

The Economics of Dowry and Brideprice

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Payments between families at the time of marriage existed during the history of most developed countries and are currently pervasive in many areas of the developing world. These payments can be substantial enough to affect the welfare of women and a society's distribution of wealth. Recent estimates document transfers per marriage amounting to six times the annual household income in South Asia (Rao, 1993), and four times in sub-Saharan Africa (Dekker and Hooogeveen, 2002).

This paper first establishes some basic facts about the prevalence and magnitude of marriage payments. It then discusses how such patterns vary across countries depending upon economic conditions, societal structures, institutions, and family characteristics. Such payments have also evolved within societies over time. For example, in some periods such payments have risen sharply. In some cases, payments have shifted from the grooms' sides to the brides', and vice versa. Also, property rights over such payments have sometimes shifted between marrying partners and parental generations.

Economists, who have only recently begun to work on the topic, have focused on explaining these facts. The second part of the paper addresses this economic literature. Though considerable insight into many of the facts has been gained, many of the existing economic explanations are weakly convincing, and many puzzles remain. One crucial difficulty is that solid data in this field have been extremely rare. The descriptions of marriage payments in this paper are synthesized from a patchwork of studies across periods, places, and even epochs, and there are doubtless numerous cases which remain undocumented. Thus, the paper

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concludes with some conjectures along with suggestions for the type of data collection that will be needed to differentiate among them.

Prevalence of Marriage Payments

Most societies, at some point in their history, have been characterized by payments at the time of marriage. Such payments typically go hand-in-hand with marriages arranged by the parents of the respective spouses. These marriage payments come in various forms and sizes but can be classified into two broad categories: transfers from the family of the bride to that of the groom, broadly termed as “dowry,” or from the groom’s side to the bride’s, broadly termed as “brideprice.” Brideprice occurs in two-thirds of societies recorded in Murdock’s (1967) *World Ethnographic Atlas* of 1167 preindustrial societies. Conversely, dowry occurs in less than 4 percent of this sample. However, in terms of population numbers, dowry has played a more significant role, because the convention of dowry has occurred mainly in Europe and Asia, where more than 70 percent of the world’s population resides.

Prevalence of Brideprice

The custom of brideprice dates back as far as 3000 BCE. The ancient civilizations of Egyptians, Mesopotamians, Hebrews, Aztecs, and Incas all used brideprice (Quale, 1988). The Germanic tribes, who date from 2000 BCE and ruled western Europe from the 600 to 1000 CE, required brideprice for a marriage to be legal (Hughes, 1985). A valid marriage contract in Islamic law required a form of brideprice (Bianquis, 1996). Such transactions are associated with the Maghreb of the early Middle Ages, Bedouin tribes of the Middle East, and countries previously under the Ottoman Empire such as Iraq, Syria, Egypt, Turkey, Iran, Albania, and Afghanistan (Rapoport, 2000; Quale, 1988). Classical China required the negotiation of a brideprice for the validity of marriage, and these transfers continue to be the norm in many rural areas today (Ebrey, 1993). China also seems to be one of the few examples where brideprice and dowry coexist, with the brideprice being compulsory and the dowry, which is more voluntary in nature, typically financed with a return portion of the brideprice (Engel, 1984). Taiwan also seems to follow this traditional Chinese practice of exchanging marriage payments in both directions (Parish and Willis, 1993). Other countries in Southeast Asia, such as Thailand, Indonesia, and Burma, seem to only transfer brideprices (Cherlin and Chamrathirong, 1988; Spiro, 1975). Brideprices are most prevalent in Africa; more than 90 percent of sub-Saharan societies traditionally made such marriage payments (Murdock, 1967; Goody, 1973).

Table 1 lists recent studies that demonstrate the prevalence of brideprices in contemporary times. Brideprices remain prevalent in the rural areas of China, but rare in urban Chinese environments. The majority of urban marriages in Thailand seem to make monetary transfers. It was also common in the major cities of Egypt,

Table 1
Prevalence of Brideprice in Contemporary Societies

<i>Country</i>	<i>Years</i>	<i>Paid a brideprice</i>	<i># Observations</i>
Rural China	1950–2000	79%	451
Urban China	1933–1987	9%	586
Taiwan	1940–1975	53%	964
Rural Thailand	1950–1978	93%	248
Urban Thailand	1950–1978	79%	395
Cairo (Egypt)	1940–1976	93%	919
Damascus (Syria)	1940–1976	84%	1164
Kinshasa (Zaire)	1940–1976	96%	694
Tororo (Uganda)	1940–1976	95%	781
Urban Iran	1971–1991	99%	511
Uganda	1960–1996	73%	1657
Rural Uganda	1960–1980	98%	155
Rural Uganda	1980–1990	88%	364
Rural Uganda	1990–1996	65%	226
Urban Uganda	1960–1980	96%	93
Urban Uganda	1980–1990	79%	379
Urban Uganda	1990–1996	46%	440
Turkey	1944–1993	29%	6519
Rural Turkey	1960–1975	46%	127
Rural Turkey	1975–1985	37%	205
Rural Turkey	1985–1998	23%	286
Urban Turkey	1960–1975	34%	210
Urban Turkey	1975–1985	24%	367
Urban Turkey	1985–1998	12%	650

Source: Information for rural China comes from Brown (2003); for urban China, from Whyte (1993); for Taiwan, from Parish and Willis (1993); for Thailand refer to Cherlin and Chamratrithirong (1988). Statistics for cities of Egypt, Syria, Zaire, and Uganda are from Huzayyin and Acsádi (1976), and for Iran, see Habibi (1997). The data used for the statistics from Uganda and Turkey are from the Demographic Health Surveys.

Syria, Zaire, Uganda, and Iran at least until the 1980s. Recent data from Uganda and Turkey indicate some abatement, both in rural and urban areas.

