New Cross-Cultural Perspectives on Marriage Transactions

**Brad R. Huber[1],
William F. Danaher[1],
and William L. Breedlove[2]**

Abstract

This article refines and extends previous cross-cultural research on marriage transactions (e.g., bride wealth, dowry). The authors begin by expanding the standard cross-cultural typology of marriage transactions. They identify six additional kinds of transactions (e.g., groom wealth, groom service) and show that many societies of the Human Relations Area Files (HRAF) probability sample have two or more types of transactions. Next, the authors take a Darwinian approach to marriage transactions. Differences in male and female reproductive strategies account for the general pattern of the bride's family materially benefitting from marriage at the expense of the groom's family. Kin selection theory explains why wealth devolves from the parents of the couple to the bride and groom. Finally, the authors examine evidence that the type of kin relied on by members of a society and the prevalence of polygyny also influence marriage transactions in predictable ways.

Keywords

Marriage transactions; evolutionary anthropology, reproductive strategies, kin selection, polygyny

[1]College of Charleston
[2]Independent scholar

Corresponding author:
Brad R. Huber, 19 St. Philip Street, Department of Sociology and Anthropology,
College of Charleston, Charleston, SC 29424
Email: huberB@cofc.edu

Introduction

Scholars have examined marriage transactions, such as bride wealth, dowry, and gift exchange, from a number of different perspectives. They have focused on symbols and meaning (e.g., Comaroff, 1980), labor needs, property, and status (e.g., Bell, 1998; Bossen, 1988; Goody, 1973; Harrell & Dickey, 1985; Kressel, 1977; Rao, 1998; Schlegel, 1991; Spiro, 1975; Tambiah, 1989), and the use of marriage transactions by family members to maximize their reproductive success (Apostolou, 2007, 2008; Dickemann, 1979; Gaulin & Boster, 1990; see also Borgerhoff Mulder, 1995). Although there have been disagreements among researchers about the interpretation of their findings (e.g., Dickemann, 1979, 1991, 1993; Gaulin & Boster, 1991, 1993; Lang, 1993; Schlegel, 1991, 1993), we view these perspectives as complementary rather than mutually exclusive.

We take an interdisciplinary approach to marriage transactions and test hypotheses using data from a worldwide sample of societies. From a Darwinian perspective, people around the world appear to utilize marriage as part of a long-term strategy to maximize their reproductive success. Because of this, the selection of a long-term mate is generally regarded as a serious matter and often involves the input of a group of people—the bride and groom, their parents, closely related kin, and friends. Each person involved in this process brings a unique set of biological, social, economic, and political assets to the marriage negotiations, and each weighs the costs and benefits of the marriage from their own particular vantage point. Nevertheless, the reproductive stakes of the couple and their parents are larger than those of other participants, and they often make the largest material resource investments at the time of marriage.

The bride and her parents come to the bargaining table offering more valuable reproductive resources than the groom and his parents. Women make a larger initial physiological investment in reproduction than men, and they generally provide more direct parental care. We argue that these reproductive differences shape marriage transactions around the world.

Marriage expenditures depend on the couple's and their families' socioeconomic status and goals. Consider Dickemann's analysis (1979, p. 171) of why a bride and her family might use dowry to their advantage by having her become the wife of a higher-status groom:

> Dowry purchases for the bride's family the assurance of greater reproductive success through their marrying female. As a genetically related group of cooperating kin, her family engages in competition with other families to place her in association with a higher status family to

increase her probable RS [reproductive success] thus increasing not only the likelihood of her bearing and rearing sons, but their likely good health and longevity and the probability of a polygynous future for them.

Our research on marriage transactions tests hypotheses based on insights of evolutionary anthropologists, biologists, and psychologists. We clarify how wealth is exchanged among the bride, groom, and their parents by making finer distinctions among different types of marriage transactions than those made by past researchers. We also take into account some of the more important social and cultural factors that shape marriage transactions, such as type of descent and postmarital residence, and the prevalence of polygyny in a society.

We divide this article into two related sections. The first major section begins with a brief overview of previous cross-cultural codes of marriage transactions and discusses how we use them to form the basis for a new cross-cultural typology. We then examine the frequency and distribution of marriage transactions among the 60 cultures of the Human Relations Area Files (HRAF) probability sample. The second major section of the article takes a biocultural approach to marriage transactions. We use the typology developed in the first section to examine why marriage transactions materially benefit the bride's family at the expense of the groom's and why some parental wealth devolves to their offspring at the time of marriage.

Cross-Cultural Codes of Marriage Transactions

Previous Cross-Cultural Codes

Murdock (1949, 1967, p. 155) recognized six primary "modes of marriage": bride service, bride wealth, token bride wealth, dowry, gift exchange, and woman exchange. He also recognized that some societies have an absence of transactions[1] and that many societies have primary and secondary marriage transactions. Schlegel and Eloul (1987) revised Murdock's cross-cultural codes by adding a seventh type of marriage transaction, "indirect dowry." This term had been previously used by Goody (1973, p. 2) to refer to the transfer of goods from the groom's parents directly to the bride, who may then share all or some of these goods with her husband. In this article, we refer to this kind of exchange as "dowry from the groom's parents." This makes it possible to distinguish "dowry from the groom's parents" from "dowry from the bride's parents." Goody, and Schlegel and Eloul also used the term, "indirect dowry," to refer to the transfer of goods from the groom's side to the bride's father, who in turn passes it on to the bride (and groom), after deducting some portion

of it for himself. Although this kind of transaction occurs in many societies, we prefer to treat it as two separate transactions: "bride wealth" followed by "dowry from the bride's parents." As we point out below, a careful reading of the ethnographic sources indicates that societies sometimes combine one kind of transaction with one or more additional types.

Our research builds on Murdock's, and Schlegel and Eloul's work. Our transaction typology includes five transactions from their typology: bride service, bride wealth,[2] dowry (from the bride's parents), gift exchange, and woman exchange. In addition, we recognize six other types of marriage transactions: groom service, groom wealth, dowry from the groom's parents, gift-giving to the couple, gift-giving to the groom's parents, and gift-giving to the bride's parents. Some of these additional transactions, such as groom wealth, came about because Murdock's category of "dowry" was too inclusive for our purposes. It is important for us to distinguish transfers of wealth from the bride's parents to the couple from transfers of wealth from the bride's parents to the groom's parents. The first kind of transaction is a vertical transfer, from a senior generation to a junior one. The second transaction is a horizontal transfer among members of the same generation.

Ultimately, researchers employ typologies best suited to their research goals. Schlegel and Eloul (1988, p. 292) deliberately omitted certain kinds of marriage transactions that have a very limited distribution. We prefer to make a few additional distinctions among marriage transactions because they facilitate more precise statistical analyses of the contributors and recipients of material resources. The ethnographic examples reported below largely come from the 60-culture HRAF probability sample files (PSF).[3]

The Newly Added Marriage Transactions

Groom service. When a bride provides service to the groom and his family for one week or more prior to marriage, we consider this "groom service." Consider Seligman's (1932, pp. 511-512) description of the kinds of support a future Azande bride from Sudan customarily provides to a husband and his family prior to the wedding:

> Infant betrothal and marriage are the rule. Immediately on the birth of a girl, suitors come and make a ceremonial claim for her hand in marriage. . . . [The father selects his daughter's spouse.] As the girl grows she will be taken from time to time by her mother to visit her betrothed, taking with her a gift of beer and food and perhaps a fowl, while the man will make a further presentation of spears. The girl pays

three or four visits, each lasting a month or two, during which she lives in her husband's homestead under the supervision of his chief wife, or, if he is still unmarried, of his mother. Here she is trained in household routine and the duties of a wife.

Groom and bride service are similar in that both can function as tests of the potential spouse's suitability as a marriage partner and household member. Groom and bride service also serve as training for the duties a spouse will assume on a full-time basis upon marriage. These functions are apparent in the above example as well as in the following account written by Bogoras (1909, pp. 584-585) of bride service among the Chukchee living in the extreme northeastern reaches of Siberia:

[The suitor] begins with bringing a load of fuel from the woods. He tries to make his load as large as possible, in order to show his physical strength and his power of endurance. . . . Then [he] begins his trial, which lasts one summer, sometimes two or even three summers. All this time the suitor leads a very hard life. He rises first in the morning, and retires last at night. Often he is not even given a place in the sleeping-room, but stays in the outer tent or in the open air. Most of his time is spent with the herd. He carries burdens, hauls heavily-loaded sledges, mends and repairs broken utensils. He has to please the girl's father, her elder brothers, and other male members of the family.

