Norm Enforcement among the Ju/'hoansi Bushmen

A Case of Strong Reciprocity?

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The concept of cooperative communities that enforce norm conformity through reward, as well as shaming, ridicule, and ostracism, has been central to anthropology since the work of Durkheim. Prevailing approaches from evolutionary theory explain the willingness to exert sanctions to enforce norms as self-interested behavior, while recent experimental studies suggest that altruistic rewarding and punishing—"strong reciprocity"—play an important role in promoting cooperation. This paper will use data from 308 conversations among the Ju/'hoansi (!Kung) Bushmen (*a*) to examine the dynamics of norm enforcement, (*b*) to evaluate the costs of punishment in a forager society and understand how they are reduced, and (*c*) to determine whether hypotheses that center on individual self-interest provide sufficient explanations for bearing the costs of norm enforcement, or whether there is evidence for strong reciprocity.

KEY WORDS: Altruism; Ju/'hoansi Bushmen (San); Norm regulation; Punishment; Strong reciprocity

The high level of altruistic cooperation that is found in many human societies despite relatively low levels of genetic relatedness has invited numerous explanatory models. Of these, perhaps the most widely accepted has been reciprocal altruism in which one partner in a dyad rewards or punishes the other on a tit-for-tat basis (Axelrod and Hamilton 1981; Trivers 1971). While indeed daily life in human societies is punctuated by tit-for-tat calculations, complaints, and cutoffs, there is a good deal of altruistic cooperation that is not so maintained.

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Recently, alternate models to account for certain forms of cooperation have been proposed; important among them is strong reciprocity (Bowles and Gintis 2004; Fehr and Fischbacher 2003a, 2003b; Fehr and Gachter 2000; Gintis 2000). Strong reciprocity occurs when individuals are willing "to sacrifice resources for rewarding fair and punishing unfair behavior, even if this is costly and provides neither present nor future rewards for the reciprocator" (Fehr, Fischbacher, and Gachter 2002:3). Strong reciprocity requires high levels of monitoring within the group and subsequent action to bring individual behavior in line through reward and punishment. Numerous economic experiments in western and non-western societies have indicated that people behave altruistically by forfeiting personal economic gain in order to punish (Fehr and Gachter 2000; Fehr et al. 2002; Gintis et al. 2003; Henrich et al. 2003; Turillo et al. 2002).

The concept of communities with a "collective conscience" that control members through such mechanisms as shaming, ridicule, and ostracism has been central to anthropology since the work of Durkheim (1933). As ethnographers have noted, leveling transgressors provides the spice of life in foraging societies that have no formalized leadership (Boehm 1999; Briggs 1970; Lee 1979; Silberbauer 1981a, 1981b; Turnbull 1965; Wiessner 1996; Woodburn 1982). However, few systematic studies have been carried out to investigate the dynamics of norm enforcement. Here I will use data from 308 conversations among the Ju/'hoansi (!Kung) Bushmen of northwest Botswana (Howell 2000; Lee 1979; Lee and Devore 1968, 1976; Marshall 1976; Shostak 1981; Wilmsen 1989a) to examine norm enforcement through reward and punishment.

My objectives are threefold: The first is to look at the dynamics of punishment among the Ju/'hoansi:

a. What are the respective roles of reward and punishment in norm enforcement?
b. Which behaviors elicit punishment by individuals and by groups?
c. Who punishes whom?
d. What different forms of punishment are applied, and what are their outcomes?

My second objective is to evaluate the costs of punishment in a forager society and look at how they are reduced. A number of authors have argued convincingly that reward and punishment are low-cost behaviors that play important roles in the creation and maintenance of diverse primary behaviors in a cultural system, such as resource acquisition, sharing, or defense (Boyd and Richerson 1992; Boyd and Henrich 2001; Sober and Wilson 1998). Are reward and punishment indeed low-cost among the Ju/'hoansi? If so, how are these costs reduced? If not, my third objective is to see if the Ju/'hoansi data provide evidence for strong reciprocity in punishment, or whether other hypotheses that center on individual self-interest provide sufficient explanations.

INSTITUTIONS AND NORMS IN FORAGING SOCIETIES

Social institutions, the "rules of the game in a society" (North 1990:3), and their accompanying norms vary across foraging societies. Nonetheless, three social institutions central to the achievement of cooperation that have a strong impact on incentive, norms, rewards, and punishment are found in most mobile forager societies:[1]

1. Foragers live in cooperative communities where food is shared widely and children are reared by a range of "alloparents" from grandparents to siblings (Draper 1976; Hewlett 2001; Hrdy 1999; Konner 1975). Widespread food sharing prevails within the community (camp), reducing variance in subsistence income, supporting those who are not capable of providing their own food at certain points in their lives, and promoting cooperation.[2] The availability of alloparents from all age groups, particularly for the care of children over the age of three, frees parents to pursue subsistence activities. Norms supporting cooperation include mutual obligations among close kin; willingness to share; respect of possession for material goods, mates, and relationships; and the maintenance of harmony within residential groups.

2. Egalitarian relations (Boehm 1993, 1996, 1999; Cashdan 1980; Clastres 1977; Gardner 1991; Kelly 1995) are maintained among foragers to facilitate reciprocity and cooperation on five accounts (Wiessner 2002a). (*a*) They standardize certain information by specifying that all adult members of the society are autonomous equals who cannot command, bully, coerce, or indebt others. (*b*) They reduce the risks of cooperation because people do not fear that assistance given in the present will be used to dominate in the future. (*c*) They stipulate that it is the obligation of all people to stand up for their interests and permit all individuals to punish norm defectors, if they choose to do so. (*d*) They allow individuals and families to choose different options when environmental conditions require dispersal. (*e*) They facilitate mobility between visiting groups because hierarchies do not mesh easily. Egalitarian institutions vary in how encompassing they are, that is, whether they include adults of both sexes and all ages, and whether equality applies to both opportunity and outcome (Flanagan 1989; Robbins 1994). For the Ju/'hoansi, as for many foragers, equality applies to all adults and to equality of opportunity as well as equality of outcome; modesty is the ideal. However, as in all human societies there is an age hierarchy and the young generally defer to the older. By contrast, in big-man societies potential equality is fiercely defended, but attaining higher status is permitted in exchange for goods and services provided for the group (Brown 1990; Godelier and Strathern 1991; Roscoe 2000; Sahlins 1963; Wiessner 2002a).

3. Most foragers have far-flung social ties used to reduce risk by opening access to the resources of those in other areas.[3] These ties may be based on

kinship, exchange, or ceremonial relationships. Supporting norms include respect of the land rights and marital relations in other groups, hospitality, and emphasis on relations of equality and respect. In most forager relationships, the social and the economic are closely intertwined (Mauss 1930). Individuals do not want to receive immediate returns but may tolerate one-way giving for extended periods of time to maintain the relationship, so that returns can be collected in time of need (Sahlins 1972). The capable are less concerned with economic balance than they are with supportive relationships that will cover them in times of severe misfortune. Consequently there is much vigilance for signs that relationships may be deteriorating.

