Ch 14. Reputations.

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SI 14.1. The interviews and computations. Procedure. Tables and histograms.

The replies were copied from notebooks and entered as text strings in the files in which interviews were transcribed from the field notes. This file includes fields with text data for each skill and each year, and transcribed interview answers, mostly as lists of names separated by commas. A program cuts the string into segments delineated by commas and makes a record out of each segment. It built a separate file for each question – each "skill". The program used the household censuses and anthropometry record to find the region in which each woman was seen and interviewed.

The output files were reviewed by eye and if a string turned out to be the name of two men, made into two records. Some strings were meaningless, containing for example just the word "and", or some note in which I commented on the conditions of the interview, and these were given a code "1000" for non-information.

Nominated men were identified in the population register and their ID number entered. When a man could not be identified I entered 1000. Some answers were generalizations, such as "there are no expert hunters, or "all the younger men", or "just us around here". These were entered as 2000 for "don't know" and replies with the same implication (25 records, from 23 women), and 3000 for answers that implied "all the men" (8 records, 8 women). These records were saved, including the ID of the woman, the location, region, and year of the interview, the segment of her response, and the code for ID of the nominated man.

The men were nominated from some pool of available men. I assumed that these were all the men aged over 20 living in the region at the time of our interviews. Approximated by number of records >=2 and inarea >= 60%. The number of such was 227 men. Among them 104 different men received at least one nomination and 123 men received no nomination in any category. The histograms are based on the 188 of the men who had an RS record (were in the RS file, which was combined with the nominations file.

Note men's scores included only 1 per woman nominating them, they did not add a second count if a woman nominated them twice. If interviewed a second time women quite often named some men they had not previously nominated.

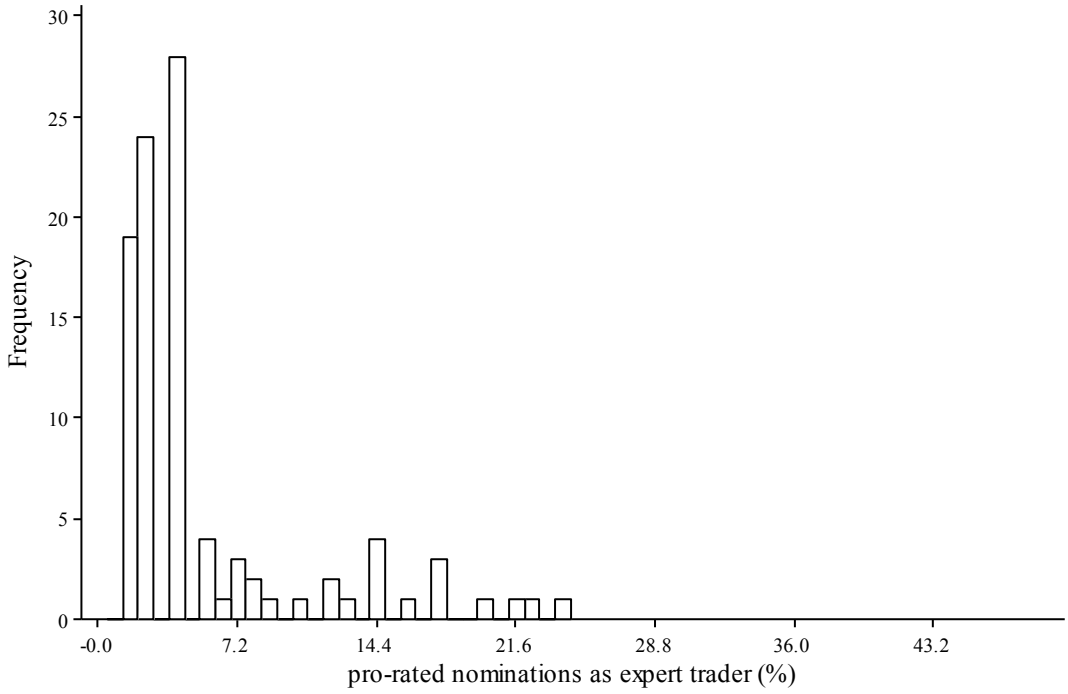
There were some non - significant differences in men's pro-rated hunting nomination score by region. Siponga had the lowest mean, and Tliika the highest. Mangola was only a little lower than Tliika. These differences accord with our impressions of the availability of game animals during our study period. Tliika, while the best endowed with animals was the most remote from villages where items could be traded but was not remote from Datoga houses where honey and labor can be traded. However, there were no significant regional differences in the mean nomination as a trader. After 1995 two tourist companies began to visit Tliika occasionally and Hadza will have taken these as excellent opportunities for trade. But we saw no indication of a sudden change in men's reputations as traders.