[Even after] two or three months of continual toil, he may be driven away without any apparent reason. "This is no cause of resentment," I was told by the Chukchee, "but only a weakling consents to go. A good strong man remains and works on without food, without place in the sleeping-room, and even without hope." To desist, and return home without a bride, is considered a humiliation for a young man. His father will say, "So you are really bad. If you were good, you would not be sent away thus."

When the requirements of service are extensive, groom and bride service serve as "honest signals" future in-laws can use to measure the bride's and groom's ability and willingness to cooperate with household members and invest time, energy, and material resources in parental care (Apostolou, 2008, p. 93; Zahavi, 1975). Other types of marriage transactions, such as groom wealth and bride wealth, also appear to have the characteristics of honest signals.

Groom wealth. We define groom wealth as the bride, bride's parents, or bride's relatives making a nonfood,[4] material transfer to the groom's parents or relatives. It is noteworthy that terms such as "bridegroom wealth" and

"groom price" have previously been used by scholars such as Caplan (1984) and Nash (1978) and that this kind of transaction is reported in many parts of India (Billig, 1991, p. 348; Rao, 1993, p. 283; Rao, 1998, p. 217), Papua New Guinea (Nash, 1978, p. 106), southern Sudan (Burton, 1982, p. 56), among the Hopi in the Southwestern United States (Schlegel, personal communication), and among the Serbs of Eastern Europe (Halpern, 1967, pp. 191, 196-197). The Serbs make payments that have these characteristics. In the following account, we can see that the Serbs have groom wealth as well as dowry from the bride's parents and that components of both are displayed together for all to see:

> The few weeks before the wedding are a busy period for both [the bride's and groom's] families. The bride has to fill in her trousseau and make sure she has enough shirts, slips, towels, and knitted socks to present to all her in-laws as gifts. . . . All items [furniture for the bride's bedroom, her trousseau, and gifts for her in-laws] are piled high on the cart so that villagers and neighbors passed on the way can see the value of the bride.

> [On the day of her wedding, before] the meal starts there is a presentation of gifts from the bride to her new in-laws. The jester acts as master of ceremonies, making everyone laugh as he describes each gift and throws it onto the shoulder of the recipient. He might say, "Now here is something really excellent, made by our lovely bride and presented to that good fellow, Uncle Tihomir. A fine shirt, and well made, too, but how will it fit over his fat belly?" After each presentation he throws back his head and calls in a loud sing-song voice, while the guests rock with mirth at his harmless teasing. (Halpern, 1967, pp. 191, 196-197).

Dowry from groom's parents. Contemporary anthropologists generally understand dowry to be a transfer of wealth from the bride's parents to the bride, which upon marriage becomes the property of the couple. However, in some of the world's societies, it is customary for the *groom's* parents to transfer wealth to the couple upon their marriage. Thus, it is possible for anthropologists to distinguish between "dowry from the groom's parents" and "dowry from the bride's parents." In the case of the Ifugao living in the Mayawyaw valley of the northern Luzon, Philippines, the dowry the couple receives from the groom's parents is matched in value by the dowry from the bride's parents (Lambrecht, 1935, p. 192). We see a matching of the two dowries in the marriage of Mungko′lnon, the groom, and Enche′a, the bride:

A little more than one year [after a favorable marriage omen], Mungko'lnon went to get his wife, and they went to live in a house allotted to them and situated in the village of Mali'nne. Mungko'lnon inherited then the group of rice-field terraces, adjacent to their house, which was the marriage-field; and Enche'a inherited also a big group of rice-field terraces, situated around the house where her parents remained living.

The matching of two dowries is different from gift exchange, which consists of the bride's parents and relatives exchanging nonfood, material items with the groom's parents and relatives. The Blackfoot of Montana use gift exchange to publically recognize a marriage and have incorporated an element of competition into the presentation of gifts. John Ewers (1958, p. 99) writes,

The socially approved marriage was an important family function. . . . [It] was solemnized by an exchange of gifts between the families of the bride and groom. The first gifts could be offered by either the bride's or the groom's folks. Horses always were the most prized gift. One or more horses were invariably given, along with robes or blankets and household goods of lesser value. Relatives commonly chipped in to make the marriage gifts as imposing as possible. It was expected that the gifts returned by the spouse's family should be more lavish than those they had received.

Gift-giving to the couple. Both kinds of dowry are transfers of wealth from parents to offspring. "Gift-giving to the bride and groom" is different from both kinds of dowry in that gifts come from the couple's parents' relatives and friends rather than from their parents. Gift giving to the couple is found among the Saami of Finland. Saami brides and grooms receive gifts during a series of lavish banquets on the days following the church wedding ceremony. Itkonen (1984, pp. 825-826) writes:

In the evening [after the first banquet] the goblets are overturned with the words: "We have run out of liquor and eaten the bread and salt!" Now begins the norrom-por'de or lues'tem-stualle, i.e. the collection of gifts. The bridal couple comes forward carrying a tray with a goblet filled with liquor by the drinkcounter and they offer it to each guest in turn, while bowing in silence. . . . Each guest empties the goblet and puts money on the tray, for example, three to ten rubles. Some women offer a kerchief, a bundle of wool (a garment is put on the bride's arm),

soap, etc., others promise a sheep or a reindeer. In that case the person places a piece of bread on the tray and says what kind of animal he will give and when it may be fetched. . . . The next day the feast is repeated with new guests; they will eat and drink and in the evening gifts are collected in the same way. The same ceremony will be repeated for three to five days. . . . [The] couple may get half a dozen sheep, 30 reindeer, 100 rubles in money and as many as 20 kerchiefs, some made of silk, etc.

Gift-giving to the bride's parents and to the groom's parents. Related to gift-giving to the bride and groom are two other transactions: "gift-giving to the groom's parents" by the groom's parents' relatives and friends, and "gift-giving to the bride's parents" by the bride's parents' relatives and friends. Marriage-related expenditures can be quite substantial for the groom's and bride's parents, and these two gift-giving customs offset some of their expenditures. This is the case for the Kanuri, an agricultural group living in western Nigeria, where the bride's and groom's parents are responsible for a number of substantial expenses (Cohen, 1971, p. 85).

Either before or after [the] sada' [wedding fee] ceremony, the Kanuri ceremonial reciprocity custom (nzaye) is carried out. [The nzaye can be summarized as follows:] Friends and relatives of a man or woman giving a ceremony come and make contributions to help defray the cost of the ceremony and to dramatize their reciprocal membership in a social network. Such a ceremony is quietly held at the groom's house, and outside the bride's house a quiet nzaye is carried out for the father of the bride. Inside the bride's household, a more elaborate nzaye takes place for the mother of the bride. This is explained as compensation to the mother for having contributed and worked to obtain the girl's dowry. Realistically, the girl's father has also contributed, but over the years the mother has saved and scrimped for this large outlay for mats, pots, jewelry, etc.

The Revised Marriage Transaction Typology

The revised marriage transaction typology appears in Table 1. There are two symmetrical transactions, woman exchange and gift exchange, in which the bride's and groom's parties make exchanges of the same relative value. The remaining nine transactions are asymmetrical in that the party that provides a gift does not receive a return, though the gift receiver may be expected to participate as a gift provider on the occasion of another marriage.

Table 1. Revised Typology for Coding Marriage Transactions

1. Woman exchange: Parents of family "A" provide a wife for a son of family "B," and parents of family "B" provide a wife for son of family "A."
2. Gift exchange: The bride's parents and relatives exchange nonfood, material items with the groom's parents and relatives.
3. Bride service: The groom works for the bride and her family for one week or more.
4. *Groom service: The bride works for the groom and his family for one week or more.
5. Bride wealth: The groom, groom's parents, or groom's relatives make a nonfood, material transfer to the bride's parents or relatives.
6. *Groom wealth: The bride, bride's parents, or bride's relatives make a nonfood, material transfer to the groom's parents or relatives.
7. Dowry from bride's parents: The bride's parents make a nonfood, material transfer to the couple.[a]
8. *Dowry from groom's parents: The groom's parents make a nonfood, material transfer to the couple.
9. *Gift-giving to the couple: The couple's friends or the couple's parents' relatives give gifts to the couple.
10. *Gift-giving to bride's parents: The bride's parents' relatives and friends give nonfood, material items to the bride's parents.
11. *Gift-giving to groom's parents: The groom's parents' relatives and friends give nonfood, material items to the groom's parents.

a. Technically, the bride, not the couple, is endowed. However, all of the dowry, except for personal items, become the property of the bride and groom. The transmarked with an asterisk were not used in Murdock's (1949, 1967) or Schlegel and Eloul's (1987) cross-cultural research.