Prevalence of Dowry

The dowry system dates back at least to the ancient Greek city-states (800 to 300 BCE) and to the Romans by around 200 BCE. The Greco-Roman institution of dowry was then eclipsed for a time as the Germanic observance of brideprice became prevalent throughout much of Europe, but dowry was widely reinstated in the late Middle Ages. In medieval western Europe and later, dowries were common practice among most, if not all, social and economic groups. Since dowry was required under Roman law, dowries were also transferred in many parts of the Byzantine Empire until its fall to the Ottomans in the fifteenth century (Patlagaen, 1996). Dowry payments were prevalent in seventeenth and eighteenth century Mexico and Brazil, where Spanish and Portuguese family law governed colonial

Table 2
Prevalence of Dowry in Contemporary Societies

<i>Country</i>	<i>Years</i>	<i>Paid a dowry</i>	<i># Observations</i>
Rural India	1960–1995	93%	1217
Rural India	1970–1994	94%	1842
Rural Pakistan	1970–1993	97%	1030
Pakistan	1986–1991	87%	1300
Rural Bangladesh	1945–1960	3%	2303
Rural Bangladesh	1960–1975	11%	3367
Rural Bangladesh	1975–1990	44%	3745
Rural Bangladesh	1990–1996	61%	1065
Rural Bangladesh	2003	76%	1279

Source: Information for the first sample from rural India comes from the NCAER (National Council of Applied Economic Research, India) data provided by Vijayendra Rao. The second sample is from the Survey on the Status of Women and Fertility (SWAF) by the Population Studies Center, University of Pennsylvania. For Pakistan, the first sample is from the SWAF, the second from the surveys of the World Bank's Living Standards Measurement Study. The Bangladesh data for the earlier years is from the Matlab RAND Family Life Surveys; the final sample, for the year 2003, is from Suran, Amin, Huq, and Chowdury (2004).

marriages until those countries gained their independence (Nazarri, 1991; Lavrin and Couturier, 1979).

In contemporary times, India's widespread dowry payments have been extensively documented. Dowries have long been a custom in India and are presently an almost universal phenomenon. Comparatively little research has explored marriage transfers in the rest of south Asia, though several studies point to dowry payments now occurring in Bangladesh, Pakistan, and Sri Lanka. Table 2 highlights the prevalence of dowries in contemporary South Asia. In both India and Pakistan, paying dowry at the time of marriage is almost universal. In Bangladesh, the probability of paying a dowry at the time of marriage is increasing.

Magnitude of Marriage Payments

The historical record shows that marriage payments are pervasive. These payments can be large enough to affect savings patterns and have implications for the distribution of wealth across families and generations. Tables 3 and 4 provide a sense of the magnitudes involved. Table 3 refers to studies pertaining to marriage transfers from the groom's side, while Table 4 refers to studies pertaining to marriage transfers from the bride's side.

As Tables 3 and 4 suggest, there haven't been many empirical studies done on marriage payments and, thus, it is difficult to generalize. However, dowries do seem to comprise a substantially larger proportion of household income, amounting to several times more than total annual household income, than do brideprices.

However, brideprices are still significant, and can also represent a large financial burden for poor households.

Social Characteristics and the Occurrence of Marriage Payments

Substantial ethnographic research by anthropologists has aimed at distinguishing between those societies where the burden of marriage payments falls primarily on the groom's family and brideprices are paid, and those where the bulk of the transfer comes from the bride's family and dowries are paid. The general pattern seems to be that brideprice exists more frequently in primitive, tribal, and often nomadic societies. Several scholars have even contended that dowry marks a transition to more complex societal structures. For example, Hughes (1985) argues that the historical absence of brideprice in Greece and Rome was an important demarcation of the complexity of Greco-Roman civilization. This contrasts with contemporary Indo-European peoples (the Germanic tribes) and also the ancient and more primitive peoples of the Mediterranean whose legal and religious literature, from the code of Hammurabi to the Bible, records the practice of brideprice.

In many ancient cultures, the practice of brideprice began to wane, and a transformation to the custom of dowry occurred as these civilizations grew and flourished. This pattern occurred in the Babylonian empire of Mesopotamia as the society slowly began to urbanize after the eighteenth century BCE (Quale, 1988). Similarly, the ancient Egyptians began to emphasize dowry by the sixth century BCE. Ancient Hebrews also experienced the same shifts away from brideprice to dowry as they moved from pastoral nomadism on the fringes of Mesopotamia to settled agriculture and city life in the land of Canaan. Growth in the use of dowry amongst Hebrews continued with their movement into an increasingly urban life after the Diaspora (after 70 CE).

A predominance of dowry over brideprice in China during the Sung period (960–1279) also corresponded to the development of a more complex social order at that time. This period saw increased emphasis on the acquisition of education in comparison with the prior T'ang period, where a small number of ruling aristocrat families precluded the possibility of upward mobility for other classes (Ebrey, 1993). Goody's (1973) sample of 857 preindustrial societies and Murdock's (1967) sample of 1167 societies also confirm that dowry is mainly found in societies exhibiting substantial socioeconomic differentiation and class stratification. In present times, this pattern is reflected in a comparison between dowry-paying India, where the caste system represents perhaps an extreme example of social stratification, and the more homogeneous tribal societies of sub-Saharan Africa that practice brideprice.

Although brideprice is typically associated with reduced social stratification, societies which do practice the custom are typically developed enough to own some form of property to transfer at the time of marriage. In contrast, in many of the indigenous cultures of North and South America, which seem to have been

Table 3

Marriage Transfers from the Groom's Side

<i>Society</i>	<i>Time period</i>	<i>Average payments</i>	<i>Magnitude of average payments</i>
Germanic Tribes:			
Visigoths (Spain)	9 th century		1/10 husband's wealth (Quale, 1988)
Lombards (Italy)	9 th century		1/4 husband's wealth (Quale, 1988)
Franks (France)	9 th century		1/3 husband's wealth (Quale, 1988)
Asia:			
Rural interior provinces (China)	1960–2000	538 yuan (1985)	82% of value of household durables (Brown, 2003)
Rural south west (China)	1983–1987	700 yuan (1987)	1.1 × per capita annual income (Harrell, 1992)
Rural east Szechwan	1966–1981	109 yuan (1980)	1 × per capita annual income (Lavelly, 1988)
Middle East:			
Palestine	1920s	£49 (1925)	8 years of income for landless agricultural laborer (Papps, 1983)
Urban Iran	1971–1991	1,807,200 Iranian rials (1980)	\$7059 (Habibi, 1997)
Sub-Saharan Africa:			
Rural Zimbabwe	1940–1995	8–9 cattle	2–4 × gross household annual income (Dekker and Hoogeveen, 2002)
Bantu tribe (southern Africa)	1955	100 goats	Larger than average herd size per household (Gray, 1960)
East African herders	1940–1978	15–50 large stock	12–20 × per capita holdings of large stock (Turton, 1980)
Uganda	1960–2001	872,601 shillings (2000)	14% of household income (Bishai and Grossbard, 2006)