3. If women were nominating men at random we would expect the number of nominations to cluster around 2-3 for each man. The interview process violated some of the assumptions of the binomial test (Siegel 1956, a test which appears to be commonly used in sociometric studies). But applying the test separately to each region suggests that around one man in each region would receive more than 5 nominations by chance, and about 2 would receive no nominations. Applying the test to the whole sample suggests that the observations depart massively from the expectations of a binomial distribution. The women are not throwing unbiased multi-faced dice.

SI table 14.1. Nominations of men in the RS file. Men's pro-rated nomination scores as hunter, trader, arrow maker. The number of women who nominated a man (x 100) is divided by the number of women interviewed in his home region. For the table, the scores were rounded down to nearest whole number. The zero category includes men in the region who were never nominated but feature in the RS file. Total 188 men. More details are given in the text.

Pro-rated score	Hunter	Trader	Arrow maker
0	115	112	124
1	15	13	13
2	8	17	7
3	5	6	2
4	8	16	5
5	0	4	6
6	6	1	3
7	3	3	6
8	8	3	5
9	0		1
10	4		4
11	0		
12	3	2	1
13		1	
14	1	3	1
15			
16	1	2	1
17		2	2
18	1		
19	2		1
20		1	
21	2	1	3
22			
23		1	
24			
25	1		1
26	2		
30	2		
37			1
38			1
48	1		

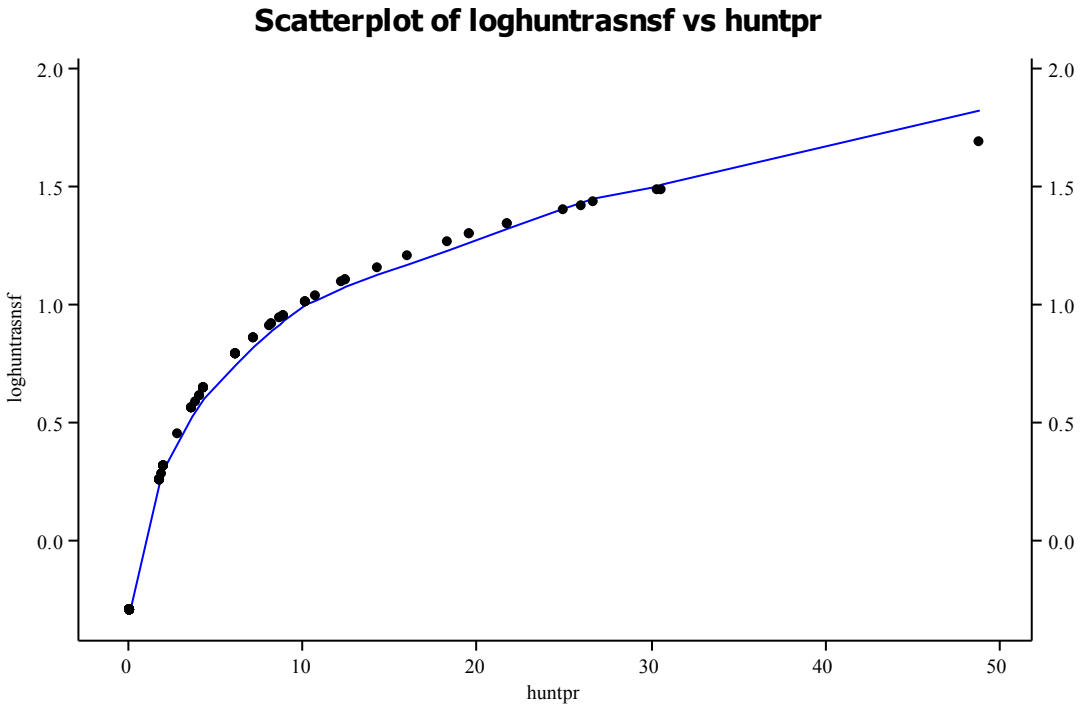
SI figure 14.1. Men's pro-rated nominations as an expert trader.



