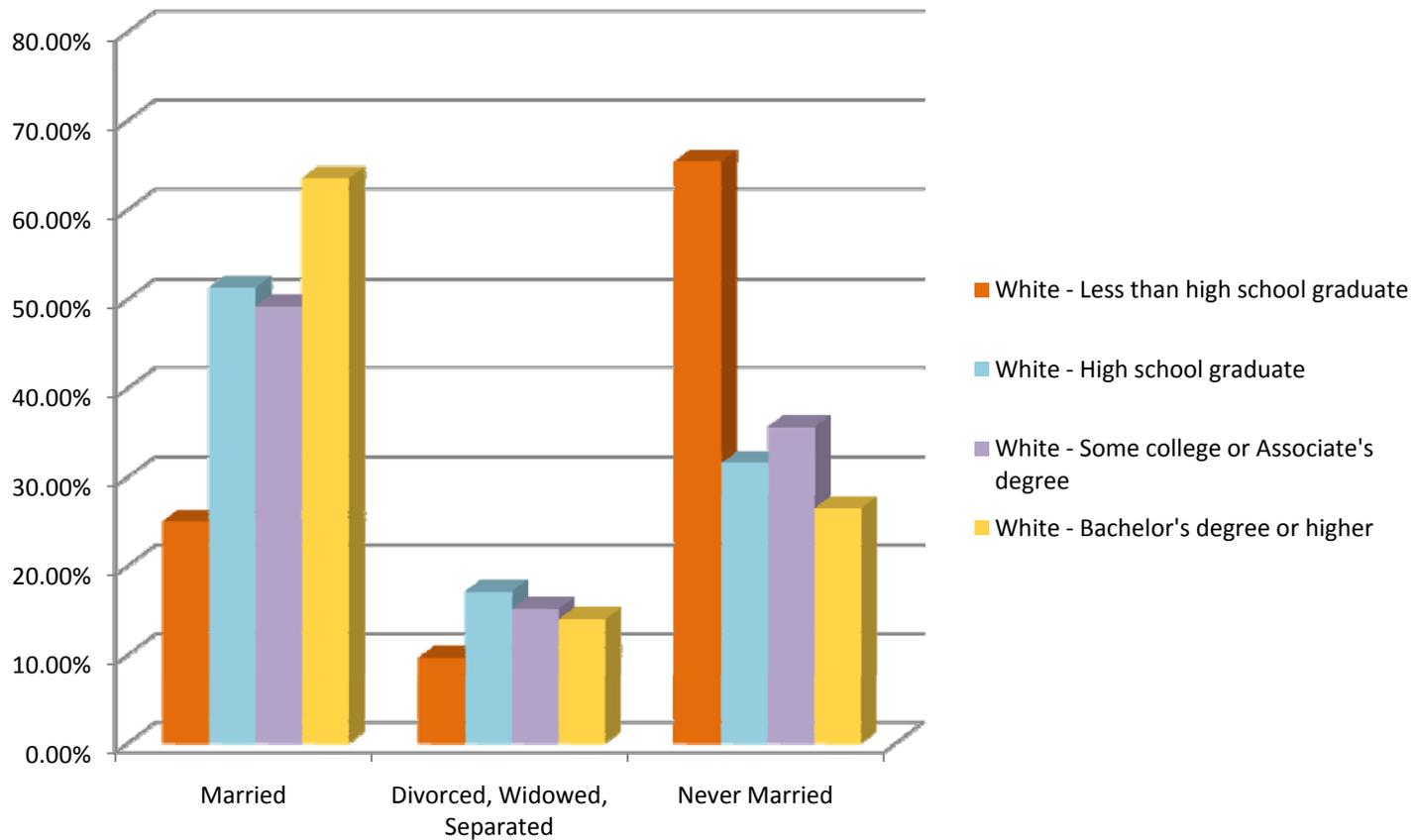


Marital Status by Education

White Women, age 15-50, 2006-2007

(source: 2007 American Community Survey)