Notes: In the China cases, a proportion of the brideprice is returned to the groom's household in the form of a dowry property for daughters. In the Brown (2003) study, average brideprices are equal to 2.2 times average dowries. Similar proportions follow for Harrell (1992) and Lavelly (1988).

characterized by more propertyless subsistence, marriage payments were relatively rare (Schlegel and Eloul, 1988).¹

Brideprice-paying societies have also been associated with a strong female role in agriculture. Boserup (1970), in particular, has argued that brideprice is found in societies in which agriculture relies on light tools (such as the hoe) and thus where women are actively engaged. In contrast, she argues dowry is more common in heavy plow agriculture where the role for women is limited. This connection seems supported by the occurrence of brideprice in sub-Saharan Africa and China, where

¹ Alternative to monetary transfers is an exchange marriage, where women are simultaneously swapped from two families (sister-exchange) or two lineages or tribes (kinswomen-exchange). See Quale (1988) for more discussion.

Table 4
Marriage Transfers from the Bride's Side

<i>Society</i>	<i>Time period</i>	<i>Average payments</i>	<i>Magnitude of average payments</i>
Historical			
Europe:			
Athens	6 th Century BC		10% bride's father's wealth (Quale, 1988)
Mediterranean Jews	969–1250	150–1500 dinars	800 dinars could maintain a family for 30 years (Goiten, 1978)
Tuscany	1415–1436	125.5 florins	20% bride's household wealth (Botticini, 1999)
Urban Tuscany	1420–1436	1507.7 lire	6× annual wage of skilled worker (Botticini and Siow, 2003)
Florence	1475–1499	1430 florins	3× average fiscal wealth per household (Molho, 1994)
Colonial Latin America:			
Mexico	1640–1790	1000–5000 pesos	Equal to the cost of 3–16 slaves (Lavrin and Couturier, 1979)
South Asia:			
Rural Karnataka (India)	1960–1995	66,322 Rupees (1995)	6× annual village male wage (Rahman and Rao, 2004)
Rural Uttar Pradesh (India)	1960–1995	46,096 Rupees (1995)	3× annual village male wage (Rahman and Rao, 2004)
Rural south- central India	1920s–1980s	4,792 Rupees (1983)	68% of total household assets before marriage (Rao, 1993)
Rural Uttar Pradesh (India)	1970–1994	\$700	7× per capita annual income (Jejeebhoy and Sathar, 2001)
Rural Tamil Nadu (India)	1970–1994	\$769	8× per capita annual income (Jejeebhoy and Sathar, 2001)
Delhi (India)	1920–1984	>50,000 Rupees (1984)	4× annual male income (Paul, 1986)
Rural Bangladesh	1996	12,700 Taka (1996)	62% of average annual household gross income (Esteve-Volart, 2004)
Rural Pakistan	1986–1991	18,196 Rupees (1991)	1.13 × annual household income (Anderson, 2005)
Urban Pakistan	1986–1991	32,451 Rupees (1991)	1.23 × annual household income (Anderson, 2005)

women's participation in agriculture is relatively high. The reemergence of dowry in medieval Europe also corresponded to a period of economic expansion coinciding with the introduction of heavier plough agriculture technology. In turn, this technology led to greater productivity, more surplus for trade, growth in commerce, and a rise of towns, all of which have been argued to increase the amount of household-bound activity for women (Quale, 1988).

The use of brideprice has tended to correlate with polygyny (men have more than one wife) and also with the possibility of divorce. In contrast, monogamy is the norm and divorce is rare in dowry-paying societies. For example, brideprice is near-universal in sub-Saharan Africa, where more than 95 percent of societies are traditionally polygynous (Goody, 1973). Polygyny was also permitted in ancient Israel, Mesopotamia, ancient Egypt, classical China, and Islamic countries, all of which commonly had the burden of marriage payments falling to the groom's side (Burguiere, Klapisch-Zuber, Segalen, and Zonabend, 1996).

In contrast, lineage and locality of postmarital residence seem to play little role in determining the direction of payments. Both dowry- and brideprice-paying societies tend to be patrilineal (children belong to the lineage of their father) and patrilocal (brides join the household of grooms and their families upon marriage) (Goody, 1973; Murdock, 1967; Quale, 1988).

Family Characteristics as Determinants of Marriage Payments

The previous section summarizes the underlying patterns of societies that determine the type of marriage payment that occur. This section emphasizes the nature of the economic transaction between the two families in determining the magnitude of these payments.

Determinants of Brideprices

Because women generally join the household of their groom at the time of marriage, brideprice is typically considered to be the payment a husband owes to a bride's parents for the right to her labor and reproductive capabilities. The amount of brideprice required has usually been rather uniform throughout society, where the size is linked directly to the number of rights which are transferred and not to the wealth level of the families involved (Quale, 1988; Goody, 1973). The studies of Tapper (1981) for Afghanistan, Zhang (2000) for rural China, and Mulder (1995) for Kenya suggest that the amount of brideprice is relatively constant across families of different income levels. Evidence from Kenya suggests that brideprice amounts also do not vary with the rank of the wife in polygynous marriages.

Ancient brideprice was often considered a direct payment for a bride's virginity. The amount was fixed at a relatively constant level in early legal codes of the Germanic tribes (Hughes, 1985) and in Hebrew law (Alvarez-Pereyre and Heymann, 1996). Among Bedouin tribes, where marriage to paternal cousins was most common, the brideprice was often larger if the bride married a more distant relative because in that case, the groom gained rights to a woman and children from a more distant lineage (Bianquis, 1996). This relationship was similarly found by Papps (1983), who studied brideprices in a 1920s Palestinian village, and Kressler (1977), who looked at data from 1964–1975 among Bedouin living in Israeli towns. The amount of brideprice can also depend on the expected number of children a woman will bear. For example, a divorced woman who already has

children will receive a lower brideprice, whereas women who reach puberty earlier receive a higher price (Dekker and Hoogeveen, 2002; Mulder, 1995).

In sub-Saharan Africa, a central purpose of the brideprice is to create an alliance between kinship groups (Dekker and Hoogeveen, 2002; Ekong, 1992). As a result, raising the brideprice is often the responsibility of the groom's extended lineage group, with the principle contributions coming from his father, grandfather, and father's brothers, and with mother's brothers making small contributions. Likewise, since in this setting the entire lineage group has rights to a woman, the brideprice is distributed among many members of the bride's extended family. In this case, larger brideprices can arise with larger lineage groups.