SI table 14.1.2. Pro-rated nomination score for hunting by region of hunter. 188 men with RS measurements.

Hunt pr	Mangola	Tliika	Siponga
0	23	35	57
1	1	12	2
2	3	1	4
3		5	
4	2	1	5
5		0	
6	5	0	1
7		2	1
8	3	4	1
9			
10	2	2	
11			
12	1	1	1
13			
14	1		
15			
16		1	
17			
18	1		
19		2	
20			
21		0	2
22			
23			
24			
25		1	
26		1	1
27			
28			
29			
30	1	1	
48		1	

The log10 transform of pro-rated hunt score compresses the differences among the highest scoring tail of the distribution. Most effects seem to be attributable to the differences among the greater number of men at the lower end of the distribution.



SI 14.2. Reliability. Split half and repeat interview results.

A simple split half reliability test adds to my confidence that the nomination scores are meaningful. The interviewed women were randomly divided into two groups and their nominations compared. Taking each eligible man as an observation, the nominations received from one set of women was very highly correlated with the nominations received from the other set of women. The process was repeated 5 times and the means of the matrix of 45 correlations for each skill were: for hunting 0.9047 (range .825 - .967) , for trade 0.8371 (range .689 - .913) and for arrow-making 0.8724 (range .802 - .937). Measures of concordance taking the numbers of nominations received as an ordinal score, also gave high values and extreme significance. There is agreement about which men are expert hunters, traders, or arrow-makers. The implication is that I would probably have seen the same men getting high nomination scores if I had interviewed a different sample of eastern Hadza women.

A second supporting argument is that women tended to give similar nominations when they were interviewed a second time. Men's scores derived only from the second interview of the 50 women who were interviewed a second time, were strongly correlated with scores derived only from their first interviews (Pearson correlation 0.793 p <.000). In regression b = .5499 (95%CI .4952 - .6046), p <.0000, adjusted r-squared .6279. The intercept closely bracketed zero (95%CI -.16 to + .12). The nomination scores derived from the first interview and from the second interview also correlated significantly with the main score used and had an identical pattern of correlation with other measures such as RS.

Twenty-five men were also nominated from outside their region but these nominations were not counted towards a man's final score (perhaps they should have been).

SI table 14.3. Number of women in each region asked to name expert hunters, traders, arrow makers.

N women asked about	Mangola	Tliika	Siponga
Hunters	49	56	23
Traders	49	55	23
Arrow - makers	47	57	24

SI table 14.4. Distribution of the eligible adult 188 men in the core study area across regions.

	Mangola	Tliika	Siponga
N of adult men	43	70	75

SI 14.3. Nominations of husbands, brothers, fathers.

Many women appeared ambivalent about naming their husband. Although they sometimes referred to him indirectly "him in the house", "father of that one", they showed no hesitation naming men as father of their children. They were not reluctant to use his name in the context of listing children but behaved as if it was in bad taste to boast about one's husband's hunting success. This was especially memorable in the case of a woman whose husband was widely nominated, and known by all observers over many years from direct observation to be an outstandingly hard – working and successful hunter. The program was also able to look for relationships between the nominated man and the nominating woman: did she nominate her current husband, her father, or her brother?

A wife adds just one nomination to a man's score. Thus wife nominations make a small proportional difference to a man's score. Nonetheless I looked to see what difference it would make if we removed nominations by wife. I re-calculated the pro-rated scores for each man whose wife had nominated him. In some analyses I divide men into those with a pro-rated score of 5 or more, or less than five. I wondered how many men would change category if we removed nominations by their wife. Just two men would change category. We can safely ignore the issue of wife nominations. The same analysis gives the same result for brothers.

SI table 14.3.1. Father, husband and brothers were most likely to be nominated if they received nominations from many women. Data for all men nominated by women (not restricted to the 188 men who were also in the RS file). The number of men eligible to be nominated was counted from men alive between 1992 and 1997 when the interviews were conducted, aged over 20, recorded in a census, and with more than 50% of their records in the core study area. There were 227 such men. The number of eligible men receiving zero nominations as an expert hunter could be estimated as 137 (227 – 90).