THE JU/'HOANSI

In the mid-1970s the Ju/'hoansi of the Dobe-/Kae/kae area were primarily foragers (Lee 1979; Wilmsen 1989a) and 90–95% of Ju/'hoan subsistence income was obtained by hunting and gathering. The remainder came from domestic foods procured from neighboring pastoralists or through Ju/'hoan farming. Settlement patterns within a band's area of land rights (*n!ore*) consisted of dispersal into small, scattered camps during the wet season and aggregation at larger camps during the dry season. Both meat and vegetable foods were widely shared. While food was plentiful in the rainy and early dry seasons, Ju/'hoansi suffered shortages in the drier months. Far-reaching ties based on partnerships of delayed, reciprocal exchange called *xaro* (Wiessner 1982, 1986, 1994) gave Ju/'hoansi access to the resources of other people within a radius of approximately 150 km, the boundaries of the central !Kung dialect group. Regular visiting on the basis of *xaro* relationships redistributed people over available resources in times of environmental or social hardship. The Nyae Nyae area was the primary destination for such extended visits.

The Ju/hoansi of the Dobe-/Kae/kae area have been in regular contact with pastoralists since at least the 1930s. Numerous changes were occurring at the time of the primary studies cited here. In the 1970s these changes included reduction of seasonal mobility, hunting on horseback, the sale of crafts, the brewing of beer in villages to the north, the opening of a school and store in a village some 30 km away, the presence of anthropologists, and talk of new legislation through which rural people could register claims to land (Wilmsen 1989a, 1989b).

To the west of Dobe and /Kae/kae in the Nyae Nyae area, rapid change was initiated in 1959 when a South African administrator was sent to assemble people at Tjum!kui and establish a center offering a store, school, clinic, permanent water, agricultural programs, crafts marketing, and wage labor. In 1970 an official Bushman homeland was proclaimed, giving the southern portion of traditional Ju/'hoan territory to the Herero and the northern portion to the Kaudum game reserve. By 1973, as many as nine hundred Ju/'hoansi, largely

from the Nyae Nyae area, were settled at Tjum!kui. By the late 1970s the dense population of Tjum!kui was plagued by social strife, violence, and drunkenness; tuberculosis took the lives of many. *Xaro* ties were used to visit relatives in Botswana or other areas for months at a time when conditions became intolerable. In the early 1980s, small groups of Ju/'hoansi began to move back to their traditional lands assisted by filmmaker John Marshall and anthropologist Claire Ritchie. By 1992 more than thirty groups who had settled in small villages on their traditional lands established the Nyae Nyae farmer's cooperative; in 1998 the Nyae Nyae Conservancy was formed. In the 1990s, Ju/'hoansi in both Botswana and Namibia were living in permanent villages, obtaining some 30% of their subsistence income from foraging and 70% from government rations, wages, sale of crafts, and old age pensions. Alcohol was rarely consumed in the villages, but Xamsa residents frequently went to the town of Tsumkwe some 50 km away to drink. Nonetheless, in months when government assistance was not delivered, hunger in Nyae Nyae was more severe than it had been in the 1970s (Wiessner 2004). Many features of former Ju/'hoan life were maintained into the 1990s—villages composed of cores of close kin, open site structure, widespread sharing, and egalitarian relations. However, with sedentism spheres of *xaro* were greatly reduced, though short-term visiting and residential moves remained frequent.

DATA AND METHODS

The data used in this paper are taken from conversations recorded in my field notes during 1974 and 1996–1997. Table 1 compares the two samples. In both years, I allocated 3- or 4-hour time blocks to the study of conversations that took place when more than three people were present. My goal was to understand Ju/'hoan social dynamics and issues of concern. Time blocks allocated to recording conversations were chosen to fit my daily work schedule. However, within the chosen blocks I took notes on all conversations from the trivial to the serious, so the data should be representative of Ju/'hoan talk. I have omitted blocks of conversation that took place when Ju/'hoansi were intoxicated.

The following points were recorded for each conversation: topic(s), setting, participants, and whether the conversation included praise or punishment. For conversations with praise or punishment, I noted the topic of the conversation, which issues elicited praise or punishment, who initiated the praise or punishment, to whom it was directed, who joined in, the form, and the outcome over the next days, weeks, or months. I cannot claim fluency in the Ju/'hoan language for any period of my fieldwork; however, at the time this work was done, I did not use an interpreter and had sufficient command of the language to record the above information. When in doubt I asked Ju/'hoansi to clarify points of the conversation that I did not understand. Of the 308 conversations

Table 1. Comparison of the 1974 and 1996–1997 Samples

	1974	*1996–1997*
Location	Dobe and /Kae/kae	Xamsa and !Ao
	Northwest Botswana	Northeast Namibia
Number of villages (camps)	4 villages	2 villages
Village size	20–40	20–40
Months sampled	Aug, Nov	July, Oct, Feb, April, June, Sept
	(8 weeks)	(6 weeks)
Number of conversations	152	156
Mean number of adults in conversations with criticism*	7.5	6.8
Conversations with criticism involving:		
village members only	41	40
village members and visitors	23	17

*Conversations with criticism include only those involving coalitions; for individual complaints, it was difficult to determine who was involved in the conversation. Because I chose to study conversations among larger groups, these figures are not representative of number of participants in a typical Ju/'hoan conversation.

noted, 193 (63%) included either praise or criticism. The remaining conversations involved story telling or information exchange with no positive or negative valuations directed at individuals.

Because the data were collected for other purposes, random sampling was not used, equal numbers of villages were not chosen, and months sampled were not comparable for the 1974 and 1996–1997 data. Moreover, cases are not independent of one another—one transgression could spur several conversations and bouts of punishment. Therefore, although significance values of statistical tests will be given, results will be discussed in terms of descriptive statistics only. The dynamics of punishment—for example, who punished whom, how, and with what outcome—were remarkably similar for the 1970s and 1990s, although the issues differed. Accordingly, the two samples were combined for most analyses.

COSTS OF PUNISHING IN FORAGER SOCIETIES

The costs of punishment among foragers include:

1. Loss of a valuable group member. In forager societies with sparse populations, even individuals who are poor producers may contribute knowledge,

engage in childcare, hold valuable social ties, etc. The departure of kin who have long histories of cooperation with group members can represent serious losses to the group. Since residence is based on kinship, joint rights to land, and a history of cooperation, new members may be hard to find. The goal of punishment was usually to bring the offender in line without permanent expulsion.

2. Severed social ties.

3. Escalation of disputes into violence. This was a very real risk. Although physical violence was abhorred among the Ju/'hoansi, when it did break out it could have severe consequences (Knauft 1987; Lee 1979; Wiessner 2004).

4. Time and energy costs. Time and energy costs of punishing were often minimal unless a severe conflict emerged.

5. Damaged reputation for being too critical or harsh. Those who punished too easily or too harshly gained negative reputations.

Costs of punishing extended far beyond the principals in the conflict. For example, since sharing was widespread, punishment that drove out a productive group member affected all. Moreover, severed social ties also had a broad impact since sharing and assistance was carried out in "waves" of giving (Wiessner 1996). Finally, as Lee (1979:392) has shown, when lethal violence breaks out, the victims are often not principals in the conflict that led up to the killing, they are bystanders or secondary participants. Violence may end in temporary or long-term termination of relations of sharing or in dispersal of the group.