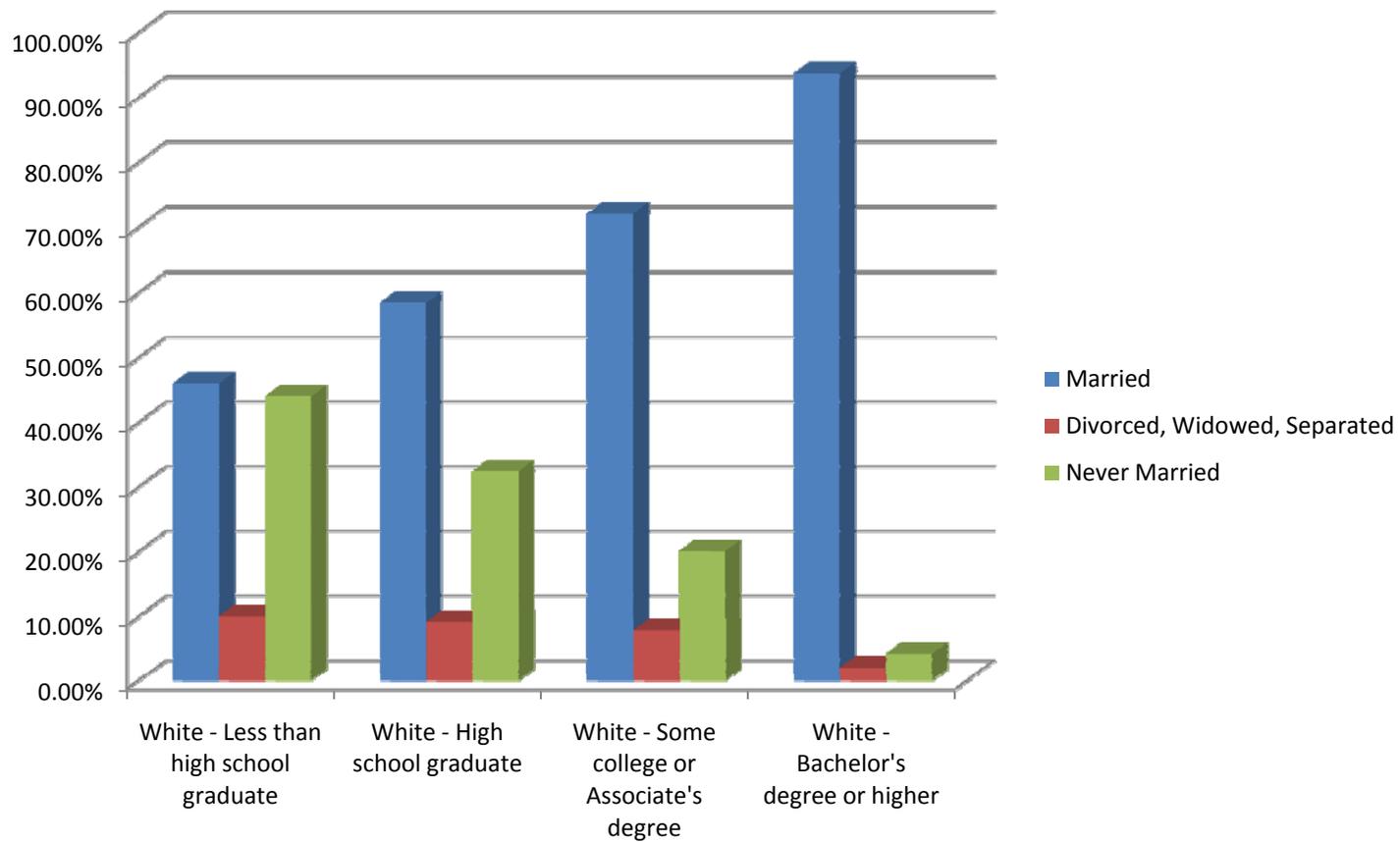
figure b



Marital Status by Education

White Women, 15-50, who gave birth 2006-2007

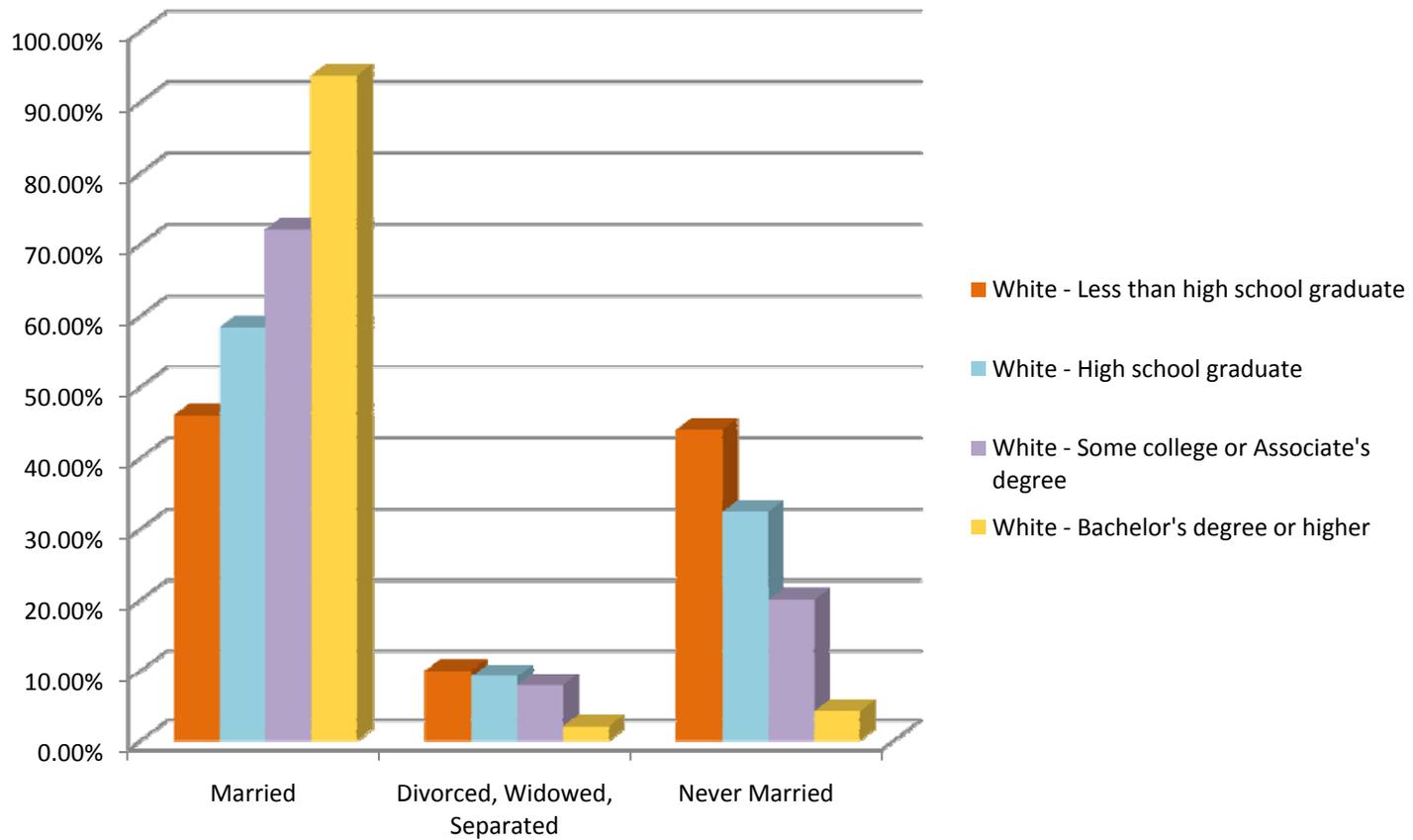
figure c



Marital Status by Education

White Women, 15-50, who gave birth 2006-2007

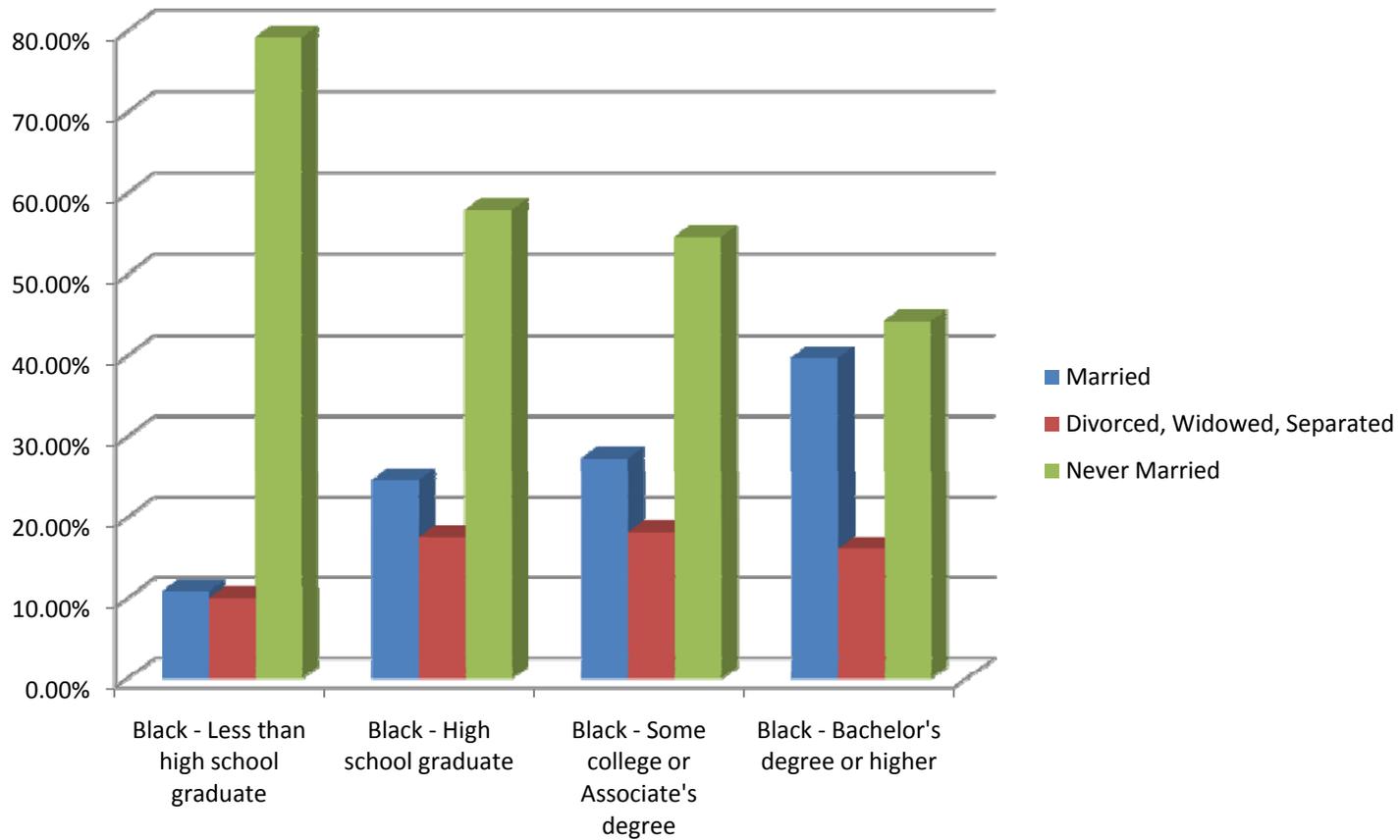
figure d



Marital Status by Education