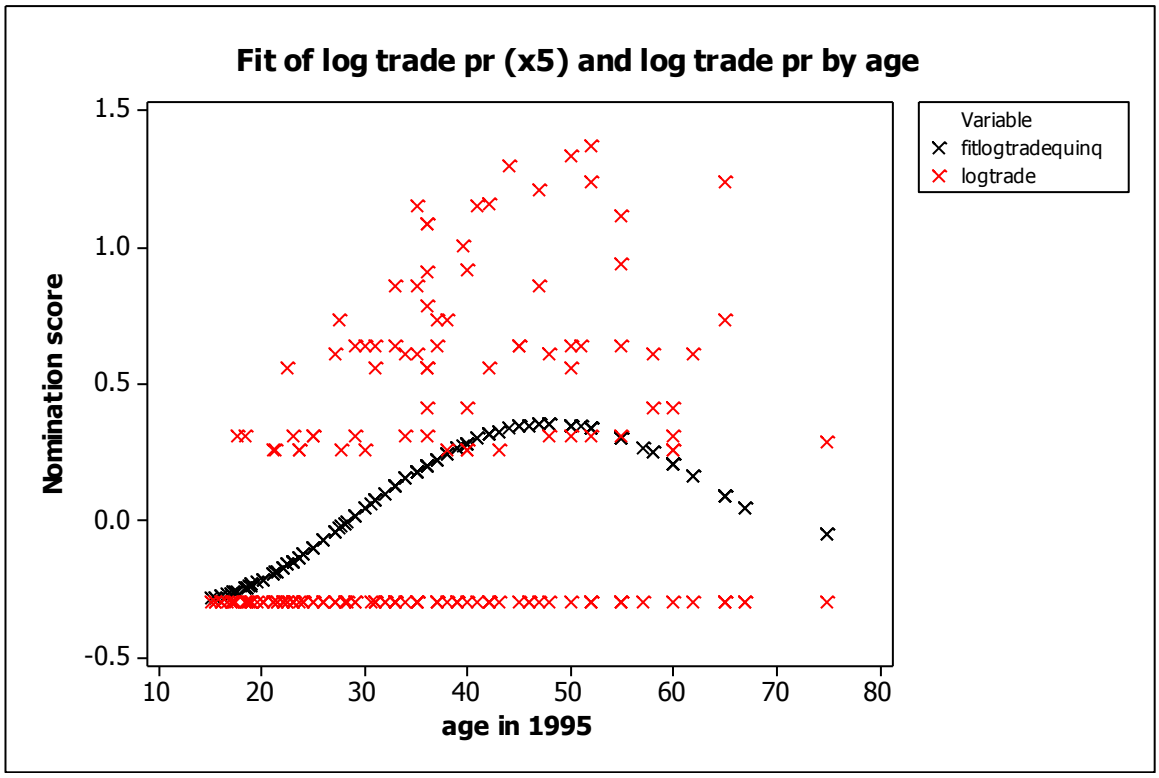
Hunt pro-rated score	N any men	Father	Husband	Brother
0				
1	20		1	1
2	13	2		
3	7	1	1	
4	11			1
5	0			
6	6		3	1
7	3		3	1
8	10	1	5	4
9	0			
10	4			4
11				
12	3	1	2	
13				
14	1	1	1	1
15				
16	1		1	1
17				
18	1		1	
19	2	1	1	1
20				
21	2		1	1
22				
23				
24				
25	1		1	1
26	2			1
30	2		1	1
48	1	1	1	1
Total count	90	8	23	20

SI table 14.3.2.
Men who are nominated as an expert hunter by their daughter, their wife, or by their sister, tend to be among those most nominated by other women. Among the 90 men ever nominated as an expert hunter (not all of them in the RS file), men who are nominated by their daughter, their wife, or by their sister, tend to be among those most nominated by other women. To check this claim I split the sample (as I do later for several analyses) into those with fewer than 5 prorated nominations and those with 5 or more. Only 2 men nominated by their wife fell in the low category, and only 2 nominated by their sister. Nominated husbands mostly fell in the over 5 category (21 of them) and so did brothers (18 of them). These numbers give chi-squared significant to less than .01. There were too few nominations of father to test.