Determinants of Dowries

Relative to brideprices, the amount of dowry varies substantially and tends to be negotiated on an individual basis. Dowry typically arises in complex socio-economic, non-kinship-based, societies with endogamous marriage practices (that is, where men and women from families of equal social status marry). Dowry then becomes a means to maintain social status by attracting a husband of at least equal standing for one's daughter. It correlates with strongly class-based social systems where higher-level individuals—by virtue of wealth, power, and possibly claim to a superior hereditary status—do not willingly intermarry with the lower levels. As Quale (1988) explains, a high-status husband might mean a Brahmin in India, an aristocrat in Renaissance Europe, or a freeborn citizen in ancient Athens, but the forces tending toward the use of dowry are the same. As a result, the amount of dowry generally increases not only with the wealth of the bride's father, but also with the groom's future prospects.

Botticini (1999) empirically verifies the positive relationship between the amount of dowry transferred and both sides' household wealth, using data from fifteenth-century Tuscany. In Guzzetti's (2002) sample of dowries from fourteenth-century Venice, average dowry increased with social class, with dowries of nobles almost four times those of commoners. Goiten (1978) similarly points to class stratification in dowries amongst Jews in the Mediterranean during the High Middle Ages. At this time, the destitute paid no dowry at all, while the very rich exchanged cash plus maidservants and parts of houses.

Similar patterns are confirmed for modern India. Dowries are largest amongst the highest ranking castes (Rao, 1993; Dalmia and Lawrence, 2005). Indeed, strikingly similar preferences seem to determine dowry payments in current-day South Asia and in historical Europe. According to Chojnacki (2000), the Renaissance marriage market valued maturity in grooms, chaste youth in brides, and family wealth and prominence for both. Typically, in India, the most important quality of a bride is a good appearance, whereas for a groom it is the ability to earn a living, often reflected in his educational level (Caldwell, Reddy, and Caldwell, 1983; Billig, 1992). Empirical studies confirm a significant positive relationship between dowry levels and the education of Indian grooms (Dalmia and Lawrence, 2005; Deolalikar and Rao, 1998), Bangladeshi grooms

(Arunachalam and Logan, 2006; Esteve-Volart, 2004), and Pakistani grooms (Anderson, 2004). The same studies also suggest that the education of brides is significantly and positively related to dowry levels, after controlling for family wealth and grooms' characteristics.²

When Marriage Payments Have Soared

We now move away from cross-sectional perspectives to consider instances of how marriage payments have changed within societies. The most dramatic changes are the times when payments have risen substantially. Such rises seem to occur particularly for dowries, and have often precipitated legislative and regulatory initiatives to reduce their effect. For example, real dowries have been rising in India for the last six decades. Rao (1993) shows that real dowry increased 15 percent annually between 1921 and 1981 in India. This increase occurs while holding constant grooms' and brides' characteristics, controlling for the wealth of both families, and imposing a real price index. In a Delhi-based case study by Paul (1986), average real dowry payments increased from 3,998 rupees in 1920–1929 to 71,173 rupees in 1980–1984. Interviews from a study in Goa by Ifeka (1989) showed that the highest-quality grooms received a dowry of 2,000 rupees in 1920. In 1980 they could command between 500,000 to 1 million rupees, far outstripping general price inflation over the relevant period (which was a factor of 14). The political outcry against this escalation of dowry payments culminated in the passage of the Dowry Prohibition Act in 1961 outlawing the practice. But despite this law, dowry inflation has persisted unabated. Similarly, the Pakistani parliament made efforts to reduce excessive marriage expenditures with a 1976 law. The scale of dowries in Bangladesh does not appear to have reached that of urban India, but the escalation of payments lead to them being made a punishable offense under the Dowry Prohibition Act of 1980.

Dowry escalation has also occurred in other societies. Dowry increases were reported in Roman times and amongst medieval and early modern noble families across Europe. According to Saller (1984), Roman dowries rose in the early to mid-Republic. Stuard (1981) found that dowry payments in medieval Ragusa (in modern Dubrovnik) increased eightfold between 1235 to 1460, whereas prices at most tripled. Stone (1965) showed that dowries among the British aristocracy during the sixteenth and seventeenth centuries almost trebled, while prices during this time increased by only one-third. Dewald (1980) reports dowry increases in sixteenth-century France, while Amelang (1986) does so for seventeenth-century Spain. Dowry escalation is well documented to have occurred in the late Middle Age and early Renaissance cities of Italy (Molho, 1994; Chojancki, 2000). Some of these samples do not correct properly for changes in the cost of living and currency

² It is possible that this result follows because the bride's family wealth, which is positively correlated with her education, is measured with error.

values, but the recurrence of the overall pattern is clear. For example, recent work by Botticini and Siow (2003) confirms that average real dowry payments in urban Florence increased from 438.3 lire in 1242–99 to 1507.7 lire in 1420–36.

Laws were also imposed to limit the size of these payments in the fifteenth and early sixteenth centuries, but they seemed to be largely ignored. For instance, the first limit on Venetian dowries was enacted in 1420, and payments were abolished by the law of 1537. Dowries were limited by a 1511 law in Florence and prohibited by Spanish law in 1761. Similarly, the Great Council in Medieval Ragusa repeatedly intervened to regulate the value of dowries between the thirteenth and fifteenth centuries (Stuard, 1981). Further evidence of the scale of dowry demands is the establishment of the Florentine Dowry Fund in 1424, which was designed to alleviate the government's fiscal problems while providing families with a government-secured investment for accumulating dowries (Molho, 1994).

In comparison to dowry transfers, little evidence exists of brideprice escalation in either the historical record or contemporary sources. Some studies claim to find a rise in brideprice through the colonial period (1930s to 1960s) in eastern and southern Africa (Mulder, 1995), but these studies have not properly accounted for inflation levels. At times, the colonial administration aimed to intervene, and missionaries typically discouraged the practice. However, these reactions seem to have been motivated by moral opposition to the tradition rather than by financial pressures (Ferraro, 1976). There are also references to increasing brideprices in Palestine between the early 1960s and 1980s, though again price and wealth levels are not controlled for (Moors, 1994; Kressel, 1977). The 1950 Chinese Marriage Law prohibited the transfer of money or gifts in connection with marriage and was aimed at limiting brideprice. However, once again, this law does not seem to be a reaction to inflationary pressures, but rather an ideological attempt by communist revolutionaries to try to abolish the feudal marriage system (Engel, 1984).

