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Methodological Individualism and Generosity

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1. Introduction

It is a touchstone of accepted economics that all explanations must run in terms of the actions and reactions of individuals. Our behavior in judging economic research, in peer reviews of papers and research, and in promotions, includes the criterion that in principle the behavior we explain and the policies we propose are explicable in terms of individuals, not of other social categories. Kenneth J. Arrow. 1994. Methodological individualism and social knowledge. *American Economic Review* 84 (2):1-9.

Today a convergence between the fields of anthropology and economics has re-emerged after decades during which the dictates of methodological individualism, as strikingly elucidated by Kenneth Arrow, had seriously limited and hampered effective scholarship in studies of economic and social development in developing countries. A new generation of development economists represented by Spolaori and Wacziarg (2013) and (Spolaori 2016) has reopened the possibility of fruitful cross-disciplinary interaction, enabling economists and anthropologists to investigate those many social structures wherein resources are jointly held and wherein social goals are the product of interests held by groups, rather than exclusively by pairs of individuals stripped of a context of ethics.

The continually expanding data of Standard Cross-Cultural Sample (Murdock and White 1969) provide a wide range of variables that make it possible to test theories regarding development and causality in human societies. Furthermore, new software facilitates the testing of these theories in the context of diffusion, historical language families and ecological contexts. Together, the data and the new software are essential to any effort to test theories of human evolutionary history and development.

Binford's (2001) thirty years of work on a new hunter-gatherer sample, twice the size of the SCCS, has provided archaeologists with a new strategy for associating standard archaeological artifacts with the cultural contexts which may have produced them. Binford's approach to archaeological theory signals a dramatic rejection of a social networks methodology that features culturally undefined and socially atomistic individuals; and it moves the investigator into a more exciting and challenging use of available data, moving beyond the oversimplifications associated with methodological individualism:

"We must seek to understand the relationships between the dynamics of a living system in the past and the material by-products that contribute to the formation of the archaeological record remaining today. In still more important ways we seek to understand how cultural systems differ and what conditions such differences as a first step toward meaningful explanation for patterns that may be chronologically preserved for us in the archaeological record." (Binford 1980: 5)

2. Generosity as a Cultural Variable

Generosity is attributed to the *extraordinary* provision of time and other resources to others at household, lineage, tribal or state levels of aggregation. In order for the provision or distribution of a resource to be extraordinary, there must be a socially defined minimal standard of adequacy, below which behavior is deemed to be inadequate and above which it

may be considered to be generous. While the standard of adequacy is seldom well defined, it nevertheless constitutes at the conceptual level a *rightful claim* which governs the allocation of risk and reward within particular social groups.

Consider the description of chiefly “generosity” among the Thonga:

[The King] received most of the cattle and women captured in war and fines for certain offences; he was easily the richest man in the nation. In return for this, he was *expected* to feed and help his people generously. He had to care for his regiments and give them their shields; in famine he was *expected* to help all his people and also at all times those in difficulties. Thus *if the king ruled according to tradition*, he was generous to his subjects, using his wealth for them; he gave them justice; he protected their interests; and through him they hoped to satisfy their ambitions on battlefield and in forum. (emphasis added)

In the above paragraph we find that a particular chief is expected to be generous, meaning that in previous distributions he has provided more than might have been expected from other chiefs (who define the “standard”). Generosity will be socially recognized by distributions above this standard, but distributions below it can be said to be miserly, even constituting a form of theft. Consequently, the standard is a rightful claim (Bell 1995, 2006), being the legitimate property of the beneficiaries even prior to its distribution. However, under the yoke of MI, rightful claims, which are so foundational to social action in any society and at every level of aggregation, are not allowed to be elements of formal models. Indeed, Kenneth Arrow suggests that academics should be severely punished for recognizing ethnographically universal social relations.