By Black Women, age 15-50, 2006-2007

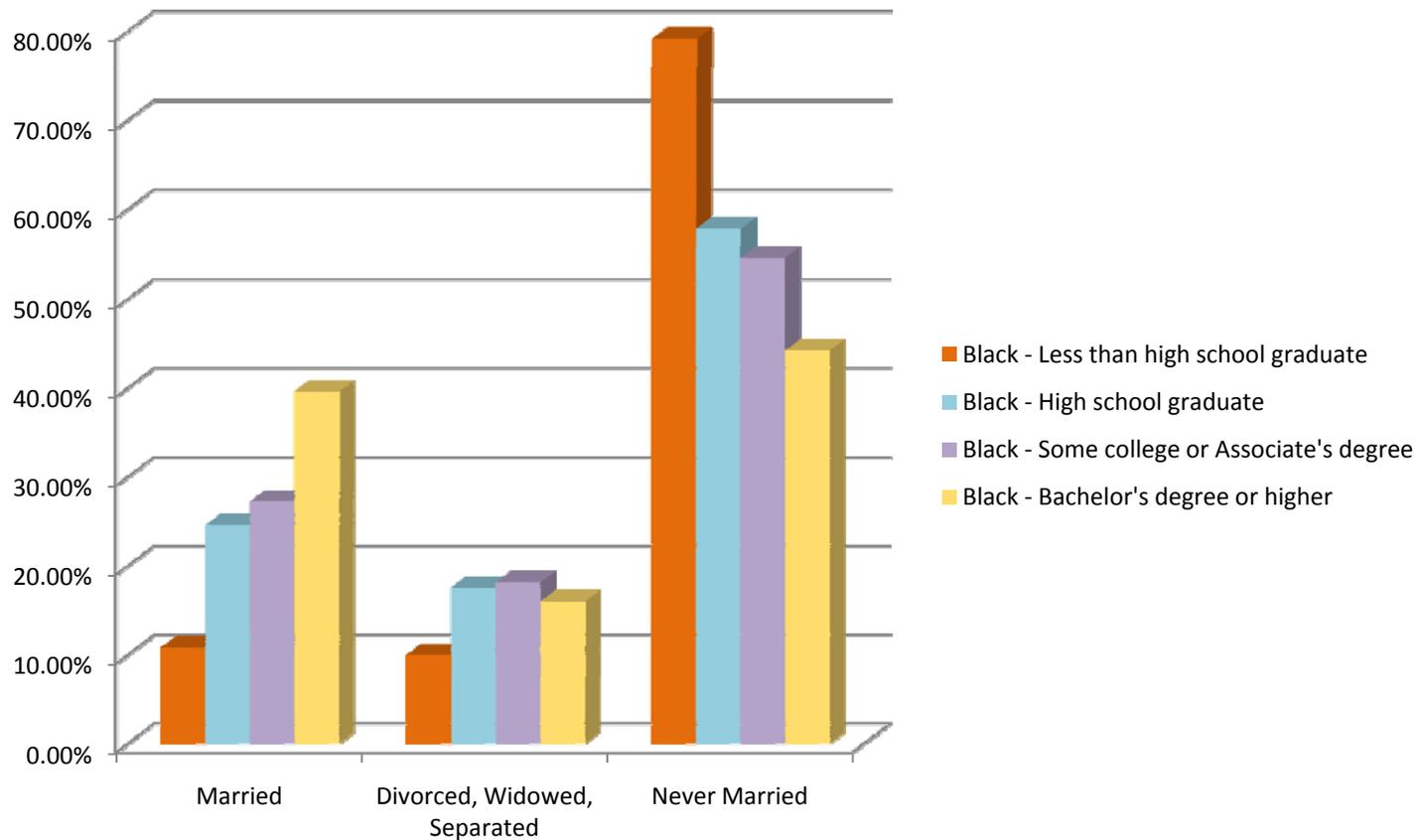
figure e



Marital Status by Education

Black Women, age 15-50, 2006-2007

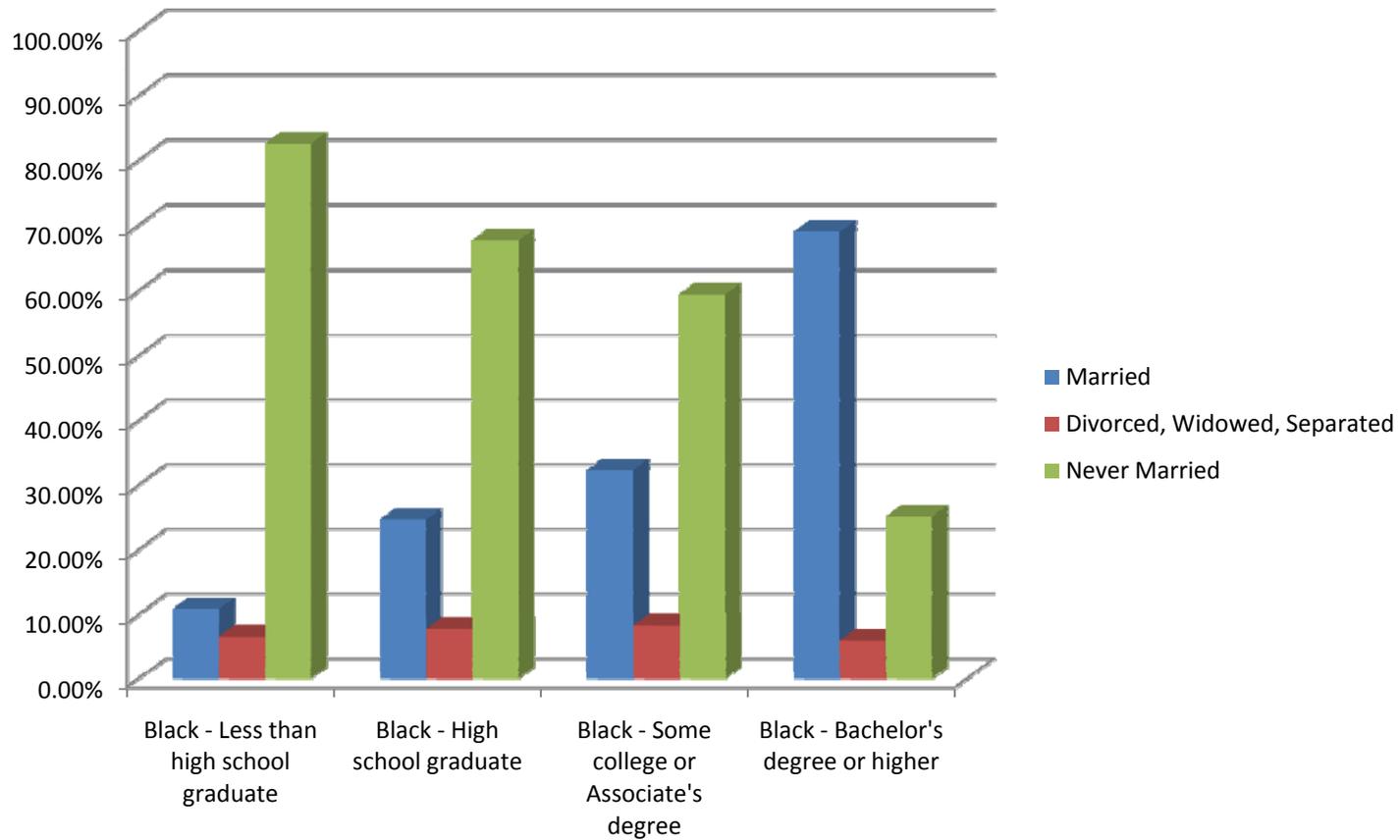
figure f



Marital Status by Education

Black Women, 15-50, who gave birth 2006-2007

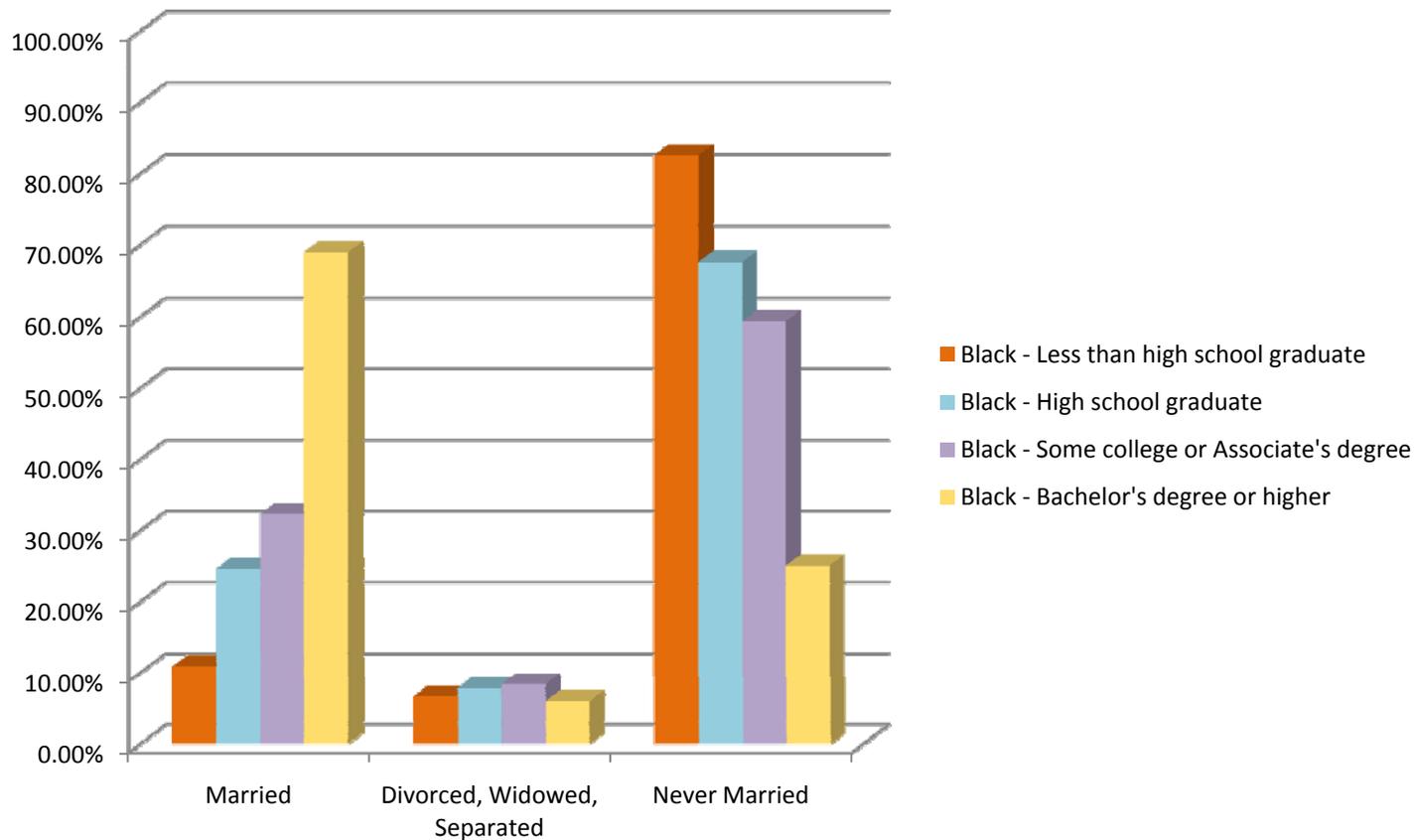
figure g



Marital Status by Education