Property Rights and Marriage Payments

Thus far, we have focused discussion of differences in marriage transfers on the side of the marriage bargain on whom the financial burden falls—either the grooms' brideprice or the brides' dowry—but ownership rights to these transfers can also vary and evolve through time. Payments from the groom's side are either transferred directly to the bride's parents, formally termed "brideprice," or to the bride directly, commonly known as "dower." Similarly, payments from the bride's parents can either go to the bride herself, referred to as "dowry," or be directly transferred to the groom and his family, termed "groomprice," to the exclusion of the bride. Both dowry (as a pre-mortem inheritance) and dower are transfers that remain with the conjugal couple but are the formal property of the wife throughout the marriage.

Brideprice and Property Rights

Brideprice transfers, where the bride's parents receive the payment, are the norm in sub-Saharan Africa. Dowry, which remains the property of the bride and is usually considered her insurance in case of divorce or husband death, is most typical of traditional Islamic marriages. The historical record on brideprice versus dowry suggests property rights over the marriage transfer evolve through time.

As mentioned above, within the ancient civilizations of the Babylonians, Egyptians, and Hebrews, there was an overall shift away from brideprice to dowry as the society developed and urbanized. An additional feature of this transformation was that the marriage payment seemed to change first from a brideprice into a dowry and then finally into a dowry (Quale, 1988). A similar transformation seemed to occur for the Germanic tribes (Hughes, 1985). By the fifth century, the Burgundians (who settled in Gaul) awarded one-third of their brideprice to their wives and two-thirds to their wives' kinsmen. By the time the law codes were issued, the Visigoths (who ruled southwestern France and the Iberian peninsula) seem to have totally incorporated their ancient brideprice into the award grooms made to their brides. Similarly, the Lombards' (who conquered northern Italy) code of law made explicit a required dowry to be given directly to brides, as did Frankish customs in the Carolingian period (eighth to ninth century). This pattern is also reflected in the traditional Chinese practice of transferring a brideprice directly to the bride's parents, who then return a portion of this as dowry to their daughter. This amount is kept by the daughter as personal property throughout the marriage.

Dowry and Property Rights

Ownership rights over marriage payments from the brides' side have also undergone transformations. Most commonly, the traditional dowry transfer is considered to be a pre-mortem inheritance to the daughter, which formally remains her property throughout marriage. Goody (1973) in particular has emphasized this role of dowry in systems of "diverging devolution," where both sons and daughters have inheritance rights to their parent's property. As Botticini and Siow (2003) summarize, a strong link exists between women's rights to inherit property and the receipt of a dowry. This is seen in ancient Rome, medieval western Europe, and the Byzantine Empire. Studies have also emphasized the similarity between the amounts of dowry given to daughters and inheritances awarded to sons. Botticini and Siow (2003) show that average dowries in Renaissance Tuscany corresponded to between 55 and 80 percent of a son's inheritance. Dowries in seventeenth- and eighteenth-century colonial Brazil could amount to more than double that of the inheritance to each heir (Nazarri, 1991).

In numerous historical instances, dowry as bequests have given way to groom-prices—that is, a direct transfer to grooms. Chojnacki (2000) documents the emergence of a gift of cash to the groom (*corredo*) as a component of marriage payments in Renaissance Venice. Krishner (1991) confirms a pattern of legislation across northern and central Italy granting a husband broader control over his wife's dowry assets beginning in the fourteenth century. Common law, in which dowry

came under immediate control of husbands, predominated in England during the sixteenth and seventeenth centuries (Erickson, 1993). Reher (1997) similarly reports that during the early modern mercantile period in Spain, husbands had greater control over their wives' dowries. All of these examples point to a time of increased commercial activity and societal inequality, where groomprices emerged to secure husbands from prominent families (Anderson, 2004).

Nowhere, however, has this transformation been more dramatic than in present-day India over the last few decades. The traditional custom of *stridhan*, a parental gift to the bride, has changed into modern-day groomprices that have a highly contractual and obligatory nature (Caldwell, Reddy, and Caldwell, 1983; Billig, 1992). Generally a bride is unable to marry without providing such a payment. This transition in marriage payments happened at a time of significant structural change, as unprecedented opportunities for economic and political mobility began to open up following India's independence in 1947. Several studies connect the emergence of groomprice to competition amongst brides for more desirable grooms (for example, Srinivas, 1984). This transformation into groomprice seems to be occurring elsewhere in South Asia, too. For example, the Pakistan Law Commission reviewed dowry legislation in 1993, adding a new subclause stating grooms should be prohibited from demanding a dowry. In Bangladesh, a clear distinction remains between the traditional dowry (*joutuk*); gifts from the bride's family to the bride; and the new groom payments referred to as *demand*, which emerged post-Independence in the 1970s (Amin and Cain, 1997).

Economic Explanations

This discussion of marriage payment practices has established four main sets of facts. First, brideprice-paying societies have the following characteristics: they are relatively homogenous, women have a prominent role in agriculture, and polygyny is practiced. Dowry, in contrast, is found in socially stratified, monogamous societies that are economically complex and where women have a relatively small productive role. Second, brideprices are relatively uniform within societies and do not vary by familial wealth. Dowries, however, increase with both the wealth and social status of both sides of the marriage bargain. Third, there have been episodes of rising real dowries in both the historical record and in contemporary times. In contrast, there seem to be no comparable instances of real brideprice increases. Fourth, there is substantial variation over the property rights of marriage transfers. Moreover, these rights can transform within a society over time.

We now consider economists' contributions to understanding these facts. We first consider the first two facts together, which relate to choice between dowry and brideprice, and then look separately at the explanations for rising dowries and for variations in property rights across marriage transfers.

Dowry versus Brideprice

Most of the literature on marriage payments in economics is built on the seminal work of Becker (1991), who developed the marriage market framework to analyze transfers at the time of marriage. In Becker's model, men and women both possess varying qualities (or potential incomes). Marriage is viewed as a joint venture that offers greater efficiency in production (household, market, or both). Each person chooses the mate who maximizes their utility. The marriage market assigns mates and the distribution of returns among them. Optimal sorting requires that no bride and groom can be made better off by matching with someone else or by not marrying at all.