The benefits of punishing include curbing free-riders, bringing norm violators back into line, the expulsion of undesirable group members, and, in some cases, the strengthening of bonds within coalitions of punishers. Punishment in conversation provides the spice of life, at least until tempers flare.

CONVERSATION AND PUNISHMENT: WHY TALK HURTS

Among the Ju/'hoansi, punishment typically does not take place through witchcraft, financial reparations, socially sanctioned duels, or violent retribution. Rather, most punishment takes place in conversations, or at least it begins as talk (Marshall 1976). Angry complaints are issued before sharing or assistance are withdrawn, and arguments escalate before violence breaks out. Conversations thus provide a reasonable picture of punishment. What cannot be gleaned from conversations are cases when individuals subtly withdraw assistance in order to signal discontent.

Two-thirds of verbal criticism took place in groups involving camp members only and one-third in groups that included visitors, usually only one or two (Table 1); only three cases included visitors from other ethnic groups. In the vast majority of cases, visitors were siblings, parents, or children. Punish-

ment is thus largely a camp matter, although some particularly difficult cases were brought to Tswana traditional courts in the 1970s or Namibian courts in the 1990s. News of criticism does not travel widely outside the camp except in the cases that potentially affect those in other groups, such as inappropriate sexual behavior and acts of violence, and cases that entertain: leveling big shots and drunks. The average number of adults participating in conversations involving norm regulation by coalitions in my sample is 7.2 adults; children were always present.

Punishment was divided into four categories: (*a*) put-downs through pantomime, joking, or mocking, (*b*) mild criticism and complaint, (*c*) harsh criticism or complaints, and (*d*) criticism plus violent acts. The first, humorous put-downs, were applied largely to level big-shot behavior by pointing out the weaknesses of the transgressor; however, if unheeded it was understood that more severe sanctions would follow. For example, in the study there were two cases of men who were leveled for repeated big-shot behavior. The first bout of leveling took place in a joking context. When their behavior did not change, sanctions escalated to harsh criticism over the following days. The outcome in one case was refusal to share meat with the offending person and his departure for a few weeks until tempers cooled. The outcome of the second was that the accused slaughtered one of his few cows and shared the meat widely to appease.

The second and third categories of punishment involved outright criticism, usually when the target person was present or within earshot. In the evenings it was not unusual to hear one person register a loud complaint that shattered the still night air, reaching all hearths. Most complaints represent a rupture in relations. Rejection was expressed in the response of the transgressor: "Jusi wesi !xau mi" "Everybody rejects (or refuses) me." People who delivered harsh complaints were unlikely to share or give other forms of assistance to the target until their anger was quelled. If anger persisted, there was the risk that a segment of the camp would break off and depart for weeks or months. Anything other than mild complaints had, or threatened to have, very real material consequences for the target, and sometimes for the punishers as well. Thus, it was not only the fourth category, physical violence, that involved more than emotional pain.

ANALYSIS AND RESULTS

The Role of Rewards and Punishment in Enforcing Norms

Turning to the first question: Is strong reciprocity more frequently enforced by reward than by punishment? Of the 308 conversations analyzed, only 22 (7%) included praise while 171 (56%) contained some norm enforcement through criticism. Praise was often woven into accounts of people's achieve-

ments in hunting, music, trance healing, *xaro* exchange, and in a few cases, prudent use of cash. In only one case was generosity praised. On the one hand, infrequent praise may seem surprising in view of the fact that praise encourages pro-social behavior and has lower costs than punishment. On the other, praise or other forms of social reward are very threatening to egalitarian relations because they risk creating social inequalities or social debts. In order for sharing to cover unpredictable events, the terms of the relationship must be that those who have give to those who are in need (Sahlins 1972) with no debt created. Giving praise for generosity, even a simple verbal acknowledgment like "thank-you," implies that sharing is more than daily routine.

Which Behaviors Elicit Punishment?

As Fehr and Fischbacher (2003a) have pointed out, studying patterns of punishment is an effective way of elucidating central norms in a society. Table 2 lists the issues that elicited punishment by individuals and groups for 1974 and 1996–1997 combined. It should be noted, however, that actions eliciting punishment differed somewhat for 1974 and 1996–1997. In the 1990s complaints about fulfilling kinship obligations declined when the government began to deliver relief food rations and old age pensions. Criticism of drunkenness and reclusive behavior increased as Ju/'hoansi tried to adjust to more permanent villages and the widespread availability of alcohol in town.

For both years combined (Table 2, column 1), verbal complaints for neglect of kinship obligations is frequent. Among the Ju/'hoansi, sharing is not based on "demand" as it is in some other forager societies but flows as a matter of course and thus complaints usually pertained to general neglect, though specific incidents may be recalled. The focus on general neglect rather than specific infractions reflects Ju/'hoan emphasis on maintaining social relationships rather than economic balance: to complain of neglect shows that one still cares (Marshall 1976). Review of kinship obligations create, maintain, and repair the fabric of community on a daily basis.

Behaviors that are disruptive to community harmony, cohesion, and flow of assistance together make up 53% of all issues that elicited punishment: trouble making, reclusive behavior, inappropriate sexual relations, drunkenness, and big-shot behavior. Trouble making included malicious gossip and aggressive behavior. In 1974 reclusive behavior involved retreat of groups to summer territories in the bush for extended periods of time, accompanied by subtle signals that visitors were not welcome—in other words, that the group did not want to share with others. In 1996–1997 reclusive behavior was expressed by two or three families building a hut cluster apart from the village and thereby distancing themselves from the daily flow of assistance. Criticism for drunkenness included admiration as well as admonition. Inappropriate sexual behavior drew heated criticism. Big-shot behavior elicited light criticism, and if

Table 2. Issues Eliciting Punishment by Individuals and by Coalitions for 1974 and 1996–1997 Combined (The percents in the first column add vertically and those in the second and third columns add horizontally.)

	Total		*Individuals*		*Coalitions*	
	N	%	*N*	%	*N*	%
Kin obligations	43	18	31	72	12	28
Trouble-making	27	12	6	22	21	78
Reclusive behavior	26	11	0	0	26	100
Inappropriate sexual behavior	20	9	3	15	17	85
Drunkenness	21	9	0	0	21	100
Big-shot behavior	29	12	0	0	29	100
Repeated stinginess, greed, or laziness*	32	14	5	16	27	84
Land occupation/politics	22	9	1	5	21	95
Jealousy over possessions	15	6	7	47	8	53
Total†	235	100	53	23	182	77

(Pearson's chi-square = 143.9, $p = .00$)

* This category did not include individual sharing complaints but rather criticism of people who regularly fail to produce a surplus, though they could do so, or those who try to consume more than their share or conceal food from the community as whole.

† In any single case of punishment, more than one issue may be involved.

the offender did not reform, criticism escalated rapidly. The success of the Ju/'hoansi in maintaining equality despite tendencies to show off attests to the power of punishment as a force that can bring about behavior that goes against human predispositions (Boyd and Richerson 1992).