The Frequency and Distribution of Marriage Transactions

The HRAF probability sample. We can now examine the frequency and distribution of marriage transactions using the 60-society HRAF probability sample. The probability sample is a cross-cultural sample designed to ensure representative coverage of traditional and peasant cultures of the world. Its developers randomly selected one well-described culture from each of 60 world regions (Lagacé, 1979; Naroll, 1967). When locating ethnographic materials in the HRAF, we searched under three OCM codes: 583-mode of marriage, 584-marriage arrangements, and 585-nuptials. We examined marriage transactions for first marriages only, and for the most common type of marriage found in a society. In order to maximize comparability to previous research and to reduce random errors in statistical calculations (Ember & Ember, 2001, pp. 64-65), we used the same time and socioeconomic status foci employed previously by Huber, Linhartova, and Cope (2004, pp. 58-59). In societies with economic inequities, information was collected on marriage transactions
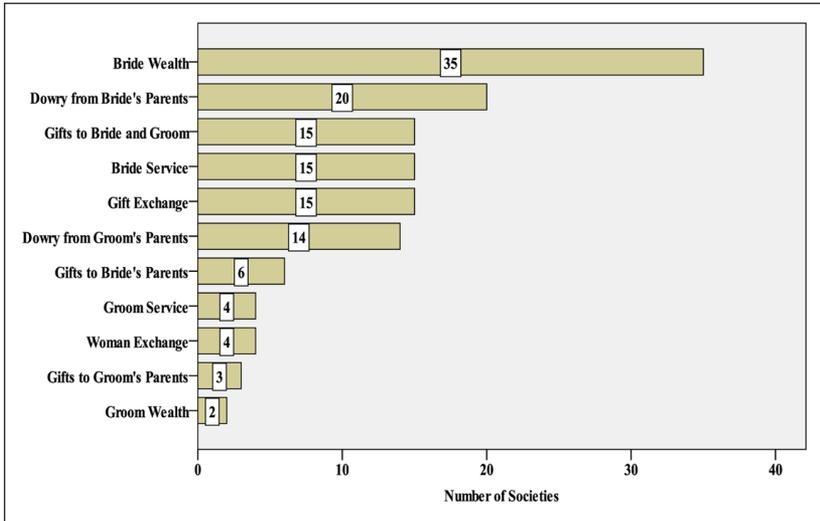
Figure 1. Frequency of marriage transactions in the HRAF probability sample (*n* = 59)

pertaining to free people of lower economic status. Finally, in cases where ethnographers described marriages in rural and urban settings, we focused on rural marriages. The first author collected and coded information on marriage transactions.

For societies with class structures, our rationale for limiting data collection to rural people of lower economic status is that the HRAF generally has much more information about the rural lower classes than about higher status, urban groups. If we had focused on marriage transactions for the higher-status inhabitants of cities, we would have had too many missing cases to make meaningful comparisons. Second, we made the above choices in order to be consistent in our cross-cultural comparisons.

Frequency of marriage transactions. We found information on marriage transactions for 59 of the 60 societies of the HRAF probability sample. Figure 1 shows their frequency.[5] (Each society can have more than one type.) Transactions that benefit the bride's group at the expense of the groom's group are common. Bride wealth occurs in nearly 60% (35 of 59) of the societies in this sample, and bride service is found in more than 25% (15 of 59). Transactions that benefit the bride and groom at the expense of their parents and relatives are also common. Dowry from the bride's parents is found in almost 35% (20 of 59) of the societies of our sample. Gifts to the bride and groom (15 of
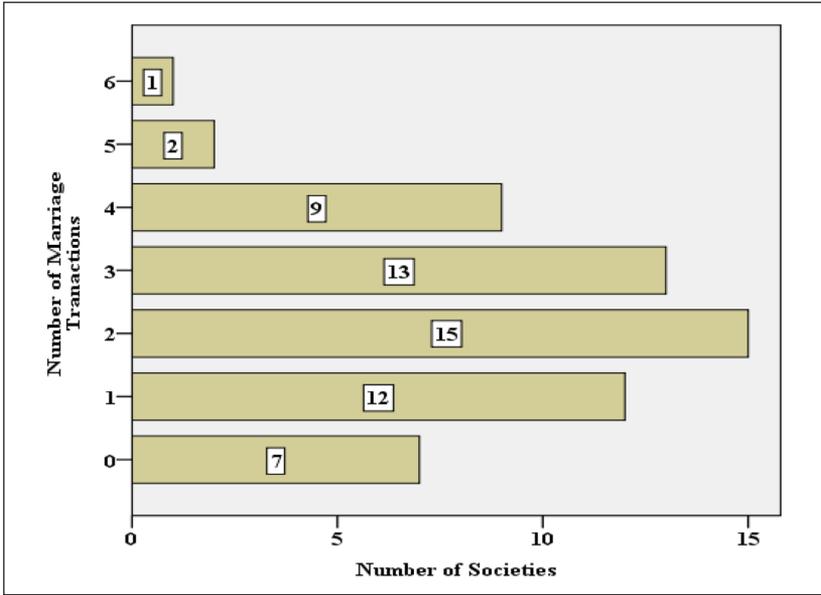
Figure 2. Frequency of multiple marriage transactions per society (*n* = 59)

59 societies) and dowry from the groom's parents (14 of 59 societies) occur in approximately one quarter of the societies in our sample. In contrast, transactions that benefit the groom's group at the expense of the bride's group are infrequent (e.g., groom service, groom wealth). We take this point up again later in the article.

Distribution of marriage transactions. Figure 2 shows that many societies have more than one marriage transaction. In fact, one society, the Taiwan Hokkien, has six. The Hokkien, an ethnic group that migrated from mainland China to Taiwan between 1600 and 1890, have bride wealth, both types of dowry, gift exchange, and gift-giving to the bride's parents and to the couple (Gallin, 1966). Two societies (the Serbs and Somali) have five marriage transactions, and nine societies (Amhara, Blackfoot, Chukchee, Hopi, Kanuri, Tikopia, Tucano, Wolof, and Yakut) have four transactions.

We wanted to know whether societies with multiple transactions tended to come from a particular region of the world. The 59 societies analyzed in Figure 2 are distributed almost equally across 6 world regions.[6] Nevertheless, societies with three or more marriage transactions are found primarily in Circum-Mediterranean (8 of 11 societies), East Eurasia (6 of 10 societies), and North America (5 of 10 societies).

A Biocultural Approach to Marriage Transactions

This section looks at marriage and marriage transactions as important components of a long-term strategy that the bride and groom and their families use to maximize their reproductive success (e.g., Apostolou, 2007; Dickemann, 1979; Gaulin & Boster, 1990). We begin with an examination of sex-specific reproductive strategies and the selection of long-term mates and follow this with discussions of kin selection theory, polygyny, and kinship laterality.

Sex-Specific Reproductive Strategies

Research on average mate preferences has been undertaken in urban and rural settings as well as in industrialized, agricultural, pastoral, and foraging societies. Although there is considerable intra- and inter-cultural variation (Borgerhoff Mulder, 2009, p. 133; Cashdan, 1996; Pillsworth, 2008), investigators have found that both men and women generally desire kind, intelligent, dependable, and healthy individuals as long-term mates. However, men tend to differ from women in placing a greater emphasis on cues related to fidelity and on indicators of reproductive value, such as physical attractiveness and youth. Women differ from men in placing a greater emphasis on resource-related cues such as ambition, industry, social status, and financial prospects (Buss, 1989; Geary, 1998; Gurven, Winking, Kaplan, von Rueden, & McAllister, 2009; Marlowe, 2004; Sprecher, Sullivan, & Hatfield, 1994).