Usually an efficient marriage market exhibits positive assortative mating, where high-quality men are matched with high-quality women, and low-quality men are matched with low-quality women. This outcome follows when husbands and wives are complementary inputs into production and an efficient market maximizes aggregate output, so that no person can improve their marriage without making others worse off. The equilibrium division of the marriage surplus between spouses is determined by these conditions. If the rule of division of output within the marriage is inflexible, so that the share of income of each spouse is not the same as under the market solution, then an up-front compensatory transfer will be made between the spouses (or their kin) and efficiency will be restored. Thus, if the wife's share of family income is below her shadow price in the marriage market, then a brideprice will be paid by the groom's family to the bride or her family, and this transfer in reverse is a dowry. The division of marital surplus is likely to be inflexible given that household commodities like housing and children, which are jointly consumed, are difficult to divide. Also legal restrictions, social norms, or an implicit imbalance of power within the household could restrict the efficient division of surplus.³ Therefore this model predicts that marriage payments should be common.

Becker's (1991) theoretical framework is consistent with several of the facts presented here. The frequency and magnitude of brideprices should be greater when wives' input into production (like agriculture) is relatively high and in societies with a high incidence of polygyny, where there is greater competition by men for wives. This marriage matching framework can also explain a transition from brideprice to a dowry as societies grow more complex.

Consider first a primitive tribal society with homogenous men and homogenous women, but where women have economic value of their own, via their input into agriculture production, and hence receive a brideprice in equilibrium. Suppose that new wage-earning opportunities open up for men, while drawing women into the home. Women remain a homogenous group with less economic value,

³ It is also possible for marriage payments to arise due to the lack of ability to commit. For example, if after marriage a wife's alternatives become worse and there is no way for the husband to commit to the provision of resources in future periods, then an upfront payment from the husband to the wife could be an equilibrium outcome. This reasoning for marriage payments has yet to be explored by economists. An exception is Nunn (2005); refer to footnote 5.

while men become a heterogeneous group differentiated by their wage-earning capabilities. As a result, brides compete amongst themselves for the more desirable grooms. Brides with wealthier fathers outbid poorer ones in the marriage market and award dowries to the grooms with the higher earning power. Thus, dowry payments emerge due to quality differentiation amongst grooms as found in socially stratified societies and are consistent with a development process where women do not directly reap the benefits of modernization and men are the primary recipients of the new economic opportunities.

When Marriage Payments Rise

The economics literature offers two main explanations for the occurrence of rising real dowry payments, one based on demographic shifts and the other based on social status.

The demographic explanation, originally proposed by demographers and introduced to economists by Rao (1993), begins with population growth and the consequent “marriage squeeze.” A “marriage squeeze” refers to an imbalance between the numbers of marriageable men and women. In most societies, men on average marry younger women. Since women reach marriageable age ahead of men, increases in population affect the numbers of potential brides first, thus effectively causing an excess supply of potential brides in the marriage market. The marriage squeeze explanation of rising dowries states that, since population growth implies that grooms will be in relatively short supply, a corresponding increase in the price of husbands is part of the marriage market’s equilibration process. In the reverse situation, an excess supply of grooms would consequently lead to brideprice inflation. Some anthropological research on brideprice inflation in colonial Africa has indeed made the link between higher brideprices and greater demand for wives leading to increased out-migration of eligible grooms (Wilson, 1981).

This demographic explanation for dowry inflation has intuitive appeal, but it has been presented as an essentially static argument. A static view involves an implicit assumption that young brides who do not find matches in a given period remain unmarried thereafter. This implication fits with historical references to an imbalance in the supply of potential grooms and brides in dramatic cases of gender balance change, such as wars and epidemics, that affected marriage transfers (Molho, 1994). In these cases, temporary solutions were often dramatic too, such as an increased number of women entering convents.

But this essentially static view does not seem to capture the situation of current-day South Asia. There, marriage is still close to universal for both men and women. Thus, in Anderson (forthcoming) I consider a dynamic version of this basic demographic model. Young brides who do not find matches in one period can reenter the marriage market when older, and attempt to marry again. In this case, the model cannot explain protracted periods of rising dowry payments—as seen in present-day India. The intuition behind this result is that when a marriage squeeze occurs, some brides delay marriage to reenter the marriage market when older. But given that delay is costly, brides will only be willing to delay if they anticipate lower

prices in the future. Thus, women will only delay marriage—which is what must occur if there is a marriage squeeze yet all women still marry—if the price they have to pay in the future is *lower* than today. In short, intertemporal optimization and rationality imply that only a downward-sloping time path of dowry payments is consistent with market equilibrium during a marriage squeeze.⁴

An alternative explanation for dowry inflation emphasizes the role of inherited status in the marriage markets of socially stratified societies during the modernization process (Anderson, 2003). This explanation rests on the assumption that modernization tends to increase wealth inequality amongst potential grooms of a given status group. Inequality is more likely to occur when traditional roles, and incomes tied to them, give way to idiosyncratic market outcomes. Brides rank grooms in terms of both inherited status and potential income. Assuming substitutability between these two groom characteristics, low-status brides with wealth place a value on matching with grooms of higher inherited status, irrespective of the groom's potential earning power, since these brides place a high value on marrying into an elite group. As a result, even if the development process has caused a high social status groom to become poorer, it will have only minimal effect on the dowry that a lower social status bride is willing to pay for him. These payments thus act as a lower bound on the groom's dowry receipt. So the low-income, but high-status grooms do not see a large fall in payments; meanwhile, to maintain indifference amongst brides, the high-income, high-status grooms must see a relative rise in their payments; as a result average dowry payments increase.

According to this theory, dowry inflation arises as an endogenous response to a modernization process in which individuals of similar inherited status start having differentiated income levels. This insight is consistent with the experience of India where unprecedented opportunities for economic and political mobility arose for many castes post-Independence (after 1947) and dowry inflation occurred as income heterogeneity by caste increased. It is also consistent with other instances of dowry inflation in historical Europe, which tended to occur in societies where inherited status became incongruent with economic success. Chojnacki (2000), for example, links dowry inflation in early Renaissance Venice to competition between the oldest noble clans and newer ones, where the relative newcomers sought status by means of higher dowries, and the more ancient families fought to preserve theirs by the same means.