Every society possesses some form of domestic group in which basic resources are allocated to children and others in relation to rightful claims. However, societies vary in the number of levels above the household for which rightful claims are recognized. In hunting and gathering societies, gathered foods are commonly the possession of the households, alone; but the rewards of hunting are often distributed more widely. In many cases, the various parts of an animal are given clearly and unambiguous social destinations far beyond the domestic group, often effected by the wife of the principal hunter, so that neither miserliness nor generosity can be expected. On the other hand, hunters may consume much of their prey prior to returning to the village, or they may decide to focus on small animals which would lack broad distribution. Such men might be known as selfish relative to some standard, while men who operate differently might be said to be generous. Furthermore, many societies lack any form of chiefly distribution of the form mentioned for the Thonga. In particular, we will not find fewer such distributions among agriculturalists. In fact, agricultural societies often have kings who appropriate large shares of the product of direct producers and redistribute it to small elites.

- Hypothesis A: From these considerations, it may be hypothesized that the *saliency* within societies of the concept of generosity will be greater as the relative importance of hunting increases in hunter-gatherer societies and that generosity will have greater saliency among hunter-gathers than among agriculturalists.
- Hypothesis B: Furthermore, if the household level distributions under the control of women are perceived to be only normal and standard, “evidence” of generosity will tend to be recognized only in relation to distributions controlled by men.

Recently, a DEfWy study of generosity was suggested by economist Michael McCullough, who in praising fellow econometrician Anthon Eff for his work with Malcolm Dow on global and local causalities, explored a recent version of the SCCS in order to study the occurrence of

generosity – a variable (v293-v336) coded by Barry, Josephson, Lauer and Marshall (1976). A Def Wy analysis of variables in the Standard Cross-Cultural Sample has the potential of discovering how perceived generosity may vary among the many social or economic contexts. Barry (personal comm. 2015), when asked, ¹ noted that “Generosity was one of three ‘Sociability’ measures that were published in the form of a single score because there were very few differential ratings by the coders for the two genders and two stages of childhood.” Yet his coders were able to rate “generosity” for 104 of 186 societies on a scale from 0-10. The other two were trust and honesty. Generosity received significantly higher scores by the coders, with 85% at the median of the generosity scale or higher (15:89 or 85.6%). There was no coding of altruism, which is hard to gauge behaviorally, while generosity can be imputed directly from resource distributions at various social levels.

0	1	2	3	4	5	6	7	8	9	10	Score by Coders
0	1	4	6	4	24	31	2	27	4	1	Generosity 85.6% > median
1	6	19	5	15	34	18	11	25	3	1	Trust 66.6% > median
1	5	18	15	13	28	15	5	8	1	1	Honesty 52.7% > median

3. Ethnographic Examples of Generosity

To verify what SCCS coders were reporting under the name of Generosity we used two-word internet searches for group and for mention of Generosity, e.g. !Kung Generosity or Thonga Generosity. Only one group of societies from Africa and one from North America are included here. Society numbers such as 2* are coded (!Kung) with numerals such as 8 that provide the scores for Generosity (2*8). None of these particular findings mention generosity within the household, since parental behavior is normally perceived to be conventional.

Coded data: <http://eclectic.ss.uci.edu/~drwhite/courses/SCCCodes.htm>

A noncommercial search engine was employed in these searches for the words generous or generosity plus an SCCS societal name.

2*8 **!Kung** generosity was important in a society that needed to share to survive.

3*8 **Thonga**: As described above (generous).

4*5- **Lozi** (no mention of generosity).

8*5 **Nyakyusa** society from the 1890s—the period of first written records: commitment to generosity between age mates and generosity in urban kinship relations carry prestige in the same way.

9*4 **Hadza** impulse of pure generosity explains little (there is a Generosity Research Project there).

16*8 **Tiv** consider it rude and improper to discuss services in terms of “exchange” but insist rather that such matters be viewed as individual acts of generosity or as kinship or age-set obligations. They recognize the reciprocity, of course, but do not themselves cast it into terms which we would consider “economic.”