Apostolou (2010) examined parental preferences in sons- and daughters-in-law across 67 preindustrial societies and found that in-law preferences generally correspond closely with mate preferences. For example, parents report preferring wealth, working ability, social status, and good economic prospects more frequently in a son-in-law than a daughter-in-law, whereas chastity is frequently preferred in a daughter-in-law and not reported as important for a son-in-law. Nevertheless, in-law preferences did not always overlap with mate preferences. For example, even though men prefer wives to be physically attractive, beauty ranks relatively low in parental preferences for a daughter-in-law.

Trivers' (1972, p. 173) theory of parental investment and sexual selection helps explain these differences in mate and in-law preferences. Men can effectively increase their reproductive success by mating with a number of women, especially if their reproductive value is high, and they are the actual genitors of their offspring. This explains a future husband's concern with his mate's youth and physical attractiveness and his and his parent's concern with her sexuality.[7]

Compared to men, women make much larger initial physiological invest-ments in reproduction, for example, large gametes, gestation, child bearing. In addition, women around the world tend to provide considerably more direct parental care (e.g., nurturing, holding, feeding, grooming, cleaning, touching, and spending time with offspring) than men (e.g., Bjorklund & Pellegrini, 2002; Geary, 2000; Hewlett, 1991, p. 2). Consequently, women can effectively increase their reproductive success by selecting husbands who are prepared to invest their resources in them and their offspring.

Because women make a larger initial physiological investment than men and provide a greater amount of direct care, they are a valuable reproductive resource, a resource for which men compete. When selecting long-term mates, we expect women and their parents to discriminate among men based, in part, on the amount of resources men and their parents are able and willing to invest in wives and their offspring. This expectation is consistent with the findings of the research reported above regarding preferences for husbands and sons-in-law who are wealthy, ambitious, industrious, and so on.

If male–male competition for spouses is a common feature of human societies, then one of the main concerns of a woman and her parents should be the ability and willingness of her prospective husband and his parents to invest in her and her offspring (Borgerhoff Mulder, 1988). A committed son-in-law is important in helping a woman maximize her reproductive success as well as that of her parents. But how can the bride and her parents identify reliable signs of male commitment? One way would be to impose a substantial cost on a prospective son-in-law. The cost could take the form of a transac-tion or a series of transactions that require the groom and his parents to make substantial material investments in the bride and her parents at the time of marriage (Apostolou, 2008, pp. 90-91; Zahavi, 1975). Such a cost would be an "honest signal" of commitment.

Kin Selection and Reciprocal Altruism

Since parents and children are genetically related by 50%, it is not surprising that parents[8] often actively participate in the selection of their sons' and daughters' marriage partners (Gaulin & Boster, 1990, p. 995; Trivers, 1974, p. 261). The reproductive success of parents depends, in large part, on their children's success. Apostolou (2007, p. 405) found that the selection of mates in a worldwide sample of 190 foraging societies is usually influenced by parents, especially in the case of their daughters' spouses. Apostolou's (2010) recent cross-cultural work with a sample of agricultural and pastoral societies, and the work of Broude and Green (1983), Coe (2003), and Minturn, Grosse,

and Haider (1969, p. 312) suggest that parents often actively participate in the selection of their offspring's mates in horticultural, pastoral, and agricultural societies as well.

Kin selection theory (Hamilton, 1964, p. 23) explains why parents are so interested in their offspring's marriages. It is in their best interest to help create a favorable environment in which their children have sufficient resources to reproduce and successfully rear children. Kin selection theory also helps explain why more distantly related relatives funnel resources to the couple and their parents. In general, we expect relatives to make contributions proportional to their genetic relatedness to the bride and groom, with more closely related kin, such as the couple's parents, making larger contributions than more distantly related ones.

Trivers' (1971) theory of reciprocal altruism helps explain gifts made to the couple and to their parents by unrelated friends of the couple and their parents. Trivers' basic idea is that it pays an individual to help another, if there is an expectation of the favor being returned in the future. ("If you scratch my back, I'll scratch yours.") Friends who give gifts to a couple and their parents at one wedding expect return gifts at their or their relatives weddings.

Polygyny

Like Gaulin and Boster (1990, p. 997), we "assume that humans seek efficient tactics for reproduction and that the efficiency of particular tactics depends on local conditions." Perhaps one of the most important local conditions affecting human reproductive strategies is polygyny (e.g., Borgerhoff Mulder, 1988, p. 216; Dickemann, 1979, 1991, p. 944; Goldschmidt, 1974, pp. 316-318). Polygyny should affect marriage transactions in both egalitarian and class-stratified societies.

In stratified societies, where polygyny is customary, male–male competition for spouses is more intense among low-status men than among high-status men. High-status men are relatively attractive husbands because they control more, and better quality, material resources. These men can attract wives from their own group as well as from lower-status groups. In contrast, low-status men are relatively unattractive long-term mates for high-status women and their families, at least from the perspective of their ability to provision material resources. As a result, low-status men have a marriage pool restricted to the women of their own group who do not marry up (e.g., Irons, 2000, pp. 223-224). Because of this marriage squeeze, male–male competition for spouses is expected to be keen among men of the lower classes in polygynous societies.

In relatively egalitarian societies, such as those comprised of foragers, the ability to acquire and provision high-quality resources also influences whether men marry polygynously or monogamously. In addition, polygyny among foragers is related to other factors such as male intimidation of other men, male coercion of women, "shopping for good genes," and so on (Low, 1990; Marlowe, 2003, p. 302). Although the causes of polygyny vary in egalitarian societies, the fact that some men marry two or more women shrinks the marriage pool for the remaining men, increasing the level of male–male competition for wives.

Kinship Laterality

Anthropologists have long been interested in marriage and kinship (e.g., Fox, 1967; Keesing, 1975; Pasternak, Ember, & Ember, 1997; Stone, 2010). They have identified six common postmarital residence rules (patrilocal, matrilocal, ambilocal, avunculocal, natalocal, and neolocal) and four descent principles (patrilineal, matrilineal, double, and cognatic descent). Collectively these customs and principles account for much of the cross-cultural variability in residential groups, such as households and communities, and in descent groups, such as lineages and clans.

In the following analysis, we use the term "patrilateral" to refer to patrilineal, patrilocal societies, and the term "matrilateral" to refer to matrilineal, matrilocal societies. Patrilateral societies contrast with matrilateral ones in important ways. Patrilateral societies facilitate close cooperation among a man, his brothers, and his father. When a woman marries, members of her patrilineage and natal household experience a loss because her and her future children's ability to cooperate with them is reduced. In contrast, the groom, his patrilineage, and his natal household benefit from the additional investments a new bride and her offspring will make. In a patrilateral society, the groom and his parents are expected to compensate a woman and her parents when she marries.

Matrilateral societies facilitate close cooperation among a woman, her sisters, and her mother. In matrilateral societies, members of the groom's matrilineage and natal household experience a loss at the time of marriage because the groom and his future children's ability to cooperate with them is reduced. However, the bride, her matrilineage, and her natal household benefit from the additional investments the groom and his offspring will make. In a matrilateral society, the bride and her parents are expected to compensate a man and his parents when he marries.

Intermediate of these two kinds of societies are bilateral societies. They tend to spread rights and obligations more equally among patrilateral and matrilateral kin and among both male and female relatives.

Hypotheses

Hypotheses 1a-c follow from our discussion of differences in male and female reproductive strategies. Differences in reproductive strategies lead to male–male competition for long-term mates and the selection of prospective mates by women and their parents partly based on a man's ability and willingness to invest material resources.

> *Hypothesis 1a:* Brides and their parents are expected to receive more material goods at the time of marriage than grooms and their parents, respectively.
>
> *Hypothesis 1b:* Grooms and their parents are expected to invest more material resources at the time of marriage than brides and their parents, respectively.
>
> *Hypothesis 1c:* Brides and their parents are expected to have a greater net gain in resources at the time of marriage than grooms and their parents, respectively.

Hypotheses 1a to 1c address the horizontal transfer of resources from the groom's side to the bride's side. Hypothesis 2 addresses the expected vertical transfer of resources from parents to the couple. Parents and children are genetically related by 50%. Kin selection theory explains why it is in the parents' best interest to invest in their offspring. Investing in offspring at the time of marriage creates an environment favorable to their children's reproduction and promotes the survival of their grandchildren.

> *Hypothesis 2:* Brides are expected to have a greater net gain in resources at the time of marriage than the brides' parents, and grooms are expected to have a greater net gain in resources than the grooms' parents.