Black Women, 15-50, who gave birth 2006-2007

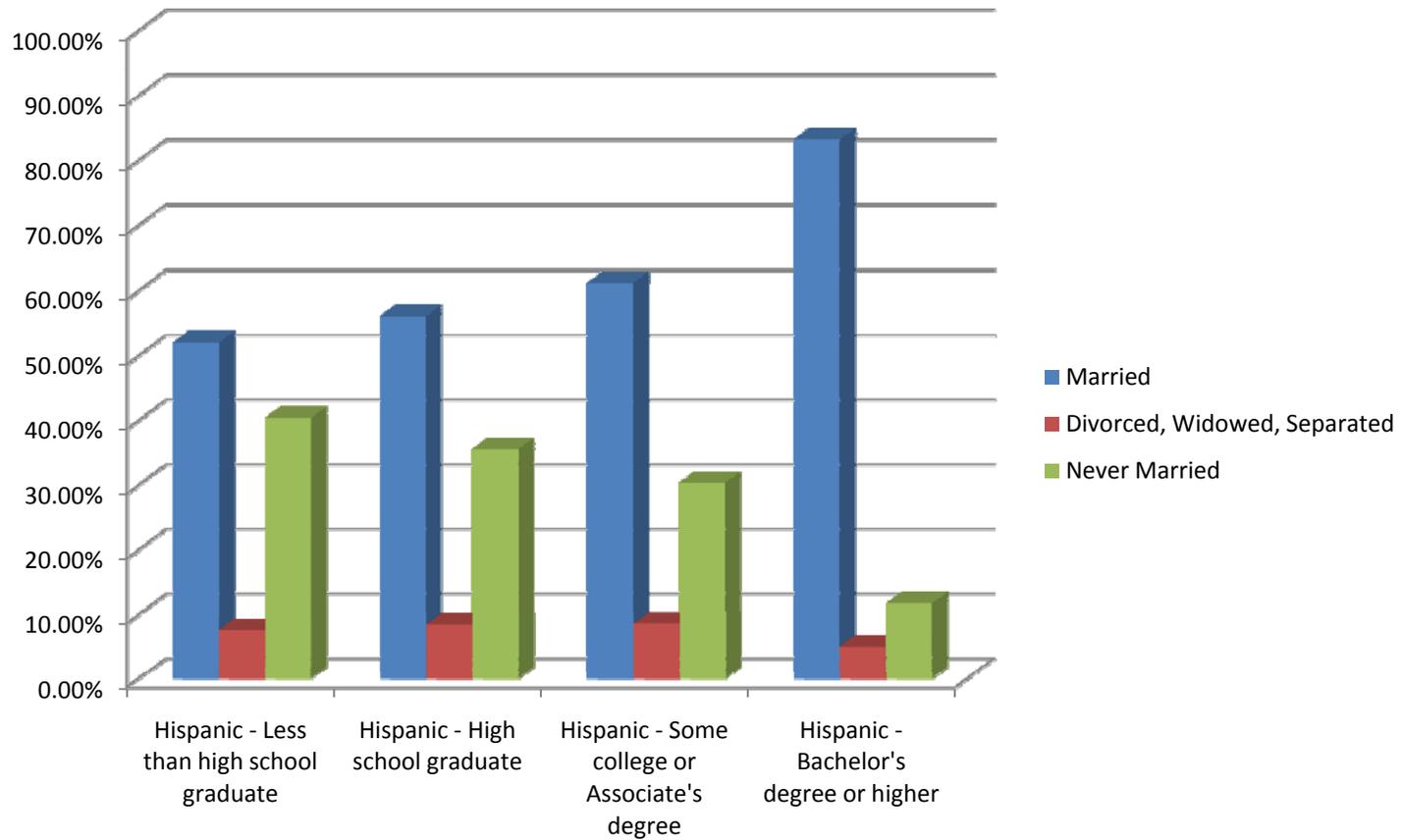
figure h



Marital Status by Education

Hispanic Women, 15-50, who gave birth 2006-2007

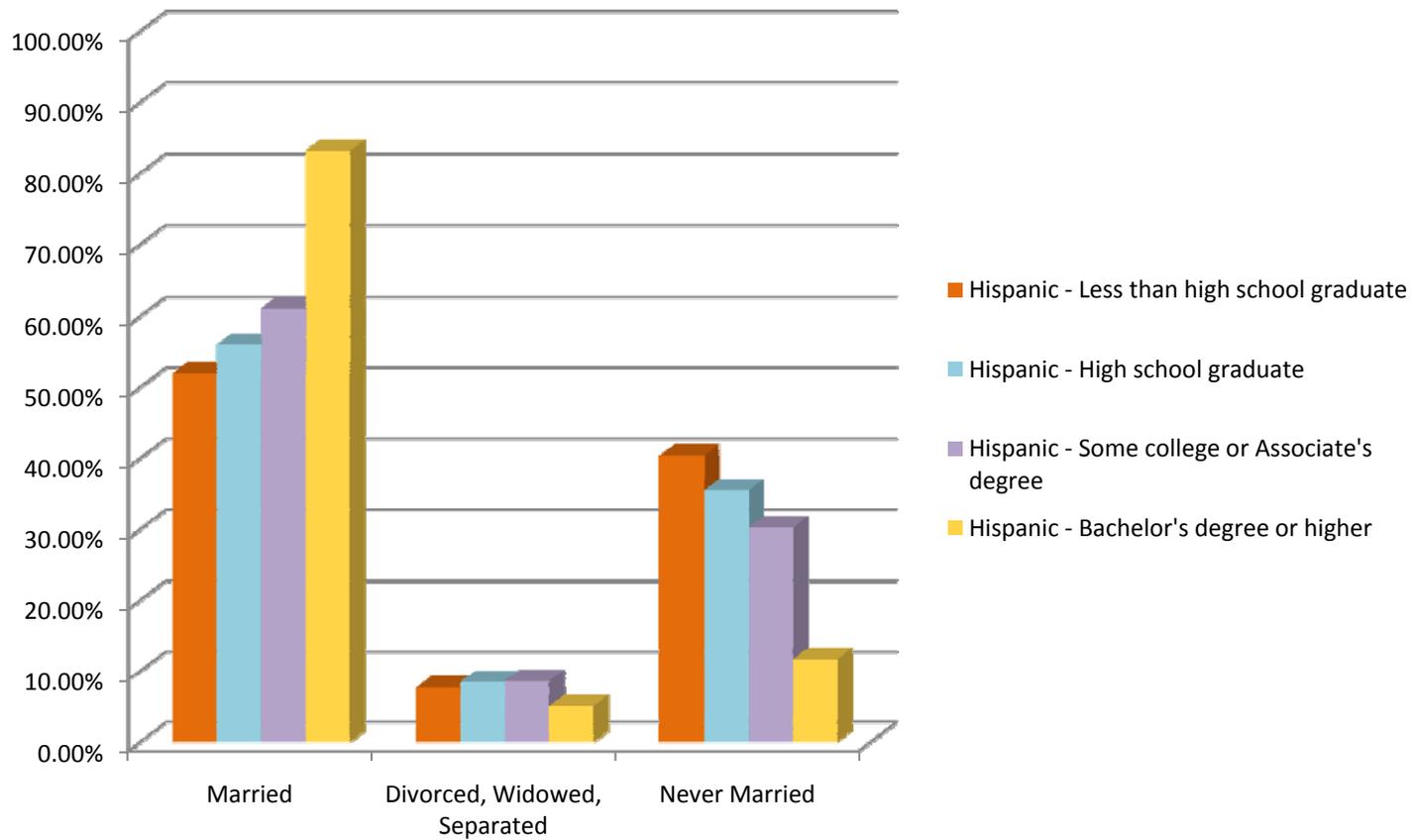
Figure i



Marital Status by Education

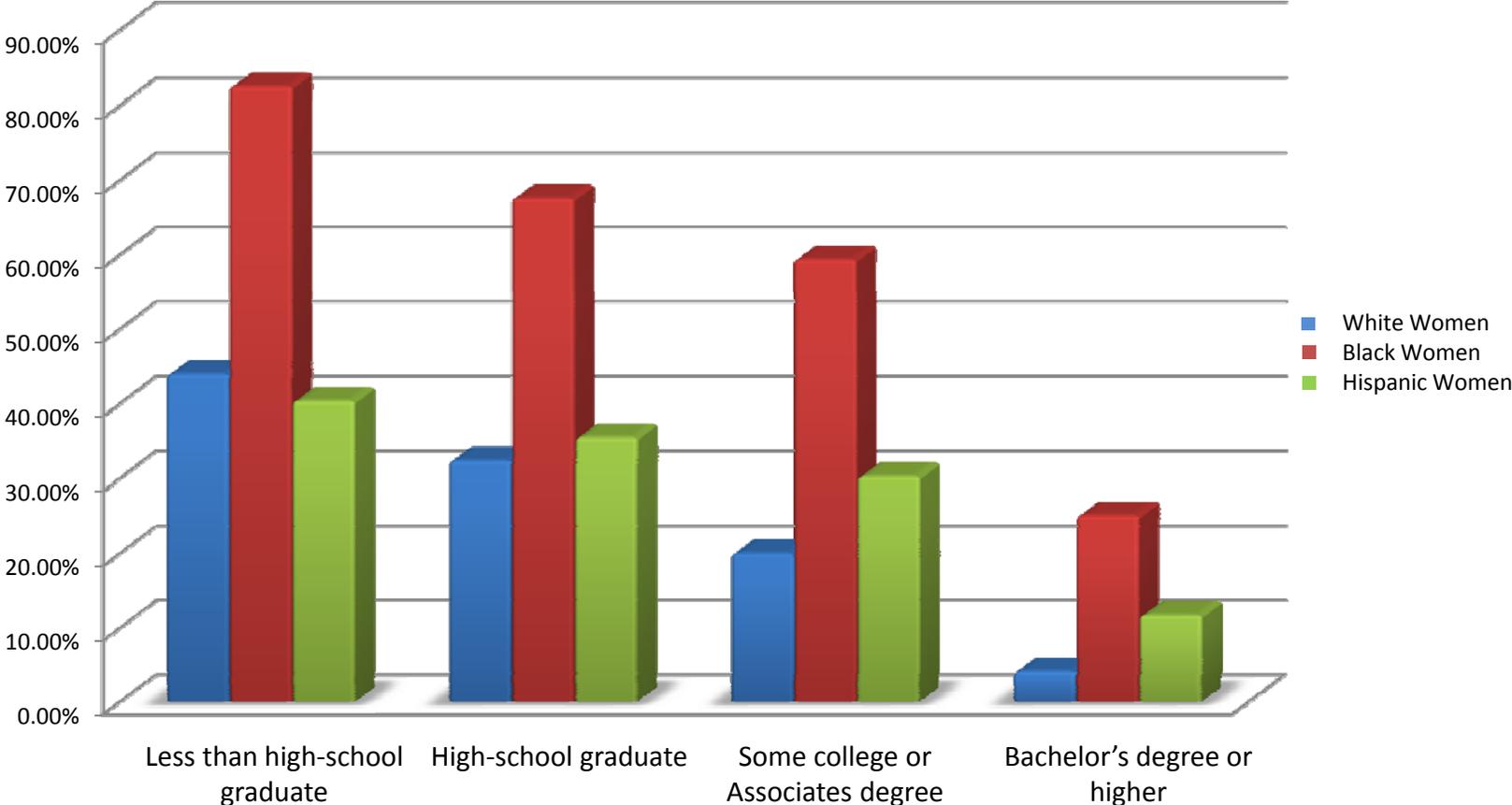
Hispanic Women, 15-50, who gave birth 2006-2007