Property Rights and Marriage Payments

In Becker's (1991) framework, brideprices and dowries are two sides of the same coin, distinguishable only by the direction of transfer. The model does not address into whose hands the payment might fall, and hence cannot explain why property rights over marriage transfers might vary. Nor does it allow the possibility of transfers from both sides of the marriage bargain, as occurs in China. Zhang and

⁴ Edlund (2000) offers empirical evidence which challenges the marriage squeeze argument.

Chan (1999) point out that if we instead interpret dowry as a pre-mortem inheritance, rather than a price for grooms, then brideprices and dowries can potentially coexist in equilibrium and act as complementary instruments for the enforcement of efficient marital contracts.⁵ In their model, Becker's (1991) interpretation of brideprices is retained, whereas dowries serve to increase a bride's control over household resources to guarantee her market-level of utility.

Botticini and Siow (2003) also assume that dowry payments represent an intergenerational transfer from parents and ask why daughters receive their inheritance in the form of a dowry at the time of marriage while sons receive theirs as a bequest. They posit that parents transfer dowries to daughters and bequests to sons to solve a free-riding problem that occurs in patrilocal societies. In these societies, daughters join the husband's household and married sons remain with their parents. If married daughters share in the parents' bequests, sons will not get the full benefits of their efforts to extend the family wealth and as a result will supply too little effort. To mitigate this problem, altruistic parents give bequests to sons and dowries to daughters. This theory is consistent with societies where daughters who received dowries were excluded from future bequests, as they explain was the case in ancient Greece and Israel, thirteenth century Byzantine law, and some parts of medieval western Europe.

As discussed earlier, dowry payments can also transform from their original purpose of endowing daughters with some financial security into a "price" for grooms. In Anderson (2004), I develop a model which embeds and distinguishes the two potential roles for dowry to explain this transformation. In both the European and South Asian contexts, the emergence of a groomprice in lieu of dowry as a bequest seems to have corresponded with increased commercialization. The early stages of modernization can be characterized by, amongst other things, increased income inequality amongst men. In Anderson (2004), I demonstrate that dowry as groomprice *must* emerge with this increased male income heterogeneity. The intuition for this result is as follows:

As already emphasized, dowry-paying societies are stratified, monogamous, and endogamous (men and women of equal status marry). In traditional societies, where men have economic value but women do not, dowry as a bequest is consistent with this marriage pattern. Wealthier parents tend to give higher dowries which in turn render their daughters more attractive to grooms. Grooms who have higher incomes are in turn more attractive to brides. As a result, grooms with high incomes match with the daughters from families where the optimal size of bequest is large, implying positive assortative matching in the marriage market.

Early stages of modernization increase the income inequality amongst men across generations. Increased heterogeneity in the pool of grooms necessarily

⁵ A working paper by Nunn (2005) provides an explanation for the coexistence of dowries and brideprices using an evolutionary model. In his model, dowry, which yields a return each period, serves as a commitment device for men who would otherwise prefer to match with different women each period rather than remain married.

implies that brides of equal-wealth fathers match with grooms of differing wealth. If transfers were pure bequests, fathers of equal wealth would give bequests of equal size. However, as grooms prefer brides with higher bequests, *ceteris paribus*, brides receiving them obtain better grooms. Thus, with sufficient heterogeneity, dowry transfers cannot simultaneously satisfy optimal bequests and assortative matching in the marriage market. When the two motives for dowry transfer come into tension, equilibrium can only be maintained when a second price instrument emerges. Hence, a component of dowry as pure transfer to the groom (and his family), termed “groomprice,” endogenously comes into being.⁶

The shift from brideprice to dower has not yet been explored by economists, which may be partly due to the rarity of this phenomenon in the contemporary setting.

Explaining the Decline of Marriage Payments

Marriage payments have tended to decline and eventually to disappear. The reasons why have not been well understood, though anthropologists have offered some conjectures. Lambiri-Dimaki (1985) marks the advent of industrialization as the turning point in the history of dowry in Europe. Goody (1983) similarly points to industrialization in Europe as the cause of disappearance in marriage payments by the nineteenth century. According to him, the process of decline in marriage payments began with the urban classes, later followed by the rural. In Latin America, the disappearance of marriage payments corresponded to not only modernization but the end of the colonial period in the nineteenth century (Nazarri, 1991; Lavrin and Couturier, 1979). Several scholars similarly point to the 1960s and the post-colonial period as the beginning of the decline in African brideprice payments. In urban areas, an increasing number of couples began to choose civil marriages not requiring a brideprice—in contrast with customary marriage laws. Some customary laws have also abandoned the requirement of brideprice; for example, Zimbabwe did so in 1982. For those where brideprice still occurred, the financial responsibility increasingly fell directly to wage-earning grooms rather than to their extended lineage (Ansell, 2001). In China, because of the marriage laws prohibiting transfers, marriage payments declined during the collectivist period, but some research suggests their resurgence in the 1980s, particularly in rural areas (Harrell, 1992). There too, as the young have more control over the selection of partners and increasingly reside on their own, they tend to be covering more of the wedding expenses (Whyte, 1993). Similarly, some evidence suggests the prevalence of brideprice in Indonesia has dropped since the 1950s (Boomgaard, 2003) and so too the dower, in both urban and rural areas of Palestine from the 1960s (Moors, 1994).

⁶ See Arunachalam and Logan (2006) for an empirical analysis which tests for groomprice versus dowry-as-bequests using data from rural Bangladesh.

If we accept anthropologists' conjecture that modernization plays a role in these cases of decline and disappearance of marriage payments, then the interesting question to economists is what specifically about modernization does this? Moreover, why does this process play out so differently around the world? In South Asia, for example, modernization seems to have triggered groomprice inflation.

According to Botticini and Siow (2003), dowry payments disappear when the development process leads male children to become less likely to work and live with their parents. This change corresponds with the development and diversification of the labor market. Moreover, as the return to investing in human capital increases, the use of bequests to align work incentives becomes less important. In Anderson (2003), I attribute the decline and disappearance of dowry to the breakdown in inherited status and endogamous matching. This outcome would follow with a modernization process that transforms a hierarchical society based on inherited status into a more individualistic one based on achievement. Once the preservation of inherited status through marriage ceases to be important, endogamy—an essential constituent of stratified social order—is no longer necessary. An implication is that, in South Asia, were the marriage matching process to place less value on the caste of potential mates, dowry payments would eventually cease. Rao (1993), on the other hand, links the decline in dowries to a fall in population growth rates.