21*8 “The **Wolof** are famous for their hospitality ... and generosity ... which extends past every barrier of race or religion. Every **visitor** will readily find lodging and meals for as long as he wants to stay with nothing asked in return. Hospitality is one of the central values in their culture and something which every Westerner living among them needs to learn to emulate or risk having a reputation for being miserly, greedy or even a non-person. Their generosity extends as far as lavish gifts bestowed on certain occasions such as family festivals or on return from a prolonged voyage, and sharing with those in need who ask, especially relatives.”

• 133*9 **Klamath** “people are traditionally hospitable and generous in nature, and eager to educate non-tribal members about their culture.”

¹ Records from the coders’ notes for the 600+ variables from the CCCC project have been stored in University of Pittsburgh archives a few miles from the Oakland campus in Pittsburgh.

- 136*8 For the **Yokuts** “The components of character were values, truthfulness, modesty..., and, above all, generosity.”
- 140*9 **Gros Ventre** “The incorporation of the horse into Gros Ventre lifestyle undermined their principles of generosity and communal sharing.” “The Gros Ventre and Crow emphasized personal rivalry more than other tribes ... this wealth was channeled into demonstrations of competitive generosity.” “At the time of reservation settlement the Gros Ventres were wealthy in horses, and men strived to be ‘prominent’ by generously distributing horses, cattle, and other property.”
- 141*8 “While the Mandan(-**Hidatsa**) were farmers, raising corn, beans, and squash, they also sent out hunting parties to harvest buffalo on the Great Plains. The Okipa was a four-day Mandan ceremony to ensure that the buffalo would remain plentiful and that catastrophes could be averted; it reinforced the relationship between the supernatural and the people. The ceremony reenacted the creation of the earth and the history of the Mandan people. In this ceremony the Mandan recognized their responsibilities to maintain the covenant of generosity at the sacred center of creation. “It was believed that a lavish display of goods expressed the generosity and solidarity of the clan. The sick person was happy in the belief that in the spirit world he could boast of the goods that had been given away when he died. The clan had no other role when death of a member occurred. Individuals of the father’s clan were in charge of the last rites.”

4. Reviewing Endogeneity from a Tutorial for Cultural Modeling

Particularly instrumental in this new intellectual context, and as a complement of case studies, is the R software, *Def Wy* of Malcolm Dow and economist Anthon Eff for cross-cultural research. *Def* allows cultural variables into the analysis and the *Wy* element addresses the effects of deep evolutionary background variables. Evolutionary variables (Pagel 2011) are not individualistic; and cultural variables are comprised of socially shared concepts, such as the emergence or ecological context of generosity as an evolutionary element of culture. Consequently, *Def Wy* enables investigators to deal with variables that are either denied or problematic within the framework of methodological individualism.

Eff (2016) provides a tutorial that enables anthropologists, sociologists and economists to utilize a common framework of analysis within the evolutionary sciences, addressing key problems of endogeneity. Eff and Dow, in their *Def Wy* R software, show how endogeneities can be broken down into components which allow various kinds of causality, including the exogeneity/endogeneity of dependent variables: (Eff p11) “in a regression model, causation must be unidirectional; independent variables must cause the dependent variable involved in a feedback relationship with the dependent variable—whereas in some cases changes in the dependent variable will cause changes in the endogenous variable.” This is a highly technical question. But “in such a case, the estimated coefficient of the endogenous variable and its standard error will be biased (Kennedy 2003: 180-204; Green 2012: 219-256).” Yet, “From a materialist perspective, our model of religion would not be suspected of endogeneity, because the dependent variable is a feature of ideology, i.e., religious beliefs, and the independent variables are features of technology and the environment” (Eff:12).

