INTRODUCTION

People seeking romantic relationships have advertised for partners on the internet in both developed countries (e.g., U.S.A.) and developing countries such as India since that first became possible twenty or more years ago. However, advertising patterns differ among societies with more advertisements in the United States by people looking for short term relationships (as evidenced by the success of such sites as Tinder), and more advertisements in India from people looking for suitable spouses in a society where overwhelmingly people have arranged marriages (Krishnan 2012).

Thanks to its complex nature the matrimonial decision in India, which has great cultural importance, has stimulated the rise of a large thriving industry of computer assisted matchmaking services catering to the millions of Indians searching for suitable spouses. This phenomenon, in turn, has attracted the interest of a variety of disciplinarians, including information scientists and social scientists.

This chapter’s focus is sociological: it concerns the way the computer has been harnessed to assist both an ancient custom of arranged marriage among Hindus and the special occupational group known as matchmakers. The principal argument is that computer assisted matchmaking, thanks to the computer’s virtually unlimited memory, improves the chances that the marriage contracted by a couple utilizing the service will be durable and happy because it offers the possibility for fine grained analysis.

From a sociological standpoint, it is maintained here that Indian matchmaking and medical diagnosis are fundamentally similar phenomena in that both are the result of non-random, non-rational processes that can be efficiently analyzed using the garbage can model of Cohen, March and Olsen, as modified by Zeldenrust (1990) and Fisher (2005). The model itself is a kind of dynamic input-output model that emphasizes flows into and out of the “garbage can” and storage within the “garbage can.” Since its development in the early 1970s the garbage can model has been applied to study “decision making in organizational anarchies” (1972) and government planning (Kingdon, 1984); and in the modified form employed here it has been used to study research problem choices of scientific research teams in the Netherlands (1990) and in the United States and Canada (2005); and to study how to improve medical diagnosis (2014).

Although this chapter focuses on India, some conclusions may apply to other societies where arranged marriages also occur: in Japan (see Blood, 1967), among European royalty from the Middle Ages onward, (see, e.g., Harris, 1989); and among such groups as the haridim (ultra pious Jews). Elsewhere, e.g. among the wealthiest families in the United States, elements of arranged marriage survive in such traditions as debutante balls whose purpose is to enhance the probability that the eligible children of the wealthy elite meet and fall in love with suitable mates, i.e. eligible singles from “good” families. However, as Krishnan points out, in India, the tradition of arranging marriages has survived the homogenization of culture of the modern era (exemplified by the popularity of “pizza, burgers, denim and rock music in India as in Europe and North America”) with the result that “in most Indian communities” people
feel “the need to conform to traditional marital practices” (p.18).

This chapter first briefly considers the complexity of the marriage decision as a consequence of constraints that must be satisfied, especially as it bears on the variety of data to be collected and analyzed. In India, the first constraint is that the marriage ceremony be performed as required by the tenets of the Hindu religion. This can be hugely expensive. According to Yee (2008), “the ceremonies are very colorful, and celebrations of the nuptials may extend for several days.”

Another constraint is the cost in time spent on the search for a suitable mate. Neither the family of the person searching for a mate for their eligible offspring nor the prospective bride (or groom) want a long drawn out search. Therefore, people seeking the services of a matchmaker or a computer assisted matchmaking service, will insist on a relatively limited group of highly desirable spouses, perhaps no more than six from whom to select the spouse. Unsurprisingly, given India’s billion plus population the computer matchmaking services have accumulated data about millions of marriage eligible individuals to cater to this demand.

A third constraint is that the negotiations between families can be similar in complexity to those between Indian “business groups”—somewhat akin to conglomerates or loosely affiliated companies that share key personnel (e.g. senior managers or owners). The latter for instance engage in lengthy, complex negotiations arising from a desire to merge or coordinate in some manner (Khanna & Yafeh, 2015). Given the constraints and the importance for families of both bride and groom of a suitable spouse for their progeny, if information scientists can adequately address the technical problems of collecting, storing, and analyzing data on tens of millions of potential mates, it stands to reason computer assistance would be popular among marriage minded Indians.

How can the garbage can model illuminate the dynamics of the computer assisted arranged marriage in India? The model’s critical feature relates to arriving at decisions based on imperfect and incomplete information in a nonrandom non-rational process: selection of a mate as a key societal decision to assure the replacement of deceased members of society.

**BACKGROUND**

What are the essential features of the decision to marry in the Indian context? First, without any slight intended to the many varieties of relationships among people, this chapter defines marriage as the union of a man and a woman with the intention of procreating and rearing children.

Selecting a mate given this intention becomes a non-rational decision made under conditions of imperfect information because the sexual compatibility necessary to procreate is unknown until conception has occurred. Selecting a mate in this context is also a non-random decision. Whether the decision to marry is preceded by rational calculation of the decision maker(s) or “chemistry,” the choice is definitely not random or probabilistic (though perhaps it could be modeled stochastically). It is socially patterned or cultural in a broadly understood way because the criteria of choice reflect societal standards of what is desirable in a mate etc. Finally, except perhaps in isolated cases it is not the decision of only the individuals who are to be married but of the organizational unit—the family, or more accurately, the families (a collectivity of organizations) —of the people to be married.

Krishnan illustrates this critical point noting that in her own case her “grandparents’ alliance was arranged solely by the family patriarchs.” The marriage of Krishnan’s parents “was initiated by the family elders but was approved by both of the [people to be wed]” while Krishnan herself and her future husband “initiated their relationship themselves and later received approval from both sets of parents.

As Krishnan points out, the participation of all stakeholders in the decision to marry even