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Source: *Social Forces*, Vol. 80, No. 1 (Sep., 2001), pp. 329-335

Published by: University of North Carolina Press

Stable URL: <http://www.jstor.org/stable/2675541>

Accessed: 13/11/2008 00:32

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Explaining Monogamy and Polygyny in Human Societies: Comment on Kanazawa and Still*

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Abstract

Kanazawa and Still (1999) argue for a female choice theory of marriage practices. This theory assumes that women determine the marriage form and that they will choose polygyny when the resource inequalities among men are great and monogamy when these inequalities are relatively low. I argue that the theory is problematic for a number of reasons, most importantly because it ignores male choice. Polygyny results primarily from male rather than female choice because it flows from the male desire for sexual variety, a desire that has evolved to promote male reproductive success. As for monogamy, Richard Alexander's theory, which argues that nation-states impose monogamy on their male citizens in order to equalize their reproductive opportunities, is suggested as the best theory currently available, and empirical data are presented to support this claim.

Kanazawa and Still (1999) make a very important contribution to sociology by developing a new theory of monogamous and polygynous marriage and testing it with a large cross-national sample. The authors test two theories of monogamy. The first, which they call the *male compromise theory*, is a distillation of the ideas of Richard Alexander (1987; Alexander et al. 1979), Laura Betzig (1986, 1992a, 1992b), and Kevin MacDonald (1990, 1995). The basic idea is that reproductive egalitarianism will prevail where societies are highly democratic: political equality promotes reproductive equality. (I am not sure that this theory is exactly what Alexander and Betzig had in mind, but I shall leave the point aside for the moment.) The authors disagree with the male compromise theory, favoring instead what they call the *female choice theory*. This theory assumes that it is females rather than males

* I am very grateful to Michael Price for allowing me to summarize his unpublished data in this comment. Requests for reprints should be sent to Stephen K. Sanderson, Department of Sociology, Indiana University of Pennsylvania, Indiana, PA 15705. E-mail: sksander@grove.iup.edu.

who determine who mates with whom. Women will choose polygyny when the resource inequalities among men are great, because it is better to be, say, the tenth wife of a wealthy man than the only wife of a poor man or a man of modest means. But when resource inequality among men is relatively low, then women will opt for monogamy because polygyny provides no advantage.

The first part of Kanazawa and Still's analysis involved performing computer simulations. These showed a strong positive relationship between economic inequality and the degree of polygyny in a society. They performed their actual empirical tests by compiling data from 127 contemporary nation-states. They claim that their data require rejection of the male compromise theory in favor of the female choice theory. This study is extremely interesting, but I am skeptical of its conclusions for a number of reasons. Kanazawa and Still argue that marriage practices emerge from the bottom up rather than being imposed from the top, but in all modern industrial societies monogamy is the law and law is made by those at the top, i.e., by political leaders. If it is simply a matter of what individuals choose, then why is it enshrined in law? Why not permit monogamy for those women who desire it but allow polygyny for those women who would choose it? Why forbid by law more than one woman at a time from marrying Bill Gates or Michael Jordan? Explaining why monogamy is enshrined in law in so many countries (and why it was enshrined in law in such ancient societies as Greece and Rome) is one of the main things we have to explain, and it appears that there is more at work than individual strategic choices.

Kanazawa and Still's claim that polygyny benefits women and hurts men is also questionable. It is true that polygyny hurts those men who lose out in the competition for mates, but it clearly benefits those men who win, and there are many societies with a large number of polygynous men. Douglas White (1988) has shown that, for the 186 societies in Murdock and White's (1969) Standard Cross-Cultural Sample (SCCS), between 20 and 49% of males are polygynously married in 32% of the societies and half or more of the male population is involved in polygynous marriages in another 9% of the societies. And clearly women in many societies see polygyny as harmful rather than beneficial. Polygyny is still permitted throughout much of the Third World today, especially in Africa and the Islamic world (Nasir 1994; Pitshandenge, 1994; Welch & Glick, 1981), and it is concentrated mainly in the most traditional sectors of these societies. Poorly educated women from rural areas and with low socioeconomic status are much more likely to be in a polygynous marriage (Armstrong et al. 1993; Ware 1979), and well-educated women from higher socioeconomic backgrounds, who have many more marital options, shun polygyny. This fact is highly inconsistent with Kanazawa and Still's argument that polygyny is chosen by women rather than by men.¹