Figure j



Women giving birth 2006-07 who are unmarried, by race

Figure k



Women giving birth 2006-07
who are married, by race
Figure I

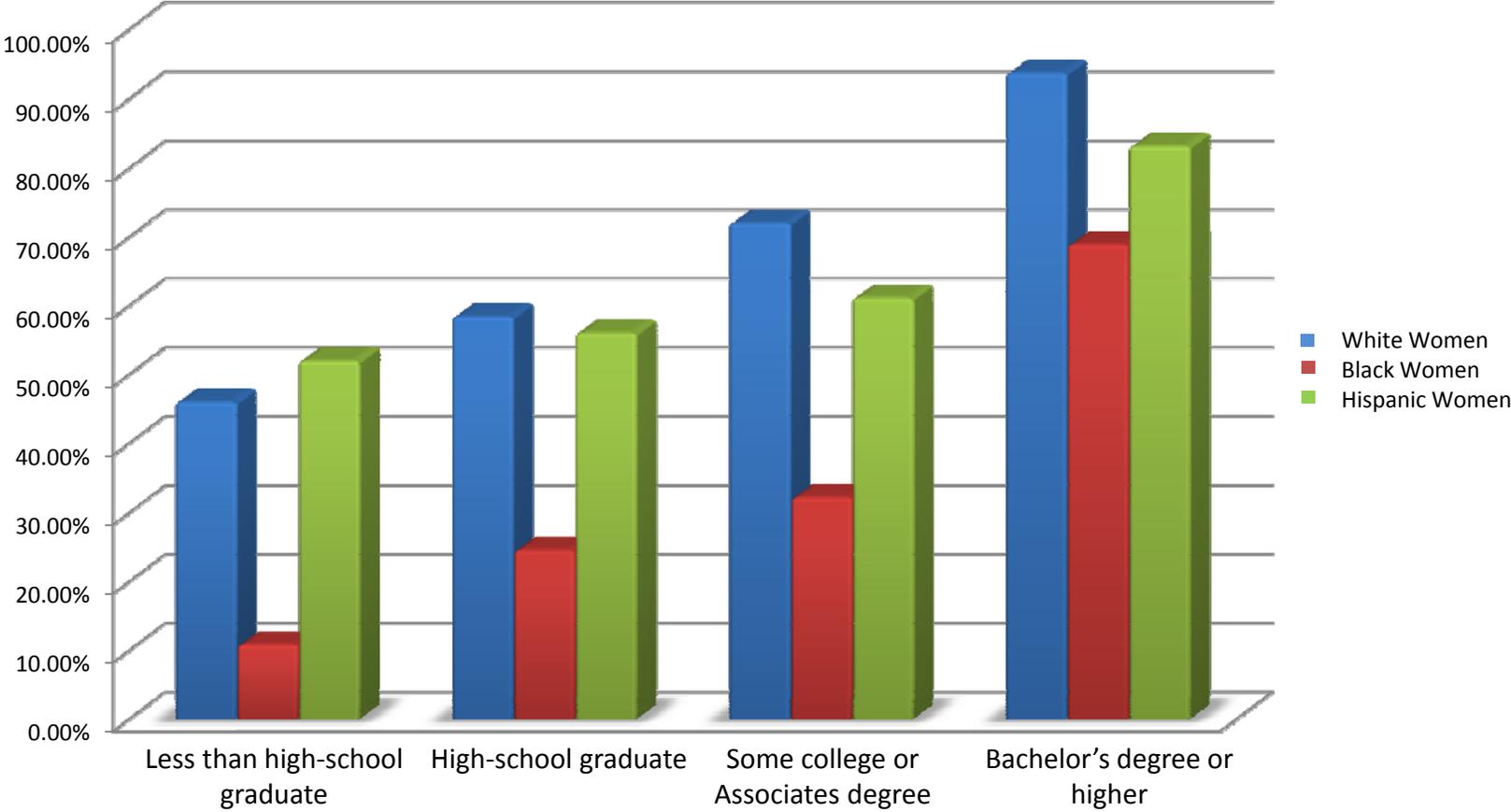
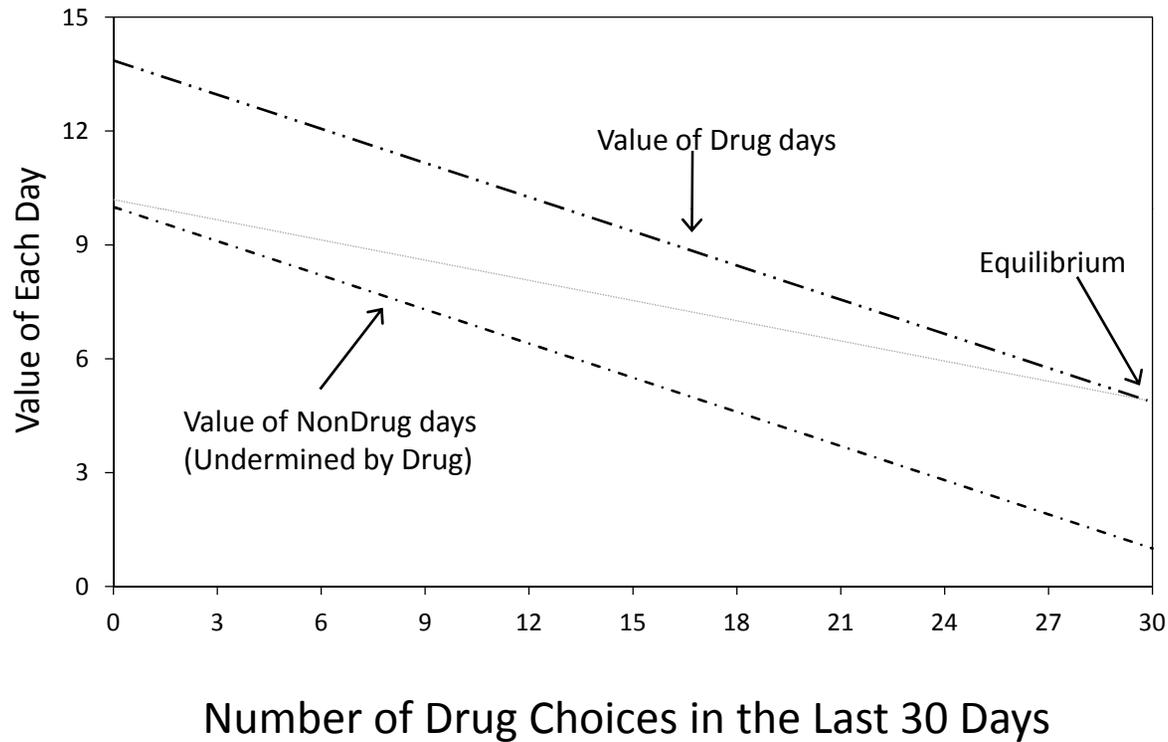