In view of arguments that punishment by coalitions is largely a means to curb free-riders (Price et al. 2002), it is surprising what a small percent of punishment (14% of all cases) was aimed at able-bodied free-riders who regularly failed to produce enough to share widely with the community or tried to consume more than their share on a daily basis. Only 5 of 32 cases involved criticism for low work effort even though there were capable individuals in all camps who produced far less than others. People did not bother with those who were regularly lazy, stingy, or greedy. Rather, the penalty for low production or stinginess was not verbal punishment but low social regard, fewer marriage opportunities, or fewer exchange partnerships (Wiessner 2002b). Positive

attributes of children of the unproductive were also seen as a reason for continued investment.

Egalitarian relations do not preclude power struggles, subtle though they may be. Politics and land were the sources of 9% of all cases of punishment. Four of the 22 cases were from 1996–1997 and involved criticism of the Nyae Nyae Farmers' Cooperative leaders for corruption. The remainder concerned land. Achieving a strong hold on an area of land (*n!ore)* is based on inheritance and integration. In theory, men and women can inherit a *n!ore* through their mothers, fathers, spouses, or in some cases even grandparents, with the result that many people have some claim to any given *n!ore* (Lee 1976, 1979; Wiessner 1977). But land ownership is not merely a matter of claiming a parcel of land—it is one of becoming successfully embedded in a core of kin who have attained "generationally continuous rights of tenure in their ancestral land" (Wilmsen 1989a, 1989b) by sticking together and utilizing inherited land. The thrust of land concerns in 1974 was that certain landowners had withdrawn to their summer lands and were utilizing them without appropriate communication with others who held similar rights. Conversations about land included reviews of genealogies, criticism of those currently utilizing the summer lands as "loners," followed by rallying of group members to utilize the land in order to activate their joint rights. Some complaints were leveled at younger group members who were too lazy to move to the bush for this purpose. Preoccupation with holding summer lands in outlying areas may have been accentuated by changing patterns of land use with the decrease in Ju/'hoan mobility. However, there is evidence that assembling a group of closely related kin and occupying land to activate claims has long been a concern of the Ju/'hoansi (Wilmsen 1989b; Wiessner 2002b).

Most cases of Ju/'hoan verbal criticism were legitimate responses to breaches of norms; however, jealousy over possessions occasionally stimulated false accusations of big-shot behavior or greediness. Six percent of all criticisms were, according to the Ju/'hoansi, motivated by pure jealousy, and the complainers subsequently told to be quiet. Since it is accepted that some individuals will have more possessions than others even after they fulfill obligations of sharing and kinship, all of these criticisms met with counter punishment. The complainer was eventually told to be quiet, that he or she was simply jealous, and that the criticism was unfair.

Individuals and coalitions (groups of three or more people who jointly engaged in punishment) responded to different breaches of norms (Table 2). Only 12 of 43 complaints regarding kinship obligations involved coalitions of punishers. When coalitions did support kinship complaints, it was usually in cases of neglected older or disabled individuals who were too weak to make their own demands heard. Ju/'hoansi said that they are hesitant to become involved in complaints of individuals against kinsmen because they "do not know their hearts," that is, they do not know why the other person did not give

food or assistance in a given situation. Individual enforcement of dyadic obligations reduces the costs of punishment by nipping defection at the bud and preventing cases of defection from escalating into group concerns. By contrast, 170 of 192 actions that threatened community stability and harmony were punished by coalitions.

Men and women punished for different issues (Pearson's chi-square = 47.6, $p = .00$). For the 214 issues in which there was a clear initiator, men initiated criticism in 95% of cases concerning politics and land and 67% of cases of troublemaking and antisocial behavior. Women initiated criticism for 93% of the cases of expression of jealousy over possessions; 73% of cases of stinginess, greediness, and failure to share; 69% of cases inappropriate sexual behavior; and 65% of cases involving failure to meet kinship obligations. Men appear to refrain from criticism for stinginess so as not to incite conflict, though they may encourage their female relatives to do so. Women initiated all eight complaints about meat sharing while men kept quiet and suggested in private that when they made a kill, they would retaliate by not giving meat to the offender. Men joked about inappropriate sexual behavior but let women punish other men so as to avoid male-male confrontations. Men and women were equally likely to punish big-shot behavior and drunkenness.

Perhaps as noteworthy as issues that elicited criticism were those that did not. In keeping with the strong egalitarian norm that no adult can tell another what to do, the only cases of criticism for not participating in group enterprises was criticism of youth by elders for not showing an interest in hunting or for being lazy. There was only one conflict over *xaro* exchange; although occasional disputes arise over *xaro* goods (Marshall 1976), most *xaro* relations are characterized by genuine affection, generosity, and respect. There was only one case of theft during the study period.

Who Punishes?

Characteristics of the initiators of criticism were analyzed by age, by sex, and by status (Tables 3 and 4). Although status differences are repressed by the Ju/'hoansi, some men and women are evaluated as "having strength" (*kxae g/aoh*) and others as weak (*tci ma /oa* or *tci khoe /oa*), literally 'nothing thing' or useless. Men and women said to be "strong" are skilled in mediation and persuasion; are usually good hunters, gatherers, musicians, or healers; and often have broad *xaro* networks. Among those judged to be strong are a range of personality types from enterprising and assertive to quiet, modest, and wise; not all individuals rated as strong were considered to be camp leaders. Fifty-five percent of those evaluated as strong were in the age group "adults with mature children." Those evaluated as weak usually marry late, are unmotivated or poor producers, lack social skills, or are in some way misfits.[4] Of 102 adults who participated in conversations, 25% were evaluated as strong, 64%

as average, and 11% as weak. People recognized as strong or influential were almost always adults with at least one married child, so there was a positive correlation between age and status.

Tables 3 and 4 indicate that people of all statuses, ages, and of both sexes punished regularly. Women initiated complaints or criticism slightly more frequently than did men. Likeliness of initiating criticism increased with age until old age when it declined. Those evaluated as strong punished twice as often as the average or weak individuals did, though inter-individual variation was great. Twenty-seven percent of individuals evaluated as strong were responsible for initiating 73% of the cases of criticism, so initiating punishment cannot be seen as an attribute of the strong. Women evaluated as strong were more likely to deliver harsh criticism than were men who were evaluated as strong. However, people who punished often and harshly were said to be *tchi n!ai* (literally 'angry, sharp, or biting thing') and in many cases were regarded as a "necessary evil." The fact that all can initiate and participate in punishment allows the costs of punishment to be distributed over the entire group.

Table 3. Age and Status of Initiator of Criticism for the 1974 and 1996–1997 Samples Combined

Status of initiator (as evaluated by Ju/'hoansi)	*n*	mean	s.d.
strong	26	2.1	2.4
average	65	1.1	1.8
weak	11	1	1.5
one-way ANOVA, $F = 2.48$, $P = .09$; Wilcoxon/Kruskal-Wallis chi-square = 6.13, $p = .05$			

Age of initiator	*n*	mean	s.d.
unmarried young adults	9	.33	0.7
adults with small kids	52	.98	1.8
adults with mature kids	29	2.3	2.4
elderly adults	12	1.4	1.6
one-way ANOVA, $F = 3.8$, $P = .01$; Wilcoxon/Kruskal-Wallis chi-square = 13.9; $p = .00$			

The mean is calculated by dividing the number of times the individuals initiated criticism by the total number of initiators. Thus, a mean of 2 indicates that the average initiator originated criticism twice as often as would be expected given the number of initiators and a median of .5, half as often.