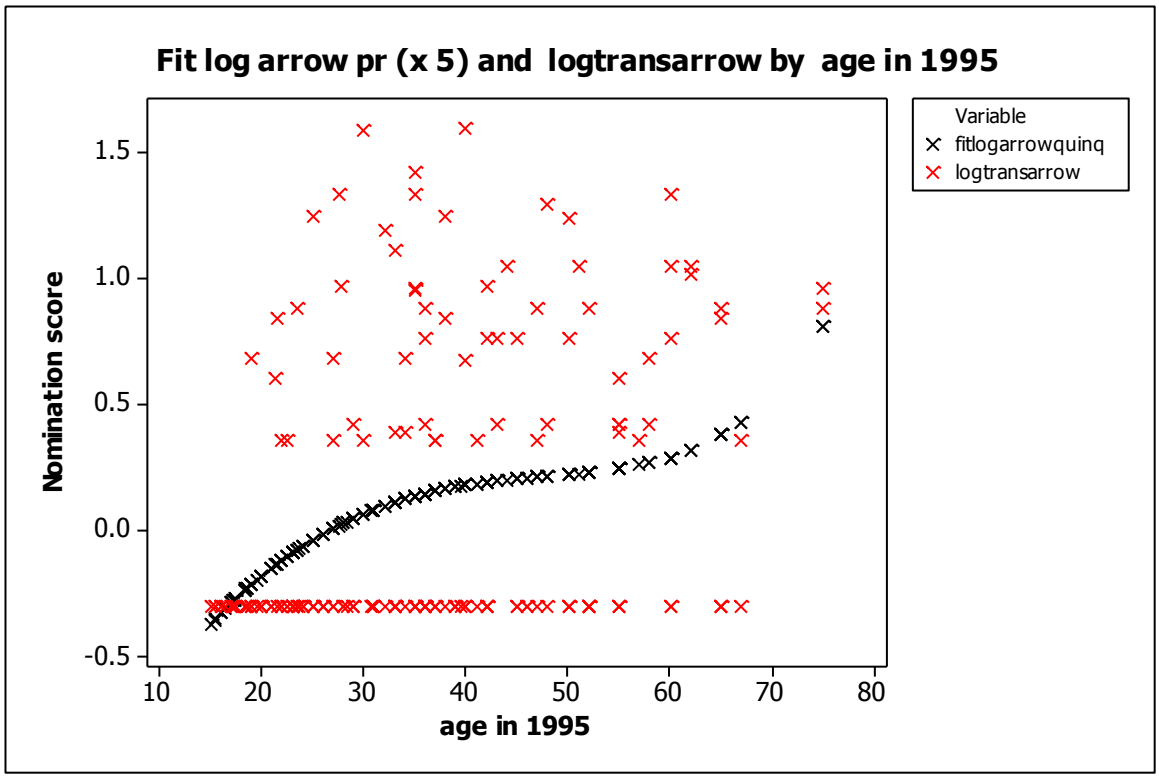
Nominated by:-	All	Daughter	Wife	Sister
< 5 nominations	51	3	2	2
>= 5 nominations	39	5	21	18
	90	8	23	20

SI 14.4. Careers. Age distribution of nominations.

SI figure 14.2. Pro-rated nominations as expert trader log-transformed plotted by age. Fitted line is to age + age^2 + … + age^5.



SI figure 14.3. Pro-rated nominations as expert arrowhead maker log-transformed x age. Fitted line is to age + age^2 + … + age^5.