The third hypothesis below follows from our discussion of polygyny. In general, the greater the percentage of polygynously married men, the more male–male competition there will be for wives. This should be the case for men in relatively egalitarian societies, and for lower-status men in class-stratified societies. As a result, women and their parents are in a position to screen

prospective spouses on the basis of spouses' ability and willingness to commit resources to marriage.

> *Hypothesis 3:* The greater the amount of polygyny, the more grooms and their parents will expend in marriage transactions, and the more brides and their parents will benefit materially.

In matrilateral societies, members of the bride's natal household and descent group benefit from the bride's and her future children's cooperation. In patrilateral societies, the bride's and her future children's ability to cooperate with the bride's natal household is reduced. This leads us to make the following prediction:

> *Hypothesis 4:* The greater the reliance on patrilateral kin, the more brides and their parents will benefit materially, and the more grooms and their parents will expend in marriage transactions.

Method

We test the above predictions with data collected from the 60-culture HRAF probability sample. Recall that our marriage transaction data pertain to first marriages only, the most common type of marriage found in a society, marriages in rural areas, and to marriages of people who live in relatively egalitarian societies or who are of lower economic status in the case of societies characterized by economic inequality.

Dependent Variables

Number of transactions in which brides, grooms, and their parents are recipients. We use the total number of marriage transactions for which brides, grooms, and their parents are recipients as an indicator of the amount of material resources they receive at the time of marriage.

Number of transactions in which brides, grooms, and their parents are providers. We use the total number of marriage transactions for which brides, grooms, and their parents are contributors as an indicator of the amount of material resources they provide at the time of marriage.

Net number of marriage transactions. The net number of marriage transactions is an indicator of the amount of resources that remains with individuals after deducting the amount of resources they expend. We calculate it by subtracting the number of transactions for which individuals are providers from the number of transactions they are recipients.

Table 2. White's Standard Polygamy Variable

Values	Frequency	Valid percent
0 = polyandry	0	0
1 = monogamy prescribed	6	15.4
2 = monogamy preferred, but exceptional cases of polygyny	9	23.1
3 = limited polygyny, <20% of married males	9	23.1
4 = full polygyny, 20% or more of married males	15	38.5
Total	39	100
999 missing	21[a]	

a. This variable was originally coded for the SCCS. A total of 21 the societies found in the HRAF probability sample are not included in the SCCS.

Independent Variables

Polygyny. The polygyny variable found in Table 2 is Douglas White's (1988, p. 534) standard polygamy code. White based this variable on "Murdock's (1949, 1967) 3-point scale of polygyny, plus his category for polyandry, modified by the distinction between categories of limited polygyny (Categories 2 and 3) used by Whyte (1978)."

Laterality. Huber and Breedlove (2007) previously developed and coded the variable "kinship laterality" in their cross-cultural work on childbirth. This variable (see Table 3) measures the extent to which members of a society rely on matrilateral, bilateral, or patrilateral kin. A society is assigned a kinship laterality score based on its rule of descent and its predominant type of postmarital residence.

Research Results: Biocultural Aspects of Marriage Transactions

Marriage Transactions: Recipients

This section reports data that test Hypothesis 1a, which predicts that brides and their parents receive more material goods at the time of marriage than grooms and their parents. The definitions found in Table 1 specify providers and recipients of marriage transactions. Table 4 lists the transactions for which brides, grooms, and their parents are recipients as well as the number of societies that have these transactions.

Table 3. Huber and Breedlove's Kinship Laterality Scale

Values	Frequency	Valid percent
1 = very strongly matrilateral	1	1.8
2 = strongly matrilateral	7	12.7
3 = moderately matrilateral	5	9.1
4 = balanced	10	18.2
5 = moderately Patrilateral	15	27.3
6 = strongly patrilateral	17	30.9
7 = very strongly patrilateral	0	0
Total	55	100
999 missing	5	

Table 4. Marriage Transactions in Which Brides, Grooms, and Their Parents Are Recipients

Brides	Grooms	Brides' parents	Grooms' parents
4 = woman exchange	4 = woman exchange		
15 = bride service	4 = groom service		
15 = gift giving to the couple	15 = gift giving to the couple	15 = gift exchange	15 = gift exchange
14 = dowry from grooms' parents	14 = dowry from grooms' parents	15 = bride service	4 = groom service
		35 = bride wealth	2 = groom wealth
20 = dowry from brides' parents	20 = dowry from brides' parents	6 = gifts to brides' parents	3 = gifts to grooms' parents
Subtotal = 68	Subtotal = 57	Subtotal = 71	Subtotal = 24

The subtotals in Table 4 show that brides are more frequent recipients of marriage transactions than are grooms (68 vs. 57) and that the parents of brides are more frequent recipients than are parents of grooms (71 vs. 24). In addition to these data, which are consistent with Hypothesis 1a, we employ Wilcoxon signed-ranks tests. Table 5 shows there are 13 societies in which brides are recipients of a greater number of marriage transactions than grooms are but that there are only 2 societies where grooms are recipients of a greater number of transactions than brides are. There are 44 societies where brides and grooms are "tied": brides and grooms are recipients of the same number of transactions.

Turning to the couple's parents, we find 39 societies in which the brides' parents are the recipients of a greater number of marriage transactions than the grooms' parents are, but only two societies where the grooms' parents are

Table 5. Wilcoxon Signed-Ranks Tests for Recipients of Marriage Transactions

Net difference in transactions	Ranks	N	Test statistics
Received by bride minus received by groom	Positive ranks	13	Z = −2.840,
	Negative ranks	2	p < .003; one
	Ties	44	tailed
	Total	59	
Received by bride's parents minus received by groom's parents	Positive ranks	39	Z = −4.879,
	Negative ranks	2	p < .001; one
	Ties	18	tailed
	Total	59	

recipients of a greater number of transactions than the brides' parents are. There are 18 societies where the brides' and grooms' parents are the recipients of the same number of transactions. The results of the signed-ranks tests support Hypothesis 1a.

Receiving resources is not the same as controlling them. If we return to Table 4 and focus on the column dealing with brides, we see that three of the five transactions—gift-giving to the couple, dowry from the groom's parents, and dowry from the bride's parents—benefit the bride. These 49 transactions (15 + 14 + 20) are distributed among 34 societies of our sample. Table 6 lists the residence of couples immediately after marriage for these 34 societies. We take into account that grooms in five societies customarily do bride service and code these societies as matrilocal.

Table 6 shows that couples live patrilocally in 15 of the above societies. In another seven societies, the couple resides matrilocally. Thus, in about 67% of the societies in which the bride benefits materially at the time of marriage, she lives with or in close proximity to her or the groom's parents. In these societies, the bride's or groom's parents may try to gain control of the bride's newly acquired resources.

Marriage Transactions: Providers

This section reports the results of testing Hypothesis 1b, which predicts that grooms and their parents invest more material resources at the time of marriage than brides and their parents do. Table 7 lists the kinds of transactions for which these individuals are providers as well as the number of societies that have each kind of transaction.

Table 6. Postmarital Residence of Couples in Societies With Gift Giving to the Couple, Dowry From the Groom's Parents, or Dowry From the Bride's Parents (*n* = 34)

Postmarital Residence	Frequency	Valid percent
Patrilocal	15	45.5
Matrilocal	7	21.2
Neolocal	7	21.2
Avunculocal	2	6.1
Natalocal	1	3
No predominant type	1	3
Total	33	100
Missing	1	

Table 7. Marriage Transactions in Which These Individuals Are Providers

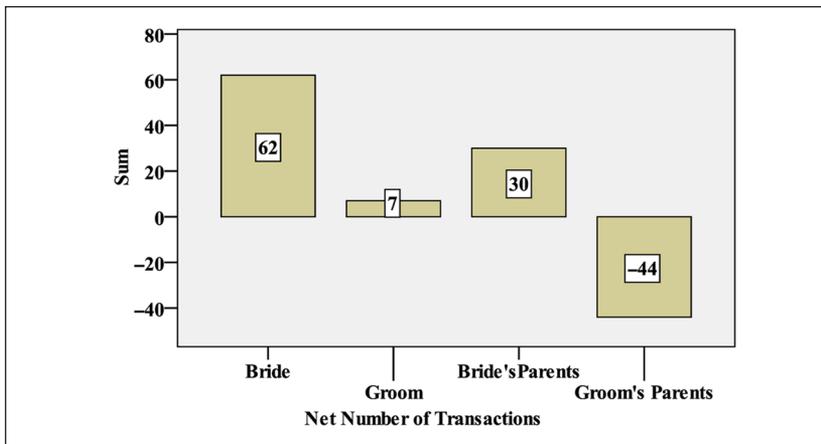| Brides	Grooms	Brides' parents	Grooms' parents
4 = groom service	15 = bride service	4 = woman exchange	4 = woman exchange
2 = groom wealth	35 = bride wealth	15 = gift exchange	15 = gift exchange
		20 = dowry from brides' parents	14 = dowry from grooms' parents
		2 = groom wealth	35 = bride wealth
Subtotal = 6	Subtotal = 50	Subtotal = 41	Subtotal = 68

The subtotals in Table 7 support Hypothesis 1b; grooms are far more frequent providers of material resources than brides (50 vs. 6) are, and parents of grooms are more frequent providers than parents of brides are (68 vs. 41). The results of Wilcoxon signed-ranks tests for providers of marriage transactions, found in Table 8, show further support for Hypothesis 1b. There are many more societies in which grooms contribute more to marriage transactions than brides do (39 vs. 2) and more societies in which grooms' parents contribute a greater amount of material resources than brides' parents do at the time of marriage (26 vs. 4).

