“Living in sin” and marriage: A matching model

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Abstract. This paper develops a two sided matching model of premarital cohabitation and marriage in which premarital cohabitation serves as a period of learning. We solve for the optimal policy to be followed by individuals by treating the model as a three stage dynamic programming problem. We find that couples are more discriminating when forming marital unions than when forming cohabiting unions. Cohabitation unions arise among members of the same “class” and there is overlap between the classes formed by marital unions and cohabiting unions. This implies that some cohabiting unions progress to marriage while others do not, a finding borne out by empirical studies.

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1. Introduction

The now old fashioned term “living in sin” has been used to describe unions in which couples live together without first having a formal marriage. This type of living arrangement is more commonly referred to as cohabitation or as a common law union. The incidence of cohabitation has increased dramatically over the last three decades in North America and Europe. For example, between the mid 1970s and the late 1980s the percentage of women aged 20–24 who were in cohabiting unions rose from 11% to 49% in France (Kiernan

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1996). In Canada, only 1 in 16 Canadian couples in 1975 reported to have ever been in a cohabiting union while this number had risen to 1 in 10 in 1995 (Wu and Balakrishnan 1995).

Cohabiting unions however, tend to be short-lived. Evidence from the United States indicates that 40% of all cohabiting couples either marry or stop living together within a year and only a third of cohabiting couples are still cohabiting after two years (Bumpass and Sweet 1989; Thornton 1988). Therefore, although more couples live together without marriage than in the past, this appears to be a transitory stage in their lives. Empirical studies find that 60% of those who marry after living in a cohabiting union, marry their cohabiting partners (Bumpass and Sweet 1989). In addition, the most frequently cited reason for unmarried individuals living together is to assess compatibility before marriage (Bumpass et al. 1991). More recent evidence based on data collected in 1992 from the British Household Panel Study also indicates that more than half of first cohabitations turn into marriage (Ermisch and Francesconi 1999).

Since so many of today’s marriages are preceded by cohabitation, it is natural to ask whether this affects future marital success. Some empirical studies have found that couples who have lived together before marriage, face a higher probability of subsequent marital dissolution (Balakrishnan et al. 1987; Bumpass and Sweet 1989; Teachman et al. 1991). Following these studies, research has investigated issues of selectivity; that is, whether couples who are more likely to cohabit are also less averse to divorce. Findings suggest that prior cohabitation has no effect on subsequent marital dissolution once selectivity corrections have been made (Lillard et al. 1995). One explanation offered for this finding is that it is the events that occur after marriage rather than before that determine marital stability (Waite 1995). Of course, cohabitation need not be viewed only as a prelude to marriage but also as an alternative to marriage, or even as an alternative to singlehood.

Since many cohabitation unions are short-lived and usually end in marriage, we develop a model in which at least the initial motivation for premarital cohabitation is to learn about the quality of a potential marriage partner. Therefore, it serves as an information collecting period during which potential partners can assess one another and decide if they should embark upon a formal marriage. At the end of this period of cohabitation, some unions progress to marriage while others are terminated. We find that individuals are more discriminating when forming marital unions than when forming cohabiting unions. That is, they sometimes form cohabiting unions with individuals whom they eventually reject as marriage partners. Individuals are shown to partition themselves within classes when forming cohabiting unions and that cohabiting unions occur only among members of the same class. We establish that there is overlap between the classes formed by cohabiting unions and marital unions suggesting that some of the unions that began as cohabiting unions end in marriage while others do not. The modelling framework used is a steady state matching model with nontransferable utility and heterogeneous agents as developed in Burdett and Coles (1997) hereafter simply Burdett and Coles.

A model of a decentralized marriage market in which positive assortative mating arises as an equilibrium outcome is developed by Burdett and Coles. Positive assortative mating, discussed in Becker (1973, 1974), is the propensity of individuals to choose marriage partners who are similar to themselves in