Oddly, Kanazawa and Still ignore the importance of male choice, which surely must be at least as important as, and possibly even more important than, female

choice. This is clearly demonstrated by rapidly accumulating evidence showing that men desire young women, attractive women, women with low waist-to-hip ratios, many different women, and so on (Buss 1989, 1994; Singh 1993; Symons 1979)?² Moreover, polygynous men in virtually all societies are almost invariably men of high social rank. Laura Betzig (1986) has shown an extremely close relationship between a man's political status and his number of wives. She is referring only to highly stratified societies, where high-status and very wealthy men often have large harems under their control, but the pattern holds for more egalitarian societies as well. In these latter societies, it is usually the headmen or the big men who have multiple wives. Women are choosing these high-status men and agree to enter into polygynous marriages with them, to be sure, but it is the men who want the marriages to be polygynous in the first place.

I also wonder whether Kanazawa and Still's data are adequate to the task of testing these theories. I think that a better test would come from cross-cultural data that included many preindustrial societies, particularly the *Ethnographic Atlas* (Murdock 1967) or the SCCS. I examined the relationship between resource inequality and polygyny in the latter sample and it was in the opposite direction from what their theory predicts. Inequality actually *reduced* the frequency of polygyny ($r = -.132$)

The standard sociobiological explanation of polygyny (Hartung 1982; Symons 1979; van den Berghe 1979) holds that it is the result of the differences between male and female reproductive strategies. Men have a natural desire for sexual variety because mating with many females promotes their inclusive fitness. As Donald Symons (1979) has shown, this male desire for multiple sexual partners is extremely widespread and is probably a true cultural universal (cf. Betzig 1992a, 1992b). Polygyny also seems to increase male wealth in societies where women contribute importantly to subsistence, especially to agricultural production. A number of studies have shown a correlation between women's contribution to subsistence and the degree of polygyny (cf. Betzig 1986; Goody 1976; Heath 1958; White, Burton & Dow 1981). Using the SCCS, I looked at the relationship between a 5-point scale of marriage type (monogamy prescribed, monogamy preferred but some polygyny, polygyny preferred by leaders, polygyny preferred by men of wealth and rank, and polygyny preferred and attained by most men) and found that polygyny was moderately correlated with the contribution made by women to agriculture ($r = .385$). It seems clear that men are more motivated to marry polygynously in societies where women's economic value is high. However, it may not be necessary to construe the sociobiological and economic explanations as mutually exclusive (van den Berghe 1979). The enhancement of wealth helps promote a man's inclusive fitness, since greater wealth allows him to provide better for his offspring. A sensible conclusion would be that men in all societies desire sexual variety and will take advantage of opportunities for it when they present themselves. These opportunities are enhanced or limited by various underlying conditions, especially the extent to

which women are available and how costly they are as wives. It is surely not a coincidence that it is primarily high-status men in most polygynous societies who have multiple wives. They have both the means to acquire them and the personality traits (e.g., competitiveness, aggressiveness) that incline them toward the pursuit of several females. High-status males mate more often and leave more offspring, a pattern that is found widely throughout mammalian species (Ellis 1995).

How then can we explain why some human societies are monogamous? Although there have been several alternative theories of monogamy in addition to the one presented by Kanazawa and Still, (e.g., Betzig 1986, 1992a, 1992b; MacDonald 1990, 1995; Posner 1992), the one that seems to be most consistent with empirical evidence is Richard Alexander's (1987; Alexander et al. 1979), discussed by Kanazawa and Still under what they call the male compromise theory, and rejected by them. Alexander's theory relies on the idea of *reproductive opportunity leveling*. Male competition for wives produces conflict, and societies that recruit large numbers of young men in order to conduct wars with other societies must find a way to minimize this sort of conflict. Alexander claims that this can be accomplished by legally prohibiting polygyny, thus giving all males equal access to wives. Alexander refers to this as *socially imposed monogamy* and claims that it is the product of the large nation-state. (Kanazawa and Still claim that Alexander emphasizes that socially imposed monogamy is the product of democracy; Alexander does mention this, but he clearly gives more importance to the nation-state, of whatever political type.)