Table 4. Sex of Initiator of Criticism by Sex of Target. Men made up 51% of the sample and women 49%.

	Sex of Target(s)					
	Males		*Females*		*Total*	
Complaints initiated by	*N*	*%*	*N*	*%*	*N*	*%*
Males	60	91	6	9	66	100
Females	50	69	22	31	72	100
Total	110	80	28	20	138	100

Pearson's chi-square = 9.8, $p = .002$

There were eight cases in which men criticized jealous women for stirring up trouble with their complaints and told them to keep quiet. These cases are coded as outcomes and not included above, though they are indeed cases in which males criticized females.

Who Are the Targets of Punishment?

Do some people get punished more frequently than others? Tables 4 and 5 give the distribution of targets by sex, status, and age. The most striking finding is that, even though men and women participate similarly in delivering punishment, men were much more frequently the targets of punishment by other men and women alike. There are at least three reasons for this. First, men were targeted more frequently than women because they were more likely to engage in big-shot and disruptive behavior. Second, they drew more criticism because they produced larger packages of food and accordingly were faced with broader demands for sharing. Third, men were reluctant to target women because they risked inciting serious conflict with the women's spouses. Women also defended their spouses, but women's responses were less likely to escalate into violence. When men did target women, it was largely to criticize them for jealous gossip, drunkenness, sexual relations with Bantu. Analysis of target by age suggests that adults with small children and those with mature children were targeted at roughly equal rates but that unmarried young men drew much more criticism than others, and elderly people were respected and rarely criticized in public.

Weak individuals were criticized more frequently than average individuals, a finding that can be explained by a few low-status women being criticized for inappropriate sexual behavior with Bantu men. Strong individuals were under fire twice as often as average individuals, largely for disruptive behavior, land issues, big-shot behavior, and sharing/generosity. This is probably because "strong" individuals are powerful characters who invite leveling, whose higher rates of production generate more demands, and who are held responsible for gathering their close kin to occupy land (see also Barkow 1992). Weak and

Table 5. Age and Status of Target for the 1974 and 1996–1997 Samples Combined

Status of target	*n*	mean	s.d.
strong	26	2	2.7
average	65	0.9	1.6
weak	11	1.8	1.5
one-way ANOVA, $F = 4.05$, $P = .02$; Wilcoxon/KruskalWallis chi-square = 10.5, $p = .005$			

Age of target	*n*	mean	s.d.
unmarried young adults	9	2.7	1.9
adults with small kids	52	1.2	1.7
adults with mature kids	29	1.5	2.5
elderly adults	12	0.2	0.4
one-way ANOVA, $F = 3.15$, $P = .03$; Wilcoxon/KruskalWallis chi-square = 13.4, $p = .00$			

The mean is calculated by dividing the number of times the individuals initiated criticism by the total number of initiators. Thus, a mean of 2 indicates that the average initiator originated criticism twice as often as would be expected given the number of initiators and a median of .5, half as often.

average people feel free to criticize the strong and are not reluctant to do so in their presence. Despite the fact that the strong are frequently under fire, they are able to maintain their positive reputations. In fact, some criticism may help rather than hurt their reputations, as it establishes the impression of equality in the face of real inequalities in productive abilities and social influence. The strong generally take mocking or pantomime with good humor, swallow criticism, or make amends. Sometimes they engage in self-leveling by getting drunk or making fools of themselves, thereby remaining "one of the boys." This tolerance for punishment on the part of the strong comes in stark contrast to big-man societies where inequality of outcome is accepted, and reputation, a person's most valuable asset, is defended with either aggression or economic sanctions (see Mahdi 1986; Watson 1971).

How Are People Punished?

Verbal punishment takes place in many forms, from pantomime to harsh verbal criticism to verbal criticism accompanied by violence (Table 6). Of the 171 cases of punishment recorded, 22% involved mocking, joking, or pantomime; 41%, outright complaint or criticism; 35%, harsh criticism; and 2%,

criticism plus violent acts. Frequencies of different forms of punishment employed were similar in 1974 and 1996–1997. Mocking, joking, and pantomime, methods that bonded participants, were the least costly forms of punishment. They were often the first step taken to bring someone in line; when unsuccessful, bouts of more direct criticism ensued. Outright complaints and criticism were the most common forms of punishment. When individuals delivered direct verbal criticism without group support, this was usually restrained: 75% of cases of mild criticism were delivered by individuals and 77% of harsh criticism was delivered by coalitions (Pearson's chi-squre = 9.7, $p = .002$). In the absence of alcohol, escalation of criticism into violence is infrequent though not negligible: 2% of all punishment initiated in sober conversations escalated into violence. Of 171 cases of punishment, 69% took place when the offender was either present or within earshot, 21% were conducted when close relatives were present and it was clear that the critique would reach the offender, and 10% took place when the offender was absent. The latter cases involved coalition building with the aim of inflicting punishment at a later date.

Consensus seeking, the process that makes group action possible in egalitarian societies (Boehm 1996), occurred when coalitions were being built. However, complete consensus was not required for group punishment; in fact, it was not desired. A significant cost of punishment in small-scale foraging societies is the loss of a valuable kinsperson and group member. To reduce the risk of such loss, some of those present refrained from complaint or criticism so the target had enough support to remain comfortably in the camp. Individuals refrained from group punishment to avoid severing key relationships, because they disagreed with the criticism, or to show loyalty to kin even when they knew that the sanctions were appropriate. Of the 128 cases of coalition punishment, in only 43 (34%) did everybody present join in (Table 7). Of these, 11 cases involved pantomime or joking and 19 involved harsh criticism

Table 6. Frequency of Different Means of Critique or Punishment

	1974		*1996–1997*		*Total*	
	N	%	*N*	%	*N*	%
Put downs through pantomime/joking, mild targeting	23	26	14	17	37	22
Outright criticism/complaint	37	41	34	41	71	41
Harsh criticism	28	31	31	38	59	35
Criticism and violent acts	2	2	2	2	4	2
Total	90	100	81	100	171	100

Pearson's chi-square = 2.0, $p = .73$

with the intent of expelling the offenders or deposing a leader. Restraint from criticism was played out by what Sugawara (1997) has called "parallel play" in which the two parties continue on their own courses without showing any significant opposition or antipathy toward one another (see also Draper 1976:209). Within one conversation circle, those who do not agree may sit quietly or discuss a different topic.

Respect may be obtained from exercising judicious restraint. Although the strong initiated more punishment than others, the *n!ore kxao*, the recognized owner of the land and/or the respected camp leader, often refrained from criticism or even attempted mediation. Of 45 conversations involving punishment by coalitions where the *n!ore kxao* was present, in 28 (62%) the *n!ore kxao* refrained.

What Are the Outcomes of Punishment?