Net Number of Marriage Transactions

The net number of marriage transactions measures the net gain or loss of resources experienced by brides, grooms, and their parents. We calculate this variable by taking the number of transactions in which party "A" is a recipient and subtract from it the number of transactions in which party "A" is

Table 8. Wilcoxon Signed-Ranks Tests for Providers of Marriage Transactions

Net difference in transactions	Ranks	N	Test statistics
Provided by groom minus provided by bride	Positive ranks	39	$Z = -5.199, p < .001$; one tailed
	Negative ranks	2	
	Ties	18	
	Total	59	
Provided by groom's parents minus provided by bride's parents	Positive ranks	26	$Z = -4.000, p < .001$; one tailed
	Negative ranks	4	
	Ties	29	
	Total	59	

Figure 3. Bar chart of the net number of transactions of brides, grooms, and their parents ($n = 59$).

a provider. The resulting number, which can be either positive or negative, indicates whether "A" experiences a gain or loss from the marriage transactions they participate in.

Figure 3 provides information regarding the net gain or loss of material resources experienced by brides, grooms, and their parents. These data support Hypothesis 1c. Brides and their parents experience a much higher net gain in material resources than grooms and their parents, respectively. In fact, the grooms' parents experience a significant net loss.

Table 9 displays the results of Wilcoxon signed-ranks tests concerning the net gains and losses of the couple and their parents. We find 39 societies

Table 9. Wilcoxon Signed-Ranks Tests Comparing Net Number of Marriage Transactions of Brides to Grooms and of Brides' Parents to Grooms' Parents

Net number of marriage transactions	Ranks	N	Test statistics
Bride's minus groom's	Positive ranks	39	$Z = -4.996, p < .001$; one tailed
	Negative ranks	3	
	Ties	17	
	Total	59	
Bride's parents minus groom's parents	Positive ranks	40	$Z = -4.946, p < .001$; one tailed
	Negative ranks	4	
	Ties	15	
	Total	59	

where brides gain more from marriage transactions than grooms do, but only 3 societies, the Blackfoot, Serbs, and Hopi, where grooms gain more than brides. With respect to the couple's parents, we find 40 societies in which brides' parents gain more from marriage transactions than do grooms' parents but only four societies, the Aymara, Hopi, Saami, and Serbs, where the grooms' parents gain more than the brides' parents. The signed-ranks tests provide strong support for Hypothesis 1c.

Wilcoxon signed-ranks tests can also be used to test Hypothesis 2. Table 10 indicates there are 26 societies where brides gain more from marriage transactions than the brides' parents do, compared to 11 societies where the brides' parents gain more than brides. There are 22 societies where they benefit from the same number of transactions. With respect to the groom's side, we find 34 societies in which grooms gain more from marriage transactions than do grooms' parents, but only 8 societies where the grooms' parents gain more than grooms. There are 17 societies where grooms benefit from the same number of transactions as do the grooms' parents. Both of these signed-ranks tests are statistically significant and provide strong support for Hypothesis 2.

As we noted previously, many societies have more than one marriage transaction. Since the magnitudes of the different types of transfers in the same society may be different, this could potentially undermine our results (e.g., the amount paid in bride wealth could be smaller than the amount paid in groom wealth.) In order to address this issue, we identify for each of our 60 societies its primary and secondary marriage transactions and assign primary transactions twice as much weight as secondary ones. For example, when the groom serves as a provider in a primary transaction, we assign him the value of "1." When he serves as a provider in a secondary transaction, we

Table 10. Wilcoxon Signed-Ranks Tests Comparing Net Number of Marriage Transactions of Brides to Brides' Parents and of Grooms to Grooms' Parents

Net number of marriage transactions	Ranks	N	Test statistics
Bride's minus bride's parents	Positive ranks	26	$Z = -2.847, p < .002$;
	Negative ranks	11	one tailed
	Ties	22	
	Total	59	
Groom's minus groom's parents	Positive ranks	34	$Z = -4.470, p < .001$;
	Negative ranks	8	one tailed
	Ties	17	
	Total	59	
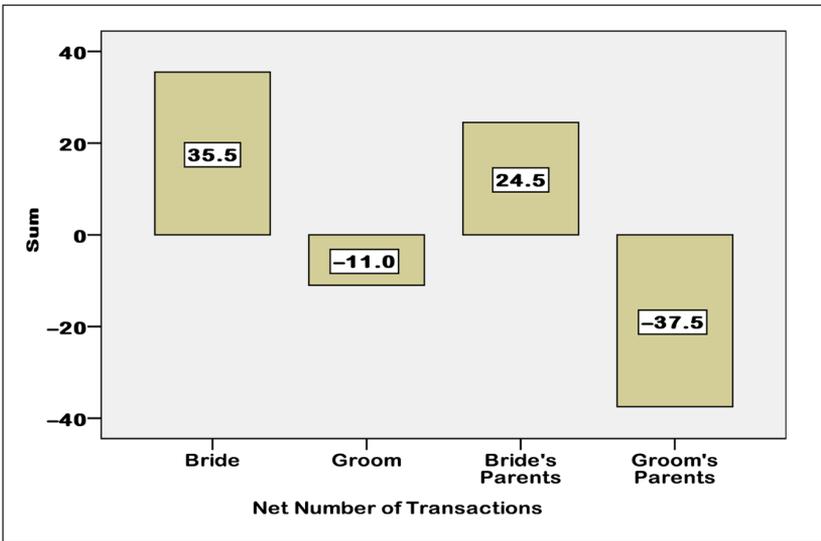
Figure 4. Bar chart of the net number of transactions of brides, grooms, and their parents, primary transactions weighted twice as much as secondary transactions ($n = 59$)

assign him the value of "0.5." We then recalculate the "net number of marriage transactions" for brides, grooms, and their parents. These "weighted" results are displayed in Figure 4 and can be compared with the "unweighted" results found in Figure 3. A similar pattern is found in both figures: Brides benefit more than grooms and the bride's parents benefit more than the groom's

Table 11. Spearman Correlations (One-Tailed Significance): Net Number of Marriage Transactions of Brides, Grooms, and Their Parents—Weighted by Unweighted Measures (*n* = 59)

Net number of marriage transactions, unweighted	Net number of marriage transactions, weighted			
	Brides	Grooms	Brides' parents	Grooms' parents
Brides	.626* (.000)			
Grooms		.733* (.000)		
Brides' parents			.730* (.000)	
Grooms' parents				.776* (.000)

*p < .001.

parents. In addition, we use Spearman's *r* to measure the degree to which our weighted and unweighted net measures are correlated. Table 11 shows that the weighted and unweighted measures are very strongly correlated. These results increase our confidence in the main results of our research, and we will use our original unweighted measures for the rest of this article. A related problem exists in studying the magnitudes of marriage transfers across societies, but this is a more complicated issue that we do not address here.

Polygyny and Patrilaterality

Because the majority of the societies in the sample are characterized by polygyny (61.6%) and a reliance on patrilateral kin (58.2%), we assess whether the net flow of marriage resources depicted in Figure 3 is characteristic of sample societies as a whole or mostly due to the predominance of polygynous or patrilateral societies. We separately analyze the net flow of resources for the 15 monogamous and 23 matrilateral or bilateral societies. The results are displayed in Figures 5 and 6. Note that the pattern of net gains and losses of resources in Figures 5 and 6 is very similar to the pattern for the sample as a whole (Figure 3).