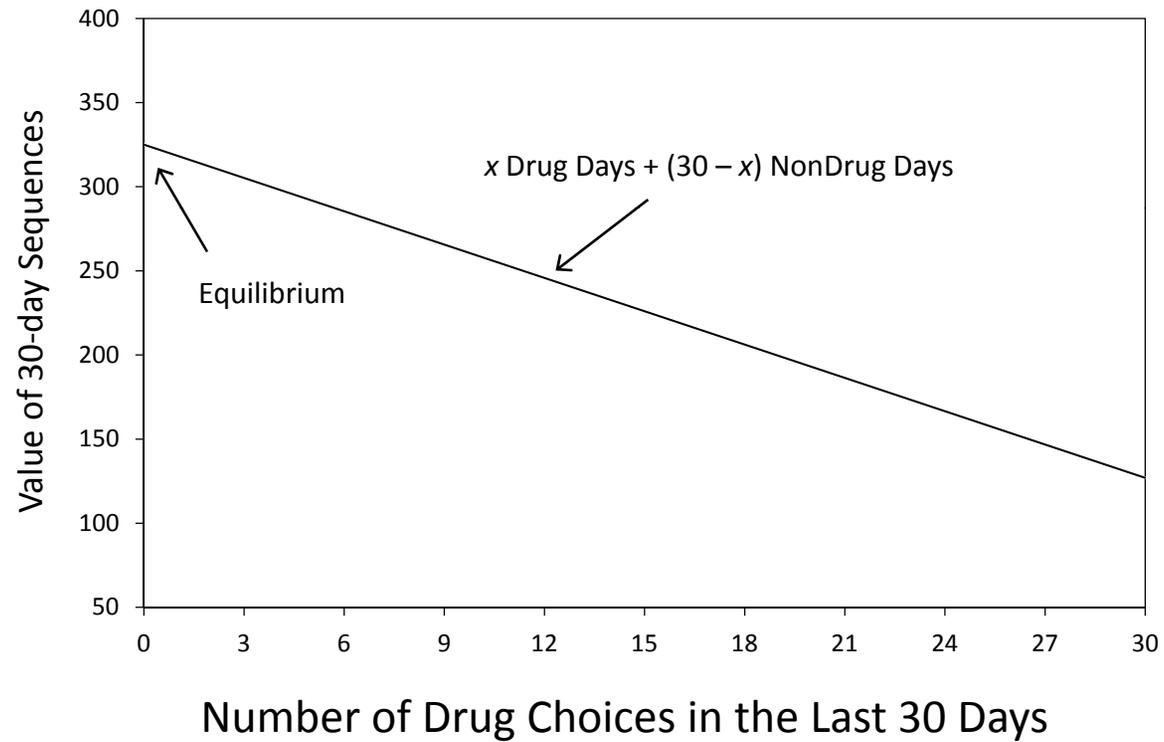
Figure 1a
daily value, local choice



Local choice leads to drug binge

From Gene Heyman: *Addiction: A Disorder of Choice*

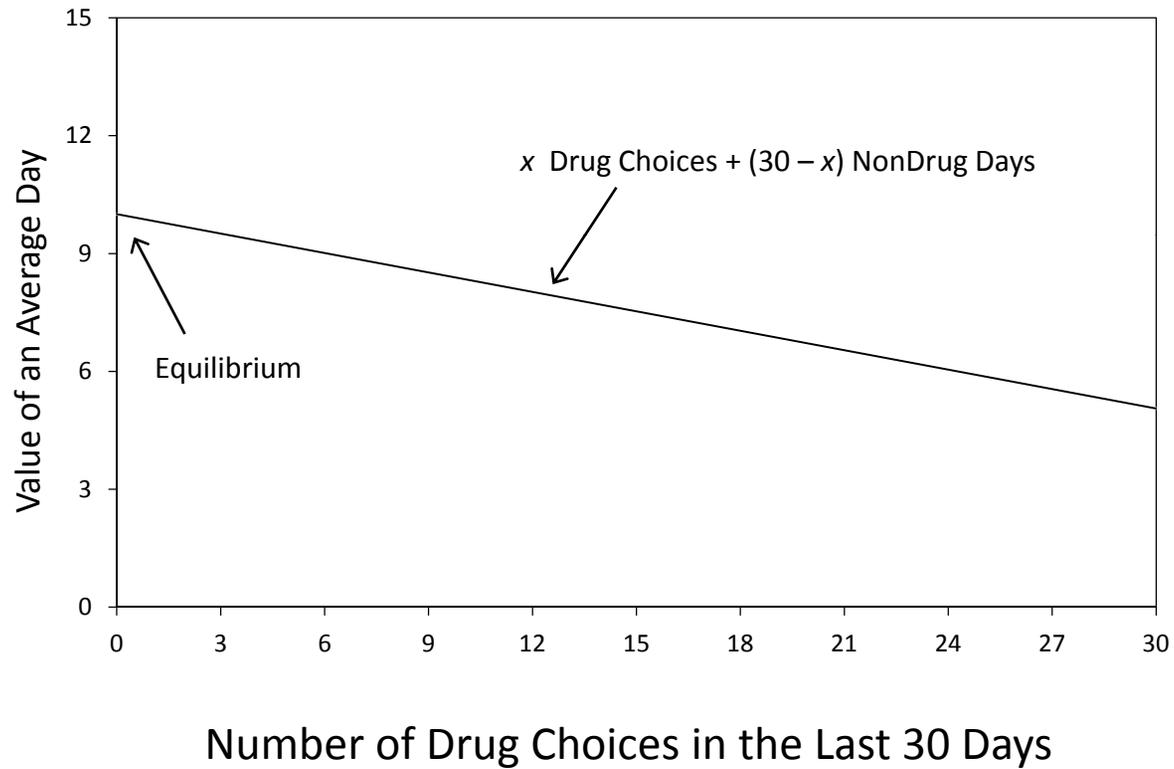
Figure 1b
Total (global) value
30 days



Global choice leads to abstinence

From Gene Heyman: *Addiction: A Disorder of Choice*

Figure 1c
global average value
30 days



Global choice leads to abstinence

From Gene Heyman: *Addiction: A Disorder of Choice*

Table 2 (for fig. 2)
Simultaneous relationship – daily values

F days	un-F days	Value F day	Value un-F day	"Global" payoff (30 days)	Average payoff per day
30	0	28	30	840.0	28.0
29	1	27.5	30	827.5	27.6
28	2	27	29	814.0	27.1
27	3	26.5	29	802.5	26.8
26	4	26	28	788.0	26.3
25	5	25.5	28	777.5	25.9
24	6	25	27	764.4	25.5
23	7	24	27	740.6	24.7
22	8	23	26	717.9	23.9
21	9	22	26	696.3	23.2
20	10	21	26	675.7	22.5
19	11	20	25	656.3	21.9
18	12	19	25	637.9	21.3
17	13	18	24	620.6	20.7
16	14	16.5	24	596.4	19.9
15	15	15	23	574.3	19.1
14	16	14.5	23	568.3	18.9
13	17	13	22	549.3	18.3
12	18	12.5	22	544.5	18.1
11	19	11	21	528.7	17.6
10	20	10	21	520.0	17.3
9	21	9	21	512.4	17.1
8	22	8	20	505.9	16.9
7	23	7	20	500.5	16.7
6	24	6	19	496.1	16.5
5	25	5.5	19	495.4	16.5
4	26	5	18	488.0	16.3
3	27	4.5	17	472.5	15.8
2	28	4	16	456.0	15.2
1	29	3.5	15	438.5	14.6
0	30	3	14	420.0	14.0

Combinations of F days and un-F days: 30-day period

Figure 2

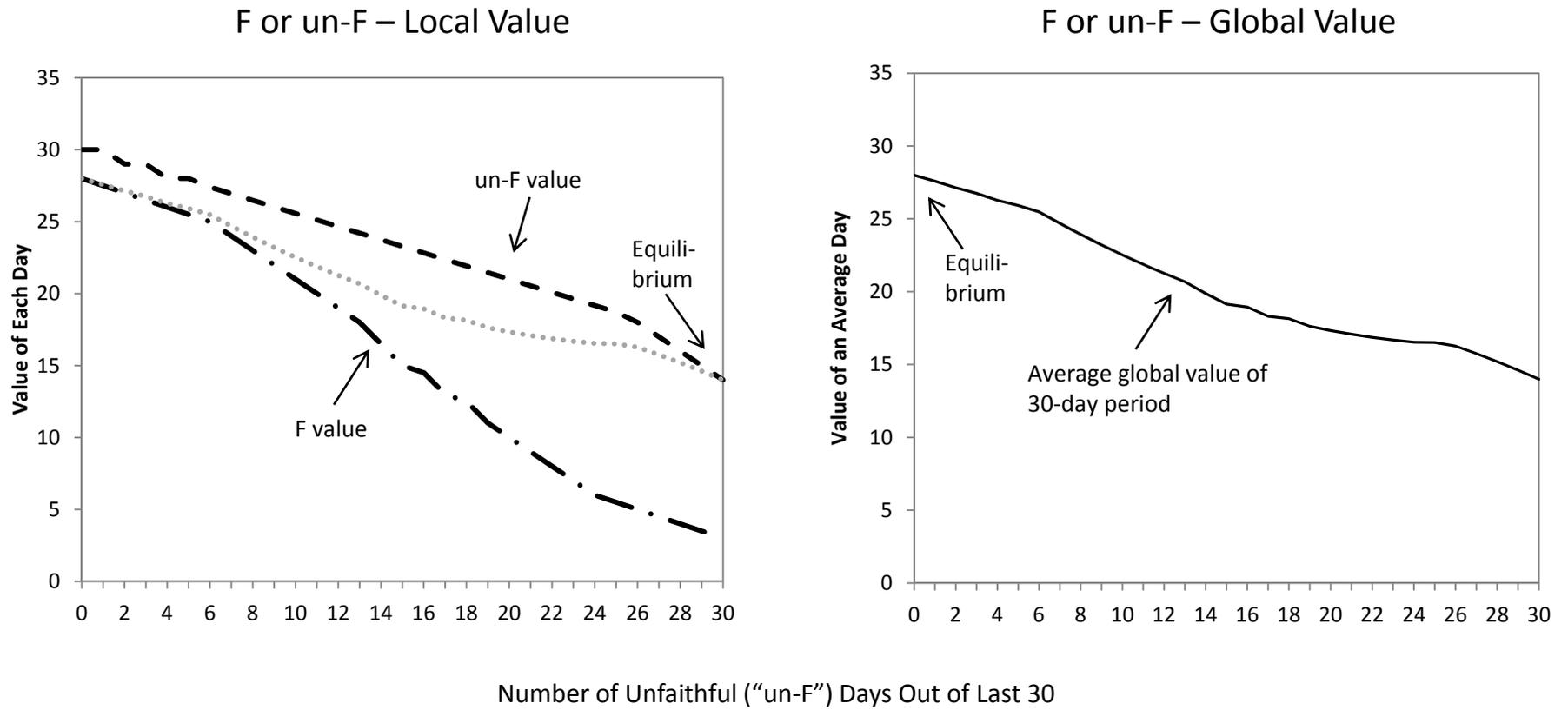


Table 3 (for figure 3)
simultaneous relationship

F days	un-F days	Value F day	Value un-F day	"Global" payoff (30 days)	Average payoff per day
30	0	28	30	840.0	28.0
29	1	27.5	30	827.5	27.6
28	2	27	29	814.0	27.1
27	3	26.5	29	802.5	26.8
26	4	26	28	788.0	26.3
25	5	25.5	28	777.5	25.9
24	6	25	27	764.4	25.5
23	7	24	27	740.6	24.7
22	8	23	26	717.9	23.9
21	9	22	26	696.3	23.2
20	10	21	26	675.7	22.5
19	11	20	25	656.3	21.9
18	12	19	25	637.9	21.3
17	13	18	24	620.6	20.7
16	14	16.5	24	596.4	19.9
15	15	15	23	574.3	19.1
14	16	14.5	23	568.3	18.9
13	17	13	22	549.3	18.3
12	18	12.5	22	544.5	18.1
11	19	11	21	528.7	17.6
10	20	10	21	520.0	17.3
9	21	9	21	512.4	17.1
8	22	8	20	505.9	16.9
7	23	7	20	500.5	16.7
6	24	6	19	496.1	16.5
5	25	5.5	19	495.4	16.5
4	26	5	18	488.0	16.3
3	27	4.5	18	499.5	16.7
2	28	4	18	512.0	17.1
1	29	3.5	18	525.5	17.5
0	30	3	18	540.0	18.0