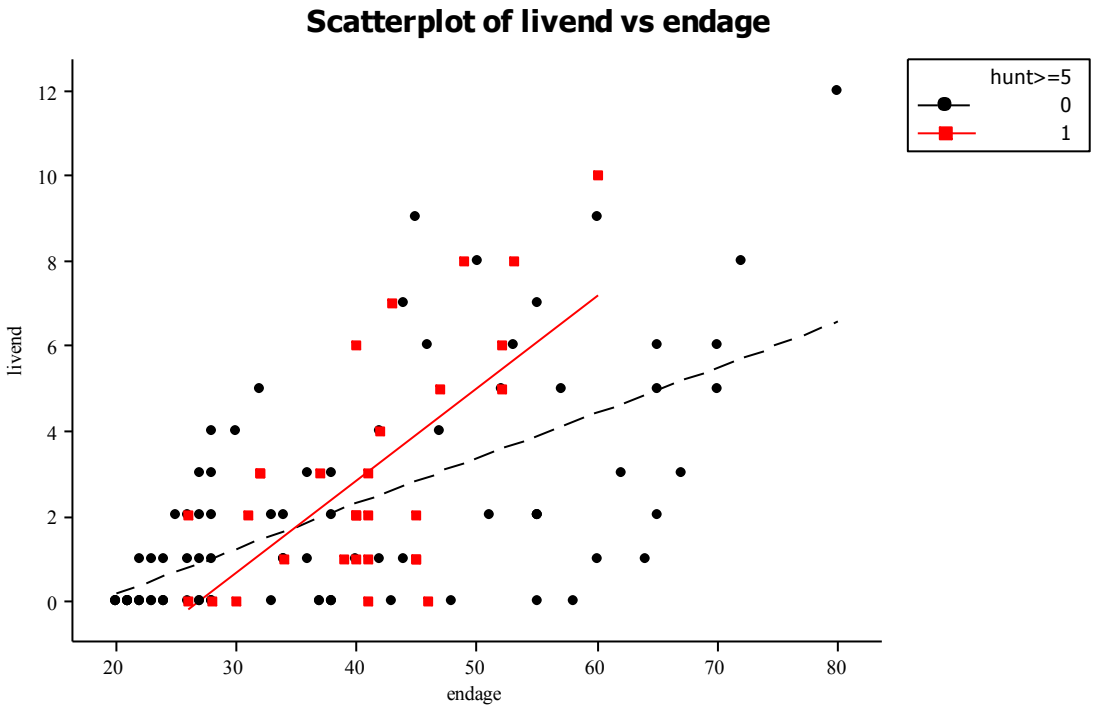
SI 14.5. Men's nominations and their Reproductive Success.

To see the relationship between nominations and reproductive performance, the pro rated nomination scores were added to the file of men's reproductive careers. Some nominated men were not in the RS file of 188 men, so the number of men ever nominated as an expert hunters falls to 73. Only two were lost from among those nominated 5 times or more (which falls from 39 to 37 men). Men in this file who received no nominations received a score of zero. The 188 men in this file were men living in each region, aged 20 or more in 1992 when I began these interviews, alive until 1997, and seen in more than 2 censuses, and in the core area in 60% or more of their records. Some additional men had received nominations, usually just one, but did not get into this file because they lived mostly out of the area, had died, or we had no record of their reproductive careers or marriages.

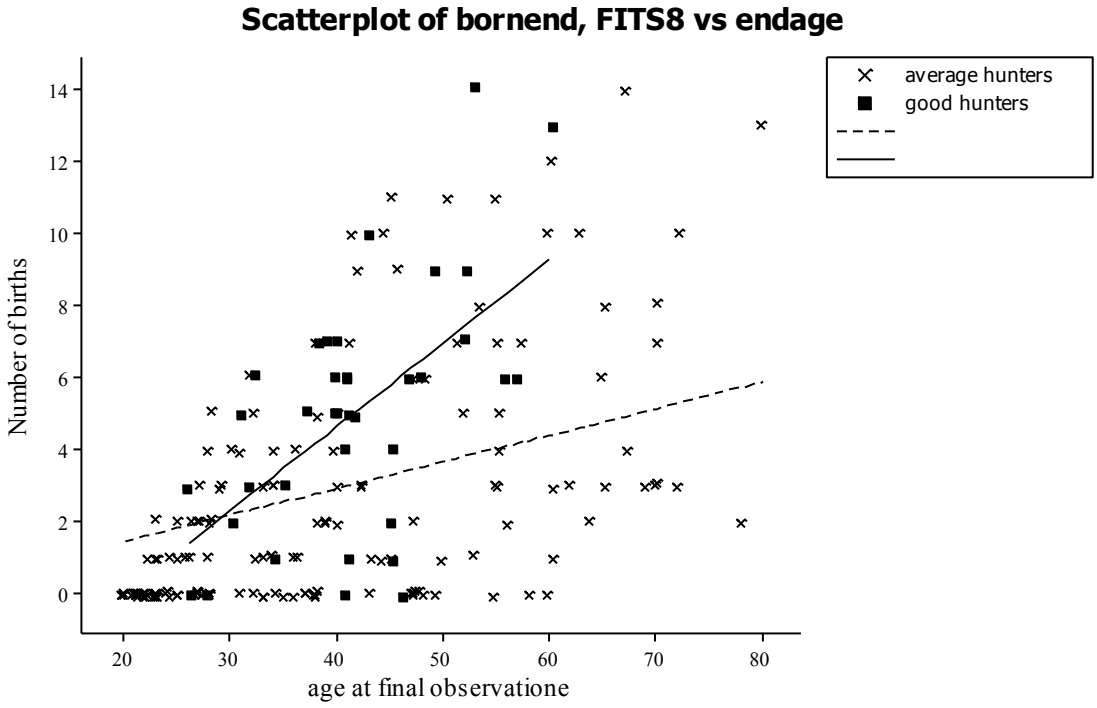
Regressions in which none of the control factors were entered also show significant contributions of nominations to predicting RS but with lower r-squared than when the control variables are included.