We now proceed to test Hypotheses 3 and 4, which predict that polygyny and patrilaterality are positively related to the net number of marriage transactions of brides and their parents and negatively related to the net number of marriage transactions of grooms and their parents. Spearman's correlation coefficients measure the strength and direction of these correlations.

As Table 12 indicates, there is a positive correlation between percentage of polygynously married men and net number of marriage transactions of

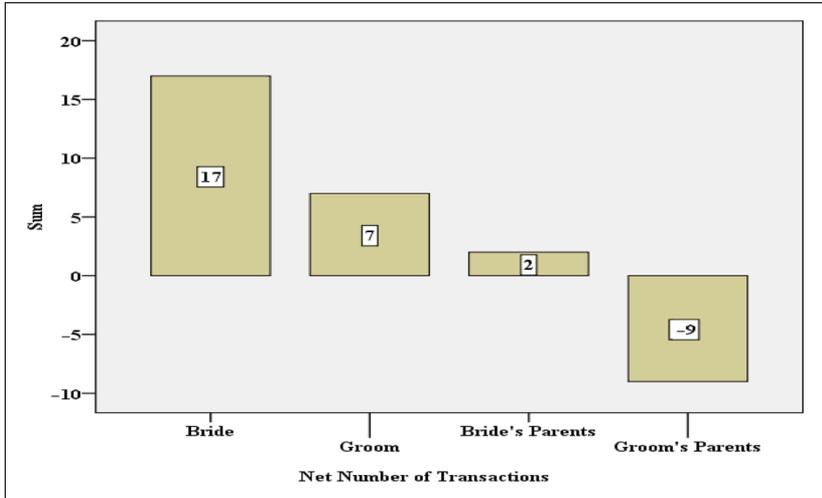**Figure 5.** Bar chart of the net number of transactions; brides, grooms, and their parents in monogamous societies (*n* = 15)
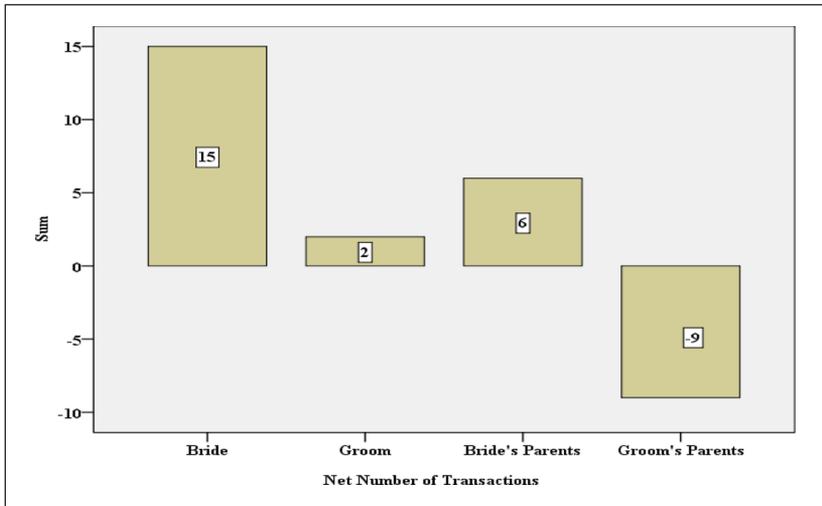

Figure 6. Bar chart of the net number of transactions; brides, grooms, and their parents in bilateral and matrilateral societies (*n* = 23)

the brides' parents. The percentage of polygynously married men negatively correlates with the net number of transactions for grooms and grooms' parents.

Table 12. Spearman Correlations (One-Tailed Significance): Net Number of Marriage Transactions of Brides, Grooms, and Their Parents With Polygyny and Patrilaterality

	Net number of marriage transactions			
	Brides	Brides' parents	Grooms	Grooms' parents
Polygyny (*n* = 39)	−.057 (.366)	.433** (.003)	−.356* (.013)	−.426** (.003)
Patrilaterality (*n* = 55)	.378** (.002)	.243* (.037)	.066 (.317)	−.323** (.008)

*p < .05. **p < .01.

These results support Hypothesis 3. The correlation between polygyny and net transactions for brides is not statistically significant.

Table 12 also shows there are statistically significant, positive correlations among patrilaterality and the net number of marriage transactions of brides and the brides' parents, and a negative correlation between patrilaterality and the net number of marriage transactions of the grooms' parents. These results support Hypothesis 4. The correlation between laterality and net transactions of grooms is not statistically significant.

Discussion and Conclusion

The marriage transaction typology that we developed at the beginning of the article preserved the best aspects of Murdock's, and Schlegel and Eloul's typologies, and refined their work by identifying six additional kinds of transactions. The additions allow for finer distinctions among providers and receivers of material resources and better reflect the transactions described by ethnographers. Four of the six additional transactions are relatively uncommon (groom wealth, gifts to groom's and bride's parents, groom service), but "dowry from the groom's parents" and "gift giving to the bride and groom" are found in one quarter of the societies in our sample.

Although Murdock, Schlegel, Eloul, and a few other scholars clearly recognize that many societies have more than one primary marriage transaction, there is a tendency among most researchers and authors of anthropology textbooks to treat societies as if they have only one type of transaction. This greatly oversimplifies the ethnographic record. More than 40% (25 of 59) of the societies in our sample have marriage exchange systems that combine three or more transactions.

When we examine the 60 societies of our worldwide sample as a whole, our general findings are (a) grooms and grooms' parents are providers of more marriage transactions than are brides and brides' parents, and (b) brides

and brides' parents are recipients of more marriage transactions than are grooms and grooms' parents. As a result, brides, followed by the brides' parents, are the top net material beneficiaries of marriage transactions. In contrast, grooms do only a little bit better than breaking even, whereas grooms' parents experience a substantial net loss of material resources.

For the societies in our sample, there is a net transfer of material goods from the groom's to the bride's side. This transfer of material resources is consistent with Trivers (1972) theory of parental investment and sexual selection. Since women make a much larger physiological investment in reproduction than men do and provide more direct parental care, they are a valuable reproductive resource over which men and their families compete. Because of this, women and their parents can be discriminating in the selection of husbands. One important criterion used to discriminate among potential husbands is their willingness to invest resources in wives and their offspring. Marriage transactions in which grooms and their parents transfer wealth to the brides' parents and brides can be used to gauge the grooms' level of commitment.

In many of the world's societies, parents and other close kin of the couple strongly influence the selection of mates and marriage transaction negotiations. This is understandable because parents, and to a lesser degree, other kin, share copies of genes with the bride and groom. Investing in the bride's and groom's survival and reproduction increases the likelihood of getting copies of the parents' and relatives' genes into subsequent generations. Wealth devolving from the parents of the couple to the bride and groom offers strong support for kin selection theory.

Several other important factors shape marriage transactions, including the type of kin upon which members of a society tend to rely and the degree of polygyny found in a society. The greater the degree to which members of a society rely on patrilateral kin, the more marriage transactions benefit brides and their parents and cost the parents of grooms. Because a bride in a patrilateral society lives with or near her husband's parents, or is expected to cooperate with the groom's patrilineal kin, she may be encouraged to share her newly acquired resources with her husband, his parents, or his senior relatives. Nevertheless, even if a bride does lose some control of her newly acquired resources, she and her parents can still use the amount of resources the groom and his parents provide at the time of marriage as a way to gauge their level of commitment to support her and her future children. Similarly, the bride's loss of control of some resources does not contradict our view that the groom and his parents are using material resources to compete with other potential grooms and their families to gain reproductive rights to the bride.

Finally, we found polygyny to have an impact on marriage transactions. The higher the prevalence of polygyny, the more material benefits are channeled to the bride's parents and the more resources are directed away from the groom's side. Even though the demand for brides is higher in polygynous societies than in monogamous ones, our results suggest that the brides themselves do not benefit materially from this increased demand.