The most common outcome of Ju/'hoansi verbal punishment was that the message was heard by the target without visible response or apology (39% of cases) (Table 8). This outcome occurred in 63% of all dyadic interactions. Sometimes such complaints were ignored because the targets did not want to hear them or because the complaints were unfounded. For example, the Ju/'hoansi associate well-being with social support, and when old people fell ill, they blamed their suffering on kin neglect rather than on their physical condition (Rosenberg 1990). Their kin knew this, heard the message, and went about their daily lives. Other times the complaint was taken seriously though the response was delayed. In 1974 a highly respected leader and one

Table 7. Number of People in Conversations Involving Punishment by Coalitions Who Refrained from Criticism

	Conversations	
Coalition Punishment	*N*	*%*
5+ people refrain	26	20
3 or 4 people refrain	27	21
1 or 2 people refrain	32	25
All participants join	43	34
Total	128	100

11 of 43 (26%) conversations in which everybody joined involved joking, pantomime, and teasing, not overt criticism.

For 28 of 45 (62%) conversations in which the *n!ore kxao,* the most respected figure in camp (and landowner), was involved, the *n!ore kxao* refrained from criticism.

of the few cattle owners at /Kae/kae was accused of big-shot behavior and failure to share meat. After suffering extensive criticism in silence, he noted that one of his cows was behaving dangerously, slaughtered it, and distributed the meat widely. Another man accused of neglecting his failing parents-in-law did provide meat for them some days later. I estimate that only a third of complaints that were received with no visible response brought about actual changes in behavior.

The second most common outcome of verbal criticism was the rallying of group opinion against the offender (26% of cases). In 1974 the two most important instances of coalition building were directed against strong individuals who exhibited reclusive behavior by going off to summer territories, withdrawing from broader circles of cooperation, and indicating that visitors were not welcome. Genealogies were recited repeatedly to establish equal or greater rights to the summer territories and to rally co-landholders. The leaders of the reclusive groups were the only ones who were severely criticized. One of the targeted parties who heard of the coalition of kin forming against him returned briefly to /Kae/kae and invited others to join them. The other reclusive group did not return, provoking some members of the coalition to go ahead and spent a few weeks in the contested area. Tension remained high when both groups returned to /Kae/kae for the dry season and persisted for several years thereafter. Sharing declined, but no further sanctions were exerted.

Table 8. Outcomes of Punishment Carried Out by Individuals and Coalitions

	Individual		Coalitions		Total	
	N	%	N	%	N	%
Message heard—no visible response	27	63	39	30	66	39
Target defends him- or herself	6	14	2	2	8	4
Initiator(s) told to stop slander	4	10	8	6	12	7
Sanctions—refusal to interact/share	0	0	5	5	5	3
Corrective action contemplated or taken	4	9	18	14	22	13
Group opinion rallied	0	0	44	34	44	26
Departure for days/weeks/months	1	2	6	5	7	4
Violence*	1	2	4	3	5	3
Ostracism	0	0	2	1	2	1
	43	100	128	100	171	100

Fisher's exact test, likelihood ratio = 13.9, $P = .000$. For this test all active outcomes—that is, those other than "message heard"—were combined.

* In all cases there were no serious injuries; the violence was quelled, and all group members remained in the camp.

Another major case of coalition building in 1974 involved ostracism of a woman who had several passing relationships with Bantu men. Ju/'hoan men are threatened by women who consort with Bantu men because external unions deplete their pool of possible marriage partners.[5] The woman in question left the area after harsh and repeated criticism and subsequently died. The cost of ostracism in this case was low for the punishers, but not for a few close kin who had refrained from the criticism with the hope that she could stay. Another case of ostracism that had occurred in the previous year was discussed in 1974. This involved one of the best hunters in the area, who was believed to have committed incest. Proof of the incest was further confirmed in the eyes of the Ju/'hoansi when his daughter died rather suddenly from a lump that appeared on her back. After extensive slander, the offender went into voluntary exile in the nearby hills with his family. Close kin continued to visit and reside with him. By 1996 he was settled at /Kae/kae, where he had become a respected member of the community.

In 1997–1998 there were three cases in which successful coalitions were built over a period of months. The first was an attempt on the part of the owners of the land and younger people in the village to depose a village leader and representative to the Nyae Nyae conservancy. The man in question had married into the group and become the village leader owing to his skills in hunting, healing, music, and mediation. As he aged, he grew self-centered and was repeatedly accused of trying to obtain more for himself and to conceal what he did have. Coalition building in this case was a tempest in a teapot—at the heart of the issue was a power struggle, but much of the criticism concentrated around how much tea and sugar he consumed on the sly. However, each time he was about to hit a new low in public opinion, he killed and distributed a large animal, performed brilliantly for tourists, and regained his influence. He died before he could be deposed. Some tension was created between the coalition and his immediate kin, sharing declined, and there was talk of a camp split that did not occur.

The second case involved the expulsion of a group of families who had recently moved to Xamsa village. At first things went very well, but when one member of the group killed a large animal and gave meat to only one person in the host village, negative feelings mounted. One incident led to the next and a coalition aimed at extraditing the temporary residents was formed. After several months of tension, the group moved on, established their own village some 9 km away, and resumed good relations. Such fission and fusion in Ju/'hoan camps is not uncommon. The third case involved the expulsion of a family from Xamsa in which the wife was drunken and promiscuous and the children unruly. People felt threatened by the wife's sexual behavior with Bantu, her bad parenting, and her wild kids. The village formed a coalition against the family, jointly refused to share with them, and even asked me not to give them anything. Severely ostracized, the family left to reside in

Tjum!kui. Here again the costs of ostracism were low for the coalition of punishers but high for her husband's immediate kin in the village. When the wife died a few years later, her husband and children were welcomed back to the village.

Other outcomes were less frequent (Table 8). Apology was rare among the Ju/'hoan, as was direct self-defense against accusations. Criticism is commonplace, and, except in adultery cases, the accused often prefers to keep quiet rather than enter into direct conflict that might escalate into violence. And indeed of the eight cases where the target defended him- or herself, four resulted in violence. For the five cases that involved violence, the conflict began in dyads, escalated into physical fighting, and then into a general brawl. In the end combatants were restrained by their closest and strongest kinsmen, and subsequent criticism was directed at those who "lost it," whether or not they were the original initiators. Only physical restraint contains violence—when tempers flare, reason departs and mediating words are to no avail.

Punishment delivered by individuals appears to have less clout in bringing about conformity to norms than that delivered by groups. Of 43 complaints delivered by individuals, 63% met with no response other than "message heard—no visible response." In contrast, of 128 cases in which a group was involved in punishing, in only 30% was the criticism met with the same. Eighty-six percent of cases that resulted in active responses were in reaction to punishment by the group.

HOW HIGH ARE THE COSTS OF PUNISHMENT?

Ju/'hoansi individuals punish readily to regulate kinship obligations and groups punish to exert sanctions against those who break norms. Are the costs of group punishment high enough to require altruism, as suggested by experiments in western societies, or are costs of norm enforcement relatively low, as suggested by Sober and Wilson (1998)? To address these questions, cases that could be explained as regulation of dyadic relationships by the two individuals involved were omitted. The remaining 124 cases of group punishment were evaluated for whether the initiator and coalition members incurred costs in the short and longer term. Since my fieldwork continued for at least a year after most episodes of punishment, I was able to evaluate the immediate and long-term outcomes.