In Becker's (1991) model, dowries, as a price which clears the marriage market, may cease when they become an inferior way of providing brides with future wealth relative to investing in their human capital. But as mentioned, the empirical record does not demonstrate a strong negative relationship between brides' education and dowries. Moreover, no obvious historical link exists between women's increasing human capital (and labor force participation) and a decline in the dowry phenomenon. In Anderson (2004), I provide a model to explain this counterintuitive finding; it emphasizes the importance of the relative quality distribution of men and women in the marriage market, and the complementarity between brides' and grooms' characteristics. In this model, where men and women both have economic value but the quality distribution of men is more dispersed, groomprice payments can persist. Intuitively, as long as relatively homogeneous brides compete for a smaller supply of high-quality grooms, groomprices will emerge. By contrast, if grooms and brides are equally heterogeneous, then the supply of high-quality brides and grooms is equal, and groomprices need not exist. According to this theory, the acquisition of human capital by daughters does not suffice to cause disappearance of groomprices, but the cause instead lies in a relative increase in the heterogeneity of women's earning opportunities.

Restricting the practice of polygynous marriage will decrease brideprices in Becker's (1991) framework. Recent work by Tertilt (2005) explores this hypothesis by calibrating a model to show that for realistic demographic parameter values for 130 countries, an outright ban on polygyny will lead to the disappearance of

brideprices.⁷ Rao's framework of an excess supply of brides and dowry inflation could also explain brideprice deflation and indeed, others have correspondingly linked the decline in brideprices in Africa to a surplus of brides due to population growth and an increasing age at marriage for men (Mulder, 1995).

Marriage Payments and the Welfare of Women

Though marriage payments can take many different forms, no consensus exists on which of these forms, if any, will enhance the welfare of women. In theory, brideprice could be interpreted as explicit recognition and valuing of women's productivity and contribution to marriage; in practice, it often serves to limit women's control over their bodies. Both sexually and in terms of their labor, brideprice has long been linked to domestic violence, owing to women's fear of returning to their natal home without being able to repay the brideprice (Ansell, 2001). African women's rights campaigners advocate the abolishment of the practice, and have linked it to the spread of AIDS, since brideprice as payment for sexual rights leads to women's loss of say in sexual protection and frequency (Wendo, 2004). A working paper by Bishai and Grossbard (2006) demonstrates that brideprice increases the number of extramarital affairs for men, but decreases those of women.

In theory, dowry, as a pre-mortem inheritance, is set up to protect property given to women. However, this institution seems to often transform into one in which these property rights are given to men. Early feminists in Europe attacked the dowry system precisely because they objected to the fact that husbands ended up controlling the funds (Cox, 1995). An even more significant factor is the magnitude of these payments. In current-day South Asia, dowry payments can impoverish the bridal family and dramatically affect the lives of unmarried women, who are increasingly considered burdensome economic liabilities. The custom of dowry in India has been linked to female infanticide and, among married women, to "bride-burning" and "dowry-death"—that is, physical harm visited on the wife (sometimes leading to death) to extract promised dowry payments (Bloch and Rao, 2002). The National Crime Bureau of the government of India reports approximately 6,000 dowry deaths every year. Numerous incidents of dowry-related violence are never reported, and Menski (1998) estimates the number at roughly 25,000.

Remaining Questions and Suggestions

One across-the-board suggestion is that more systematic data collection is needed regarding the magnitude of these marriage payments, their direction, their

⁷ In her model, a ban on polygyny also leads to the emergence of groomprices due to brides now being in excess supply, as in Rao's (1993) explanation for high groomprices.

prevalence, and the property rights over them. In addition, some particular issues require more attention.

Most economic explanations for brideprice are based on notions of supply and demand in the marriage market. Demand for women should arise when they contribute productive agricultural labor and land is not scarce. Although correlations between women's economic productivity and polygyny and brideprices have been asserted in the anthropological literature, the importance of these relationships have not been empirically tested. For example, Jacoby (1995) empirically links the productivity of women in agriculture to polygyny in Africa but does not have data on brideprices. Likewise, the reported rise of brideprice payments in colonial Africa and their subsequent decline in more recent times is inferred from case study and anecdote, but has not been firmly established.

The aspects of modernization that particularly contribute to brideprice's decline are not well understood. Does economic development render women less productive and decrease the demand for wives? The apparent reemergence of brideprice in China is even less well understood. Might the biased sex ratios in favor of males in China be affecting the marriage market and creating brideprice pressures? This possibility could be formally investigated with the collection of regional data on marriage payments to compare with population rates.

The institution of dower, which seems to coincide with women's right to inherit property from their parents and is prevalent in the Islamic countries of the Middle East, has not been studied empirically or theoretically by economists. Dower seems related to close-kin matching, but this connection has not been explored. Once again, evidence on payments in these societies, their spatial distribution, and their correlation within kinship in marriage is needed.

Economists' interest in marriage payments partly stems from their potential to affect the wealth distribution across generations and families. However, economic analysis has not directly investigated these welfare impacts of marriage payments. In this respect, marriage transfers which are destined for the couple, either in the form of dowry or dower, may function differently from those which are paid directly from one set of parents to the other, like brideprice or groomprice. The former payment is an intergenerational transfer. The latter forms a circulating fund, with receipt for marriages of one gender being used to pay for marriages of children of the other. The distribution of familial wealth is then either biased towards families with more daughters (in a brideprice society) or towards those with more sons (in a groomprice society). The fact that wage-earning men in Africa are now beginning to fund brideprices themselves thus represents a transition from an interlineage transfer to an alternative intergenerational transfer. More generally, interlineage transfers (brideprices) at the time of marriage seem to predominate in relatively homogenous tribal societies, whereas intergenerational marriage transfers (dowries) prevail in status-based hierarchical societies. Once again, determining whether and why this holds true requires collection of detailed information about such payments across differing societies. Since societies display so much variation,

it is particularly opportune to collect data in societies like sub-Saharan Africa where transformations in marriage payments are occurring today.

■ *I thank Timothy Taylor, James Hines, Michael Waldman, Andrei Shleifer, and Patrick Francois for extensive comments on earlier drafts. This paper has also benefited from discussions with Philip Brown.*

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