Graphing standard score of births against nominations for each region supports the view that nominations enhance reproductive success within each region. The graphs (and the lists of residuals) also show two outliers – two men who had very high nomination scores but very few children. Some statistical authorities recommend reanalysis of a sample without the outliers. The r-squared and betas are greater when these outliers are excluded. But the situation here is more interesting. It turns out that both were married for several years to women who were among the infertile women noted in the fertility chapter. A third man was married to another woman from this list. He had had a child by another woman and was not an obvious outlier on the graphs but it seemed more conservative to exclude him also in a re-run of the analysis. More important still, if reputations help men find wives, why did these three men stay married for so long to wives who did not enhance their RS? To answer by pointing to obvious proximate, motivational factors, normally perhaps cues to fertility, implies that these men followed the proximate cues in preference to the ultimate outcome.

SI figure 14.4. Number of live children at end of observation x age at end of observation plotted for men with more than 5 nominations as an expert hunter and men with fewer nominations.



SI figure 14.5. Number of children born by end of observation x age at end of observation plotted for men with more than 5 nominations as an expert hunter and men with fewer nominations.



SI 14.6. Are there specialists?

Correlations between skills, men's general nomination score.

Hunting and gathering societies are usually noted for their egalitarianism, for lack of stratification, and relative lack of trade specialization. Do women's nominations imply any hint of specialization, or perceived specialization among Hadza men?

Men's scores as hunters correlate significantly with their scores as arrow – makers, less strongly with their scores as traders. Scores as traders correlate quite weakly but significantly with scores as arrow – makers. I made a combined score by simply adding each man's pro-rated scores in these three skills. The inter – correlations (table below) are compatible with the idea that some men are generally well known, others less so. This is unlike what we would expect if men specialized in a single skill. But there are men who stand out as scoring high in one skill and low or not at all in others.

Plotting hunting against arrow making we find just a few perceived "specialists". Three men had high scores on hunting but close to zero nominations as arrow makers. Who was making their arrows? Two men had high nominations as arrow makers but close to zero as hunters, both were over 55. More men feature as expert traders but with zero nominations as a hunter. The highest scoring hunter had a reputation of zero as a trader. The two best arrow makers had very low scores as traders. We might wonder whether trading requires a more extrovert and sociable personality while hunting, often either solitary, or requiring long waits in the salameda favors the more introverted. Woodburn (1998) as cited in the text, implies such personality differences.

SI table 14.7. Specialists or generalists? Correlations between men's nominations scores. 157 men aged 25 and over. "General nominations" is the sum of other nominations.

	Men general nominations	Hunt pro -rated	Trade pro -rated	Arrows pro-rated
Hunt Pro - rated	0.853 <.000			
Trade Pro – rated	0.521 <.000	0.261 .001		
Arrows Pro - rated	0.773 <.000	0.487 <.000	0.138 .084	
Farmer Pro - rated	0.110 .169	0.166 .037	0.085 .289	-0.001 .987