Of the 124 cases of punishment considered, 11 (8%) had some negative repercussions for the initiators and coalition members and 18 (15%) involved visible reform or expressed intent to reform on the part of the transgressor and (another 10% with the outcome "message heard" may have involved subsequent reform).[6] None of the cases with negative outcomes dealt with regulation of sharing or free-riding. Negative repercussions ranged from tense relations and temporary cessation of sharing to severed relations to loss of a camp member through ostracism. There is little evidence that the initiators incurred more costs than the others who joined in the punishment.

The three cases with the most severe consequences, severed relations between groups, involved land issues detailed above in which the stakes were high for all members of the punishing coalition, particularly in one case where the transgressors included members who were known to be hotheaded and to have killed in the past. Fortunately, these incidents held no consequences other than temporarily severed ties. In the long run, rights to land were not lost and within a few years the transgressors began to mend ties. The remaining cases that generated tension within the village involved two efforts to expel sexually promiscuous individuals from the group and one to depose an aging leader. Tension generated in these cases disrupted patterns of sharing for months but had no further consequences for the punishers. Some members of the punishing coalition felt they had significant stakes in the outcomes; others who joined did not.

In summary, short- and long-term outcomes of Ju/'hoan punishment indicate that costs were relatively low on a daily basis. However, this was not because the costs of punishment were intrinsically low, but because Ju/'hoansi have been dealing with norm regulation for millennia and in the process have developed effective means of reducing costs. First, all people as autonomous individuals are expected to stand up for their rights in dyadic relationships, nipping defection at the bud and reducing time and energy to be spent on norm control by the group. Groups that punish are usually small, reducing the risks of factional conflict. Second, minimal energy was wasted on incorrigible free-riders; unless they were disruptive to community, they were accepted for whatever they and their families did contribute. Third, egalitarian relations allow all adults to punish, distributing the costs over the group. Fourth, as autonomous individuals, nobody is forced to punish, so if individuals feel that costs might be high, they are free to refrain from taking sides. This allows the defector to make amends and still have enough support to remain in the group. Fifth, as equals, everybody can be punished, inhibiting the rise of despots who might build power and retaliate. Sixth, men often step back and let women punish for issues that might bring men into violent conflict. Seventh, because equality is the ideal, being punished does not damage one's reputation as long as it is not for some atrocious deed. As a result, low-cost methods of punishment such as joking, mocking, and pantomime are readily accepted, even by the strong. Groups who can maintain the above conditions to lower the costs of punishment and who have leaders that exercise discretion in punishing are usually those who are most successful in maintaining harmony and stability of membership over years. Nonetheless, the very equality that lowers the costs of punishment in Ju/'hoan society also has its drawbacks. It inhibits the rise of authoritative leaders to settle disputes and leads to avoidance of giving verbal or material rewards to encourage conformity. Ju/'hoan informal means of punishment and ways of reducing the costs of punishment would be ineffective or insufficient in a larger-scale society with less mobility.

IS THERE EVIDENCE FOR STRONG RECIPROCITY IN JU/'HOANSI PUNISHMENT?

Although the costs of exerting sanctions on a daily basis were not high among the Ju/'hoansi, they were certainly not negligible, particularly in relation to the low rates of visible reform on the part of offenders. A full 8% of incidents of group punishment had some negative repercussions, and 3% resulted in violent brawls. Anytime somebody initiates or joins in punishment, a certain amount of risk is involved. Is strong reciprocity involved in Ju/'hoan punishment by coalitions or can willingness to punish be explained by individual interest alone? It is difficult to prove the existence of strong reciprocity directly with data collected in a field setting that cannot be controlled. However, it is possible to examine a number of other competing hypotheses centering on self-interest to explain why people bear the costs of punishment.

1. *Regulating reciprocal altruism.* The first and most probable explanation is that punishers are engaging in tit-for-tat behavior to counter defection in reciprocal relations. Of the 171 cases of punishment considered, 43 (25%) involved regulation of dyadic relations. The remaining 128 cases involved group punishment that could not be so explained.

2. *Second-order punishment.* Another parsimonious explanation for willingness to punish is the threat of second-order punishment—that people joined the punishers because they would be punished if they did not do so (Fehr and Fischbacher 2003a; Sober and Wilson 1998). This hypothesis was refuted; not a single case of second order punishment occurred during the conversations I analyze here. I have not observed any second-order punishment in all of my years working with the Ju/'hoansi.

3. *Nepotism.* Is punishment by coalitions a matter of factions of close kin competing over certain interests or of close kin supporting their relatives in complaints? To examine this hypotheses, the relation of the initiator to the target and that of coalition members to the initiator were examined. The results in Table 9 indicate that targets came from all categories of relatedness and relatives were targeted at rates roughly similar to those expected from their frequency in the village. The results in Table 10 shows that initiators were joined more frequently by $r = 1/2$ relatives than would be expected from their frequency in the *village*, though distant and non-kin became regular partners in coalitions. This preference may be due to the fact that siblings or parents and children share similar interests, to nepotism, or to both of the above. Nonetheless, most group punishment did not appear to be a matter of close kin ganging up on distant kin as both closely and distantly related kin were targeted and both closely and distantly related kin joined the initiator in punishment delivered by coalitions. When factional politics did occur, it was over utilization of land to which two groups shared rights (17 out of the 124 cases considered here).

Table 9. Relatedness of the Initiator to the Target in Cases of Punishment by Coalitions

	Coefficient of Relatedness (r)Between initiator and co-punishers											
	1/2		1/4		1/8		1/16+		Primary Affines		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Number of target persons related to initiator by r	4	6	4	6	7	9	47	65	10	14	72	100
Number of persons in village related to initiator by r	160	10	63	4	51	3	1135	72	169	11	1578	100

Coefficients of relatedness were calculated from an individual's genealogy. Primary affines include spouse's parents, siblings, and children from other marriages.

Pearson's chi-square: 12.44, df = 4. Not significant at the .001 level, but the data seriously violate the independence assumption.

Table 10. Relatedness of Co-punishers to the Initiator in Cases of Punishment by Coalitions

	Coefficient of Relatedness (r)Between initiator and co-punishers											
	1/2		1/4		1/8		1/16+		Primary Affines		Total	
	N	%	N	%	N	%	N	%	N	%	N	%
Number of co-punishers related to initiator by r	72	19	12	3	27	7	237	61	39	10	387	100
Number of persons in village related to initiator by r	160	10	63	4	51	3	1135	72	169	11	1578	100

Number of persons in village does not include those who were away on visits during the conversation. It does include people from other villages who were visiting.

Coefficients of relatedness were calculated from an individual's genealogy. Primary affines include spouse's parents, siblings, and children from other marriages.