This article clearly does not explain all of the complexity found in the world's marriage transactions. There are many other variables that are likely to shape marriage investment patterns such as pathogen stress, warfare, a society's sex ratio, immigration and emigration rates, and men's and women's contribution to subsistence (see Angrist, 2002; Brown, Laland, & Borgerhoff Mulder, 2009; Low, 1990). In addition to investigating these variables, we also think it is important to do cross-cultural research on marriage transactions where the overall flow of wealth is from the bride's to the groom's group. We suspect that most of these cases are lower-status women marrying higher-status men (Dickemann, 1979). However, there must be additional variables at work, since we found a few societies in our sample where this was occurring even though the marriage transactions were among social equals. Two other directions for future research are to examine the flow of resources where both spouses are from wealthy, high-status families, and the wealth transfers found in societies where polyandry is common. Marriage transactions should be a fertile area of research for years to come.

Appendix

Marriage Transactions Code

Name of Society	A	B	C	D	E	F	G	H	I	J	K	L	M
Akan	4	6	0	0	0	1	0	1	0	0	0	0	0
Amhara	5	6	0	0	0	0	1	1	1	1	0	0	0
Andamans	10	9	0	0	0	0	0	0	0	0	1	1	0
Aranda	11	2	0	1	0	1	0	0	0	0	0	0	1
Aymara	9	6	0	0	0	0	0	1	0	0	1	0	0
Azande	4	2	1	1	0	1	0	0	0	0	0	0	0
Bahia Brazilians	999	999	999	999	999	999	999	999	999	999	999	999	999
Bemba	2	4	0	1	0	1	0	0	0	0	0	0	0
Blackfoot	4	6	1	0	0	1	0	1	0	0	0	1	0
Bororo	4	0	0	0	0	1	0	0	0	0	0	0	0
Central Thai	4	8	0	0	0	1	0	1	0	1	0	0	0
Chukchee	2	10	0	1	0	0	0	1	0	1	0	1	0
Chuuk	4	0	0	0	0	1	0	0	0	0	0	0	0

(continued)

Appendix (continued)

Name of Society	A	B	C	D	E	F	G	H	I	J	K	L	M
Copper Inuit	0	0	0	0	0	0	0	0	0	0	0	0	0
Dogon	2	4	1	1	0	1	0	0	0	0	0	0	0
Eastern Toraja	4	0	0	0	0	1	0	0	0	0	0	0	0
Ganda	4	5	0	0	0	1	1	0	0	0	0	0	0
Garo	0	0	0	0	0	0	0	0	0	0	0	0	0
Guaraní	0	0	0	0	0	0	0	0	0	0	0	0	0
Hausa	4	2	0	1	0	1	0	0	0	0	1	0	0
Highland Scots	9	0	0	0	0	0	0	0	0	0	1	0	0
Hopi	10	5	1	0	1	0	1	0	0	0	0	1	0
Iban	4	2	0	1	0	1	0	0	0	0	0	0	0
Ifugao	5	6	0	0	0	0	1	1	0	0	0	0	0
Iroquois	0	0	0	0	0	0	0	0	0	0	0	0	0
Kanuri	4	6	0	0	0	1	0	1	1	1	0	0	0
Kapauku	4	0	0	0	0	1	0	0	0	0	0	0	0
Khasi	0	0	0	0	0	0	0	0	0	0	0	0	0
Klamath	10	4	0	0	0	1	0	0	0	0	0	1	0
Kogi	2	0	0	1	0	0	0	0	0	0	0	0	0
Korea	6	5	0	0	0	0	1	1	0	0	0	1	0
Kuna	0	0	0	0	0	0	0	0	0	0	0	0	0
Kurds	4	6	0	0	0	1	0	1	0	0	0	1	0
Lau Fijians	10	4	0	0	0	1	0	0	0	0	1	1	0
Libyan Bedouin	4	6	0	0	0	1	0	1	0	0	0	0	0
Lozi	4	0	0	0	0	1	0	0	0	0	0	0	0
Maasai	4	8	0	0	0	1	0	0	0	1	0	0	0
Mataco	2	0	0	1	0	0	0	0	0	0	0	0	0
Mbuti	11	4	0	0	0	1	0	0	0	0	0	0	1
Ojibwa	2	0	0	1	0	0	0	0	0	0	0	0	0
Ona	0	0	0	0	0	0	0	0	0	0	0	0	0
Pawnee	4	9	0	0	0	1	0	0	0	0	1	0	0
Saami	9	6	0	0	0	0	0	1	0	0	1	0	0
Santal	4	10	0	0	0	1	1	0	0	0	0	1	0
Saramaka	9	0	0	0	0	0	0	0	0	0	1	0	0
Serbs	6	9	0	0	1	0	1	1	1	0	1	0	0
Shluh	4	5	0	0	0	1	1	1	0	0	0	0	0
Sinhalese	9	0	0	0	0	0	0	0	0	0	1	0	0
Somali	4	6	0	0	0	1	1	1	0	0	1	1	0
Taiwan Hokkien	4	6	0	0	0	1	1	1	0	1	1	1	0
Tarahumara	2	0	0	1	0	0	0	0	0	0	0	0	0
Tikopia	10	6	0	0	0	1	0	1	0	0	1	1	0

Appendix (continued)

Name of Society	A	B	C	D	E	F	G	H	I	J	K	L	M
Tiv	4	5	0	0	0	1	1	0	0	0	0	0	0
Tlingit	4	6	0	0	0	1	0	1	0	0	0	1	0
Trobriands	10	5	0	0	0	0	1	0	0	0	0	1	0
Tukano	11	4	0	1	0	1	1	0	0	0	0	0	1
Tzeltal	5	4	0	1	0	1	1	0	0	0	0	0	0
Wolof	6	4	0	1	0	1	0	1	0	0	1	0	0
Yakut	6	4	0	0	0	1	0	1	0	0	1	1	0
Yanoama	11	2	0	1	0	1	0	0	0	0	0	0	1

A Primary marriage transaction
B Secondary marriage transaction
    0   None
    1   Groom service
    2   Bride service
    3   Groom wealth
    4   Bride wealth
    5   Dowry from groom's parents
    6   Dowry from bride's parents
    7   Gift-giving to groom's parents
    8   Gift-giving to bride's parents
    9   Gift-giving to bride and groom
   10   Gift exchange
   11   Woman exchange
 999   Missing
C Groom service
D Bride service
E Groom wealth
F Bride wealth
G Dowry from groom's parents
H Dowry from bride's parents
I Gift-giving to groom's parents
J Gift-giving to bride's parents
K Gift-giving to bride and groom
L Gift exchange
M Woman exchange
    0   Absent
    1   Present
 999 Missing

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Notes

1. Murdock coded some societies as having an absence of marriage transactions even though individuals exchange small wedding gifts.
2. The cutoff point that coders have used to distinguish between "bride wealth" and "token bride wealth" has never been specified. Our marriage transaction typology does not make this distinction.
3. http://ehrafworldcultures.yale.edu.nuncio.cofc.edu/ehrafe/
4. This can include grain and live animals but not cooked items.
5. The percentage of societies with bride wealth, bride service, gift exchange, dowry, and woman exchange in the Human Relations Area Files (HRAF) probability sample is similar to that reported by Schlegel and Eloul (1988, Table 1) for marriage transactions in the Standard Cross-Cultural Sample (SCCS), a worldwide sample of 186 societies.
6. Eleven societies are circum-Mediterranean. There are 10 societies each in Africa, East Eurasia, and North America, and the Insular Pacific and South American regions have 9 societies each.
7. In contrast, women do not gain additional offspring from mating with a large number of men and can lose considerable time, energy, and resources because of bad mating choices (Cashdan, 2002, pp. 675-676).
8. In many societies, the bride and her parents consult with kin, friends, and religious and political personnel when selecting a spouse. The same is true for the groom and his parents.

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Bios

Brad R. Huber is a professor of anthropology. He received his PhD from the University of Pittsburgh in 1985. His research interests are in evolution and human behavior, medical anthropology, and comparative social organization. In addition to cross-cultural research, he has undertaken ethnographic fieldwork in Mexico, Costa Rica, and the United States.

William F. Danaher is a professor of sociology at the College of Charleston. His work has been funded by the National Science Foundation and numerous grants from the College of Charleston. He has published in a number of journals and cowrote *The Voice of Southern Labor* in 2004. His current research investigates occupational subcultures, work and musicians, the historical changes in allies between social movements, and the role of media in constructing social problems. He holds a BA, MS, and PhD in sociology from North Carolina State University.

William L. Breedlove, formerly professor of sociology at the College of Charleston, is a priest serving in the Episcopal Diocese of Kansas. His research interests are in macrocomparative social organization and religion.