Choice between F day and un-F day: 30-day period

Figure 3

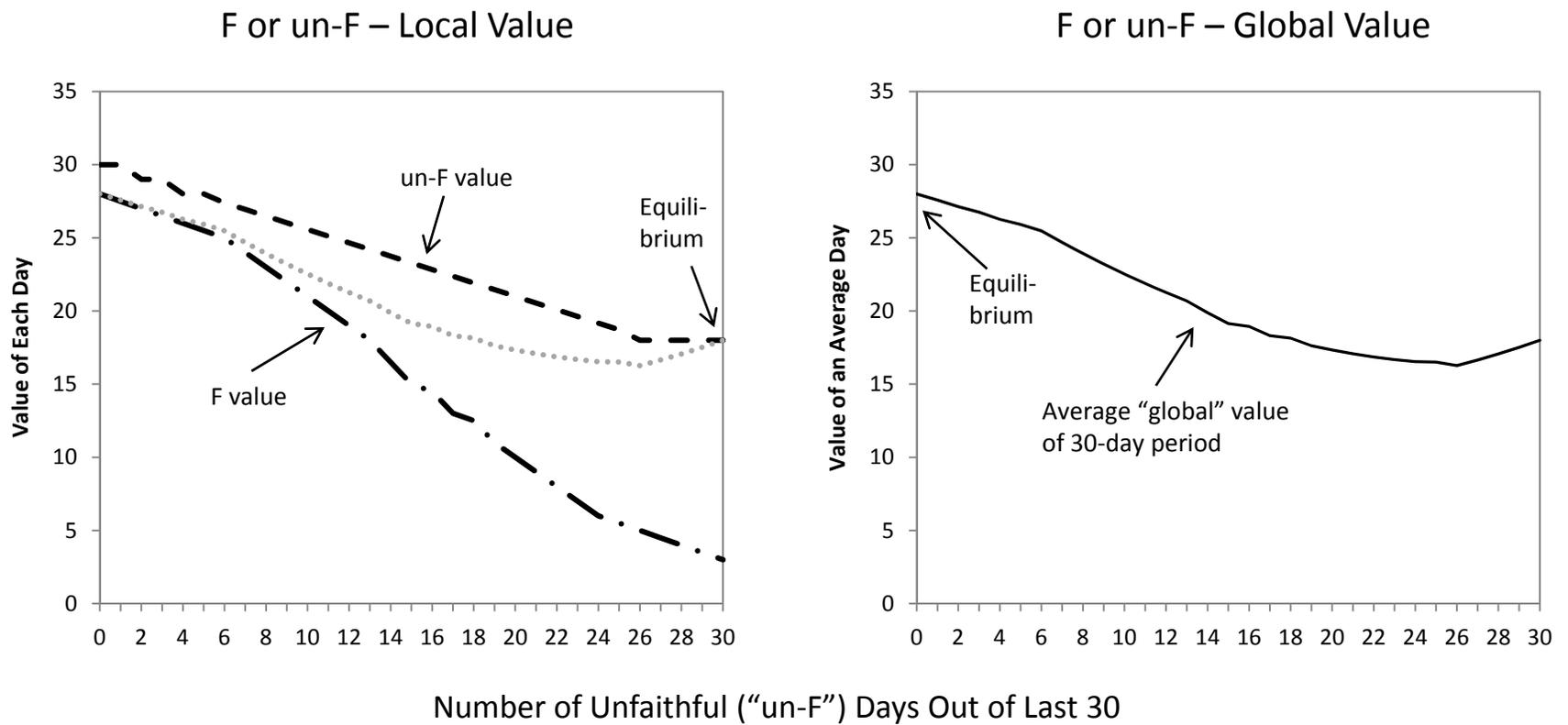


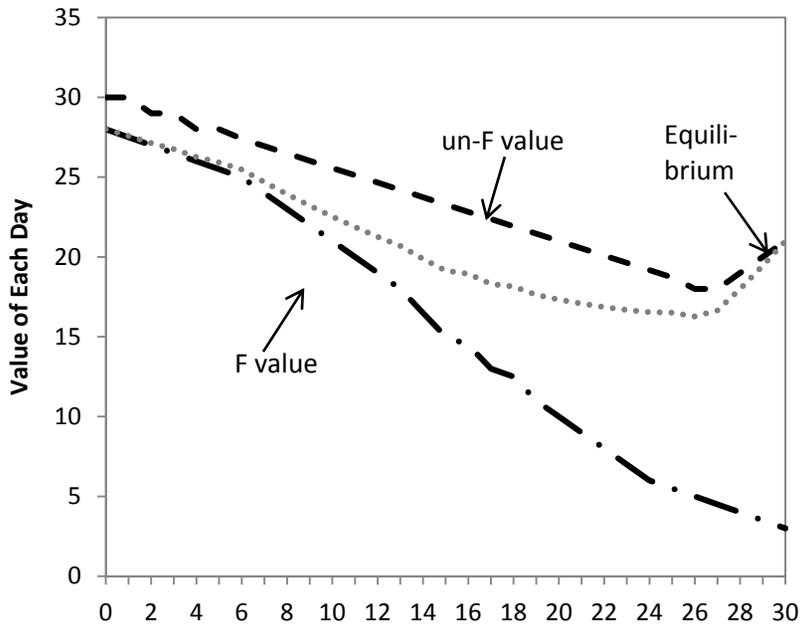
Table 4 (for figure 4)
simultaneous relationship

F days	un-F days	Value F day	Value un-F day	"Global" payoff (30 days)	Average payoff per day
30	0	28	30	840.0	28.0
29	1	27.5	30	827.5	27.6
28	2	27	29	814.0	27.1
27	3	26.5	29	802.5	26.8
26	4	26	28	788.0	26.3
25	5	25.5	28	777.5	25.9
24	6	25	27	764.4	25.5
23	7	24	27	740.6	24.7
22	8	23	26	717.9	23.9
21	9	22	26	696.3	23.2
20	10	21	26	675.7	22.5
19	11	20	25	656.3	21.9
18	12	19	25	637.9	21.3
17	13	18	24	620.6	20.7
16	14	16.5	24	596.4	19.9
15	15	15	23	574.3	19.1
14	16	14.5	23	568.3	18.9
13	17	13	22	549.3	18.3
12	18	12.5	22	544.5	18.1
11	19	11	21	528.7	17.6
10	20	10	21	520.0	17.3
9	21	9	21	512.4	17.1
8	22	8	20	505.9	16.9
7	23	7	20	500.5	16.7
6	24	6	19	496.1	16.5
5	25	5.5	19	495.4	16.5
4	26	5	18	488.0	16.3
3	27	4.5	18	499.5	16.7
2	28	4	19	540.0	18.0
1	29	3.5	20	583.5	19.5
0	30	3	21	630.0	21.0

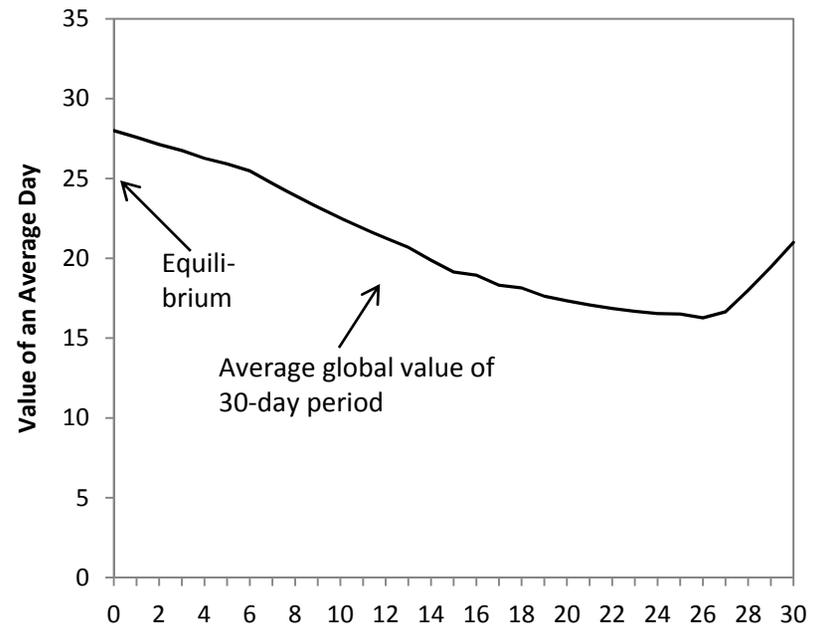
Choice between F day and un-F day: 30-day period

Figure 4

F or un-F – Local Value



F or un-F – Global Value



Number of Unfaithful ("un-F") Days Out of Last 30

Table 5 - Partner #1

Day	Value/Day – local choice	Total (all days)	Avg. Value/Day – global choice
1	26	26	26
2	25	51	25.5
3	24	75	25
4	25	100	25
5	26	126	25.2
6	27	153	25.5
7	28	181	25.9
8	29	210	26.3
9	30	240	26.7
10	33	273	27.3
11	35	308	28
12	37	345	28.8
13	38	383	29.5
14	38	421	30.1
15	38	459	30.6