Pearson's chi-square 51.20, df = 4. Significant at the .001 level, but the data seriously violate the independence assumption

4. *Costly signaling.* Gintis, Smith, and Bowles (2001) have proposed that punishing for violations of social norms is one of several behaviors that might provide a public good and thereby furnish an honest signal of the member's quality as a mate, coalition partner, or competitor. If this is the case for the Ju/'hoansi then one would expect that: (*a*) punishing would occur at an age when individuals are reproductively active and seeking mates for themselves or their offspring; (*b*) willingness to punish would increase status and make an individual a desirable group member or ally and (*c*) punishment would be a honest sign of strength and deter others from punishing.

This application of the costly signaling hypothesis to punishment is an interesting one because, unlike the provisioning of public goods, punishing does not bear positive social evaluation but is regarded as "a necessary evil." Prospective mates and coalition partners could fear that criticism might also be directed towards themselves.

With regard to the first point, individuals of mating age are the least likely to punish of all age groups, making it unlikely that punishing provides an honest signal of an individual's willingness to provide public goods and therefore prove him- or herself to be a desirable mate. It is also doubtful that even skillful punishing would increase the probability of parents finding mates for their children, because punishing takes largely place within the camp and spouses are sought in other camps. While parents do achieve reputations for hunting, healing, or *xaro* exchange that extend beyond the camp, people in other camps are generally unaware of a person's participation in punishment.

Does punishing give high social regard and make a person a desirable group member? Whereas ability to mediate is highly valued among the Ju/'hoansi, as it is in most societies, willingness to punish is regarded with mixed feelings. On the one hand, those who punished frequently or harshly were considered to be *tchi n!ai* (angry, sharp, or biting thing) and were frequently told to be quiet and stop causing trouble; on the other, camp members were often relieved to have someone else bring tense issues into the open. Twenty-seven percent of high-status individuals did punish very frequently, but there is little to indicate that punishing is an important source of status in comparison with hunting, healing, or *xaro* exchange (Wiessner 2002b). Consistent with the ideal that leaders should be mediators, not punishers, *n!ore kxaosi*, the most respected figures in camps and recognized senior owners of the land, refrained from joining punishing coalitions in 28 out of 45 (62%) conversations in which they were present.

Might willingness to deliver punishment deter competitors? This is not an easy dimension to measure in a society with no formal contests; however, the data do not lend strong support to this hypothesis for three reasons: (*a*) Ju/'hoansi of competitive mating age punish least frequently of any age group. (*b*) Reputation for punishing on the part of parents does not extend to circles where spouses or exchange partners would be sought. (*c*) While some among the "strong" or higher-status individuals punished more, they also got punished more frequently than would be expected from their representation in the population. Even those considered to be weak sometimes punished the strong. Though the possibility cannot be ruled out, there is little evidence that punishing others was a form of display that deterred competitors in central arenas of Ju/'hoan life.

In summary, 25% of cases of punishment were aimed at regulating reciprocal altruism in dyads. For the remaining cases, nepotism has some explanatory value in that immediate kin (r = 1/2) sided with one another with frequencies

somewhat higher than expected. Second-order punishment and costly signaling do not appear to account for readiness to punish among the Ju/'hoansi. The willingness to incur costs in punishment that provided no direct present or future rewards for the reciprocator lends some support to the strong reciprocity hypothesis.

CONCLUSION

Exerting sanctions to punish norm violators was an important force in Ju/'hoan society, operating largely within residential groupings. For some cases it does appear to involve strong reciprocity—that is to say, individuals obeyed the norm and punished its violators, even when this costly behavior could not be justified in terms of immediate selfish preferences. However, the fact that Ju/'hoansi do benefit from living in a stable, cooperative, and harmonious groups cannot be discounted as an individual benefit. Punishment of norm violators was one of several factors that strengthened centripetal forces of kinship and shared land ownership and curbed the centrifugal forces of antisocial and disruptive behavior.

Punitive complaints to adjust kin obligations, acrid though they may be, were part of daily life, creating, maintaining, and repairing the fabric of cooperative community with a dense network of overlapping ties. When kinship obligations were successfully regulated, food was shared with those in short supply, camp members of all ages cared for children above the age of two or three, the entire village joined efforts to heal those who were sick, and information was disseminated in good spirit around campfires at night. Centripetal force was further exerted by groups through putting pressure on relatives to converge in larger communities for certain seasons of the year and thereby keep external social ties active. Norms enforced through reward and punishment conformed closely to desires expressed by Ju/'hoansi hunters and healers who do more than their share to support the community, namely, to eat well and live on their land in stable groups of close kin (Wiessner 2002b). They also created conditions for what Hrdy (2005) has proposed to be the fundamental social organization in human evolutionary history: to live in stable, cooperative breeding communities.

But enforcement of the obligations of kinship and joint landownership that bind individuals into groups was not sufficient to maintain community in the face of disruptive forces: malicious gossip, aggression, stinginess or greediness, big-shot behavior, jealousy, inappropriate sexual behavior, and drunkenness. With a few notable exceptions, the goal of the Ju/'hoan was to bring the transgressors back in line through punishing, without losing familiar and valuable group members. Although punishment was frequent and potentially costly, costs were reduced by an array of cultural mechanisms. These mechanisms, developed over centuries, were finely tuned to cultural context. Unfortunately,

with the rapid change that is occurring today and the introduction of alcohol, the decade between 1993 and 2003 saw an enormous increase in Ju/'hoan homicide as well as other serious breaches of norms, while offenders walked away with few consequences. Unless costs of punishment can be minimized though cultural means, they are so high today that even strong reciprocators are unwilling to bear the burden. In response, new formal mechanisms such as government-supported traditional leaders' councils are being introduced to try to manage disruptive forces at a time when age-old solutions no longer suffice.

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NOTES

1. Foragers are a subset of hunting and gathering societies characterized by a sparse population, high mobility, and little or no food storage.
2. For examples see Altman and Peterson 1988; Bahuchet 1990, 1992; Barnard and Woodburn 1988; Clastres 1972; Endicott 1988; Gould 1981; Griffin 1984; Harako 1976, 1981; Heinz 1966; Ichikawa 1983; Kent 1993; Lee 1993; Testart 1982; Marshall 1976; Myers 1988; Silberbauer 1981a, 1981b; Sugawara 1988; Tanaka 1980; Turnbull 1965; von Bremen 1991; Williams 1974; Winterhalder 1986; Woodburn 1982.
3. For examples see Bahuchet 1992; Balicki 1970; Damas 1972; Endicott 1988; Griffin 1984; Heinz 1979; Henry 1941; Meggitt 1962; Robbe 1989; von Bremen 1991; Wiessner 1982, 1986, 2002b; Yengoyan 1968.
4. To rank people by status makes little sense to the Ju/'hoansi. Status evaluations by Ju/'hoansi were elicited by asking individuals which of their fellow camp members were considered to be "strong" or "weak." Those not named by the majority of people asked as having a reputation for being strong or weak were considered to be average. Evaluations coincided with remarks made in conversations and my observations on levels of productivity, involvement in community affairs, extent of exchange networks, etc.
5. Bantu men regularly enter into partnerships with Ju/'hoan women, usually in temporary unions or in polygynous marriage. Owing to racial prejudice, Bantu women rarely, if ever, marry Ju/'hoan men.
6. It is not unusual for transgressors to violate the same norms repeatedly over the years.

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