Some data I have examined are reasonably consistent with Alexander's theory. In the SCCS, 46% of larger states have socially imposed monogamy, compared to 26% of smaller states, 10% of chiefdoms, and 11% of bands and tribes. In the full *Ethnographic Atlas* (1,267 societies rather than 186), 46% of larger states have monogamy and another 39% have only occasional polygyny. Monogamy clearly is much more common at the most advanced stages of political evolution. The most systematic empirical test of Alexander's theory that I am aware of has been undertaken by Michael Price (1999) in a paper that is as yet unpublished. Price actually tests a somewhat expanded version of Alexander's theory. His argument is that monogamous societies have been much more successful than polygynous societies because of the greater cooperation promoted by the former, and as a result monogamy has spread from the West to other regions of the world. Price tests this argument by using five measures of societal success: population size, presence or absence of the death penalty, the level of democratization, the level of corruption, and the degree of economic development. Price's test relies on 156 contemporary nation-states, 84 of them monogamous and another 72 polygynous. The results are quite consistent with the overall theory. The mean population size of the monogamous societies was 52.15 million, compared to only 19.93 million for the polygynous societies. Concerning the death penalty, monogamous societies were nearly 7 times as likely to have abolished it as polygynous societies, which for Price

indicates greater cooperation and less conflict in monogamous societies. As for the level of democracy, Price found that 64% of monogamous societies but only 25% of polygynous societies had liberal democracies. Price also found that monogamous societies were much less corrupt; specifically, 42% of monogamous societies compared to a mere 5% of polygynous societies were ranked in the least corrupt third of contemporary societies. Finally, the monogamous societies had a per capita gross domestic product in 1996 of nearly \$10,000 compared to only slightly more than \$2,000 for the polygynous societies. Price also found that monogamous societies had much greater military strength, a confirmation of Alexander's original point.

Despite the empirical evidence in favor of it, the reproductive opportunity leveling theory is limited by the fact that it is unable to account for the existence of monogamy among small-scale band and tribal societies. For this reason, Alexander has proposed another type of monogamy known as *ecologically imposed monogamy* (Alexander et al. 1979; Flinn & Low 1986). In this case monogamy is not imposed politically by a powerful nation-state but arises because of the lack of resources needed by men to support multiple wives. It is clear that this is a major reason why peasants in agrarian societies almost always marry monogamously, but it could apply to many preagrarian societies as well. Alexander suggests that ecologically imposed monogamy should be found in extreme or marginal habitats and should be associated with such things as high levels of infanticide or abortion, long periods of infant nursing, wide spacing of offspring, and extended postpartum taboos on sexual intercourse. There are 186 prescriptively monogamous societies in the *Ethnographic Atlas*. A valuable project for future research would be to analyze these societies in detail, looking for evidence of either socially imposed or ecologically imposed monogamy. Until such a time-consuming project is undertaken, however, we must pronounce our understanding of monogamy limited and inconclusive.

In conclusion, I was extremely pleased to see Kanazawa and Still's article published in a major sociological journal, and sociobiology (or evolutionary psychology, as Kanazawa and Still prefer to call it) is in my view the most useful perspective for understanding the dynamics of monogamy and polygyny. However, Kanazawa and Still's article also shows that, even though one may begin with the most useful theoretical perspective, this is no guarantee that one will derive a correct theory from that perspective.

Notes

1. Women can and do benefit from polygyny for the reasons suggested by Kanazawa and Still, *but only when it already exists in a society as the result of choices made by men*. If men and women were asked to start from scratch in a hypothetical society, I would predict that few women but many men would choose polygyny.
2. Kanazawa and Still claim, in all likelihood correctly, that females are the choosers in all species where they invest more parentally than males. In these species it is the male that is the object of sexual attraction. However, it is well known that in humans this pattern has been reversed so that it is the female rather than the male who is the primary object of sexual attraction. For this reason, Kanazawa and Still's attempt to draw a parallel between humans and other animals in the mode of mate choice does not succeed.

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