Figure 5 - Partner #1

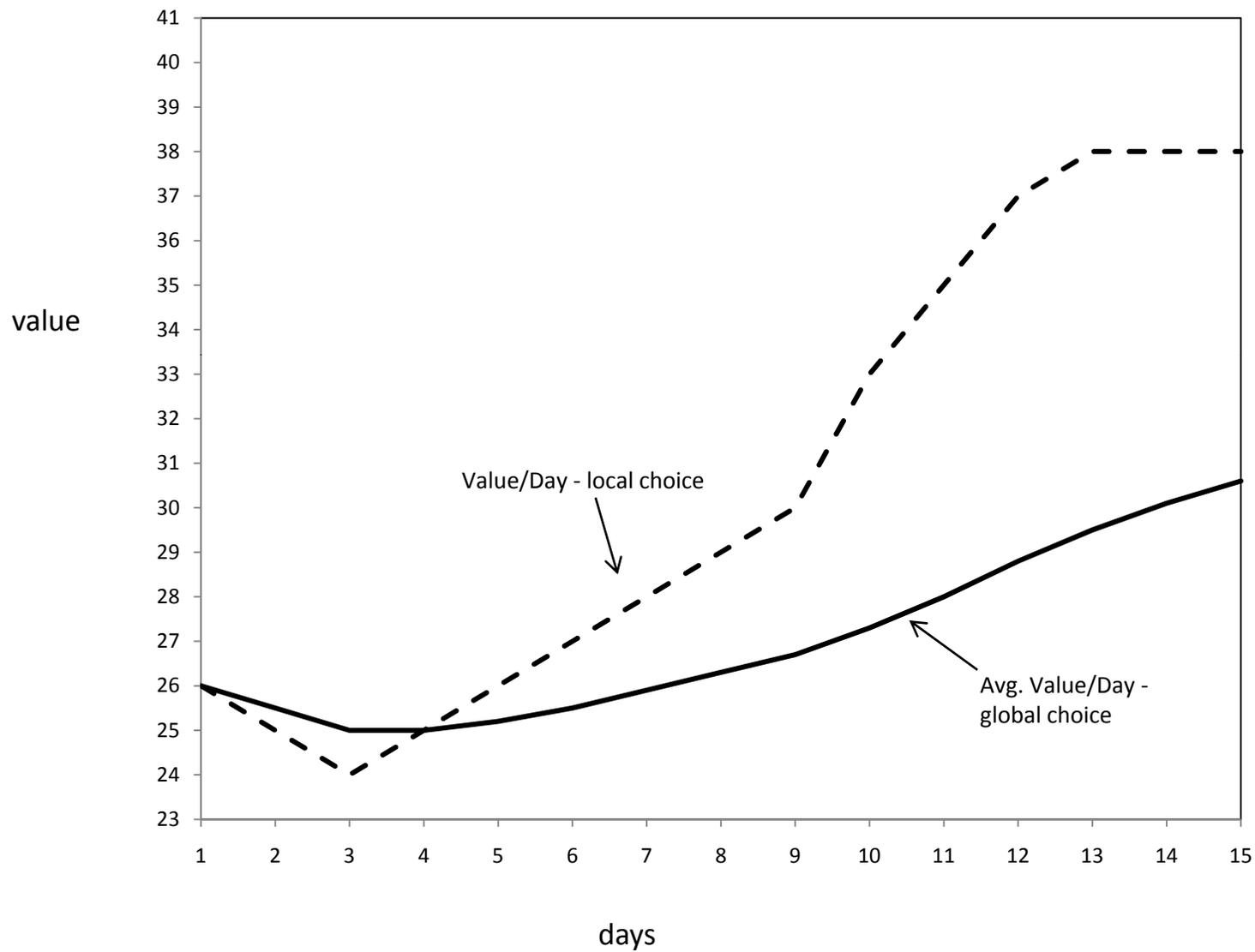
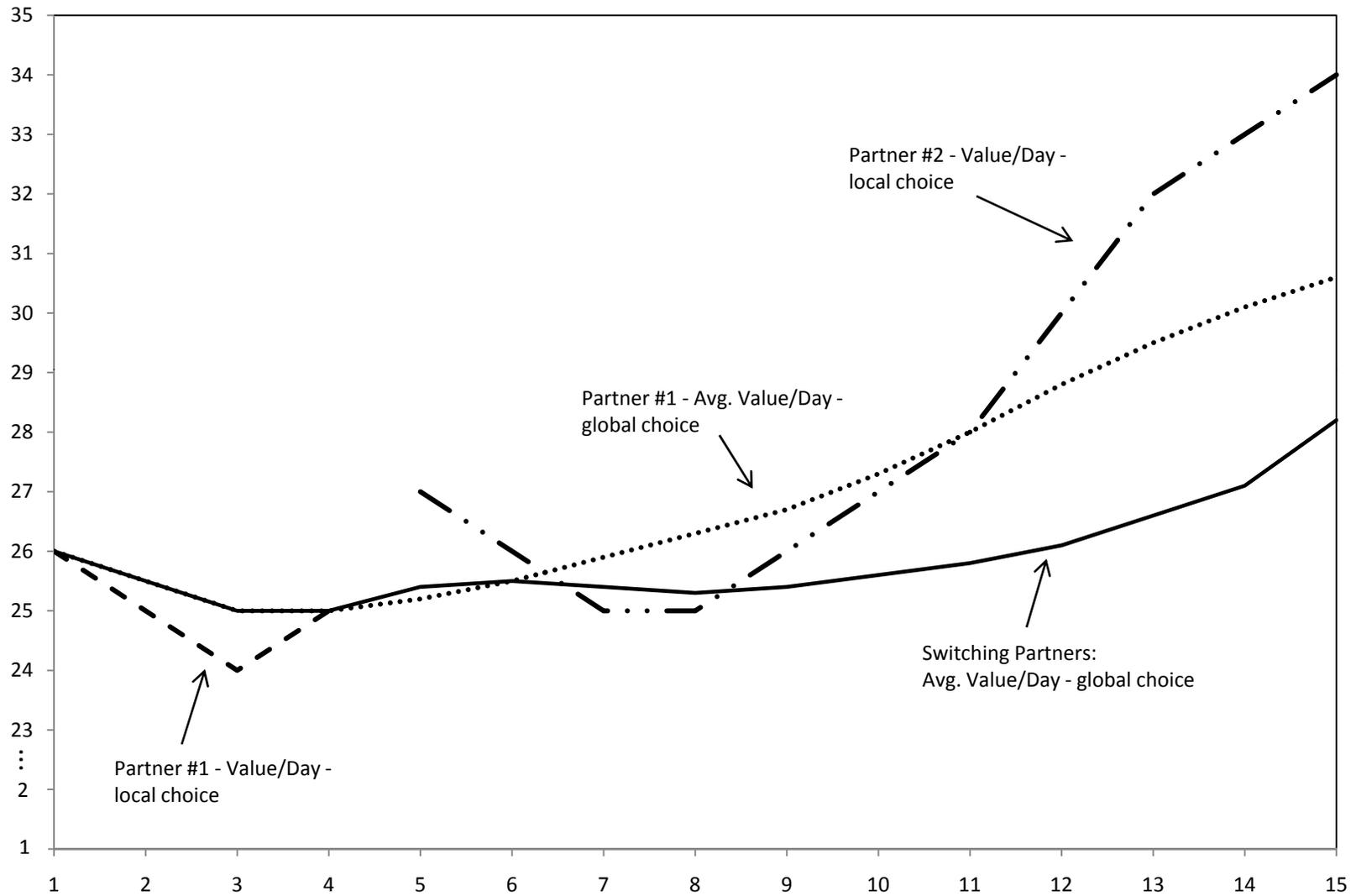


Table 6
Switching Partners, #1 to #2

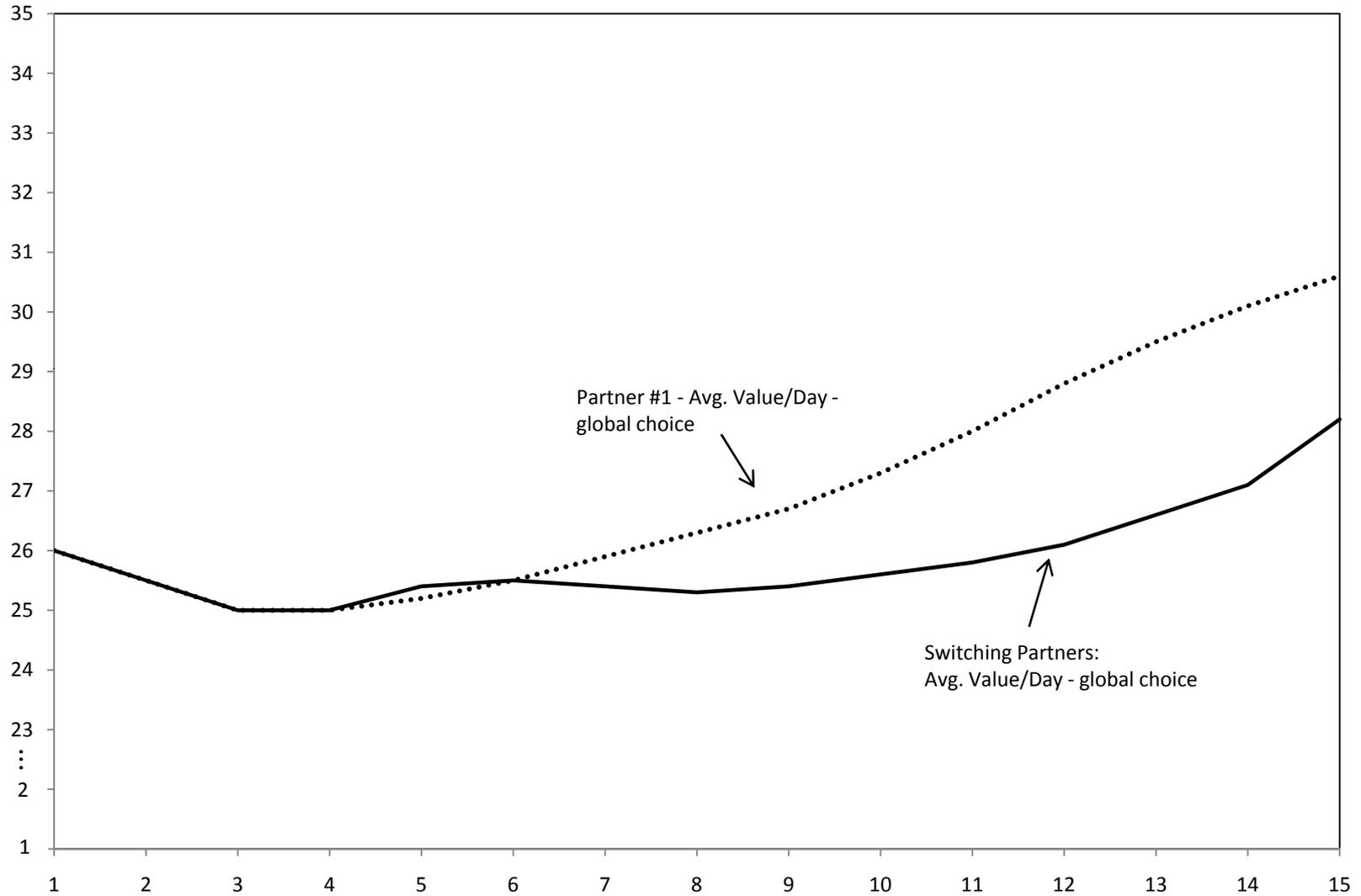
Day	Partner #1 Value/Day - local choice	Partner #2 Value/Day - local choice	Total (all days)	Switching Avg. Value/Day - global choice
1	26		26	26
2	25		51	25.5
3	24		75	25
4	25		100	25
5	[25]	27	127	25.4
6		26	153	25.5
7		25	178	25.4
8		25	203	25.3
9		26	229	25.4
10		27	256	25.6
11		28	284	25.8
12		30	314	26.1
13		32	346	26.6
14		33	379	27.1
15		34	423	28.2

Figure 6



Switching Partners : Global vs. Local Choice

Figure 6A



Switching Partners: Global vs. Local Choice

Table 7 - Partner #2

Day	Value/Day – local choice	Total (all days)	Avg. Value/Day – global choice
1	27	27	25.4
2	26	53	26.5
3	25	78	26
4	25	103	25.8
5	26	129	25.8
6	27	156	26
7	28	184	26.2
8	30	214	26.8
9	32	246	27.3
10	33	279	27.9
11	34	313	28.5
12	37	350	29.2
13	39	389	29.9
14	40	429	30.6
15	40	469	31.3

Figure 7 - Partner #2