5. Def Wy Results for the 104 Societies in the SCCS coded for Generosity

The SCCS is an enormous repository of data, including over 2000 variables and over 10,000 specific factors among the sets of ordinal categories. Moderately strong displays of generosity are widely distributed across different continents and were found in 86% of the 104 coded SCCS societies. Coders, however, found little evidence about generosity of parents, probably because such generosity would be expected by children, not exceptional. We nonetheless searched for warmth and affection of caretakers, and found that this variable was marginally significant for fathers (v486) but not significant for mothers. Rohner and Rohner’s (1982) study of “bad parenting” found only four such cases in the SCCS 186, while Barry et al (1976) failed to sustain the hypothesis that ethnographers would code varying degrees of generosity of parents toward their children, differentiated by age and gender. However, other

forms of generosity, as anticipated by Hypothesis A, were found to be more significant in hunter-gatherer societies than in agricultural societies, as manifested by (v2137), a dichotomous variable (planting =1, otherwise = 0). Generosity was shown to be less salient in agricultural societies (v151, p=.05) and in societies where there was less fixity of settlement (v150, p=.08), and approaching a near universal for technologically simple societies. These results may reflect the fact that men have the potential of sharing generously the product of hunting and fishing. Our study of the data also indicates that there are significant opportunities for the display or denial of generosity when valuable food sources are secured from external trade (v1, Food Source from Intercommunity Trade).

Considering ecology, coastal residence – hence a focus on marine resources (meanalt – near sea level) – is negatively associated with generosity, but on the other hand a compound variable Trust*Mean High Altitude (v486*v335) is significant and positively related, suggesting that hunting of big game requires cooperation and trust among a group of hunters of large game, leading to occasions for expression of generosity. Generosity was weakly correlated (p=.02) with warmth and affection of fathers (v486), but the same variable was not significant for mothers. Automated data dredging showed that the telling of creation stories was weakly correlated (p=.06) for fathers but not significant for mothers. These variables possess no a priori social significance, but they may be useful in posing new hypotheses.

Table 1 displays the results of a cross-cultural model of correlates of generosity as a dependent variable. Many of these contexts are male-oriented, where male contributions are posited at “generous,” while those of women are not, as we had expected with Hypothesis B.

Rmodel	coef	stdcoef	VIF	relimp	pval	hcvpval	bootpva	star	Dependent variable='v334': Generosity
(Intercept)	2.8605	NA	NA	NA	0.7205	0.7056	0.7129		NA
meanalt	-1.4760	-0.8468	2.8904	0.1513	0.0000	0.0000	0.0000	***	(Low) Mean altitude within 20 km radius (m) (Fishing)
v1	0.2790	0.1881	1.0871	0.0180	0.0303	0.0102	0.0118	**	Intercommunity Trade as Food Source
v2137	-0.9110	-0.2219	1.0694	0.0618	0.0087	0.0033	0.0064	***	Food Production: Planting (task present==1, absent==0)
v335mean	0.0003	0.7763	2.9643	0.0985	0.0000	0.0000	0.0000	***	Trust*(Higher) Mean altitude within 20 km radius (Hunting)
v486	0.1431	0.1658	1.0957	0.0201	0.0584	0.0190	0.0232	**	Warmth and Affection of Caretakers - Father: Aver
v676	0.3676	0.1547	1.1207	0.0168	0.0806	0.0591	0.0635	*	(Male) Creation Stories (not sufficiently significant)
Wy	0.0474	0.0031	1.1358	0.0019	0.9711	0.9694	0.9703		Network lag term
To Try = no Wy autocorrelation affecting correlated									
	Fstat	df	pvalue	star	Diagnostics				
	-0.0054	12395	1.0000		RESET test. H0: model has correct functional form				
	0.5930	659	0.4415		Wald test. H0: appropriate variables dropped				
	0.2675	7757	0.6051		Breusch-Pagan test. H0: residuals homoskedastic				
	0.3265	653	0.5679		Shapiro-Wilkes test. H0: residuals normal				
	45.989	23	0.0000	***	Hausman test. H0: Wy is Irrelevant given no significant Wy				
	0.0892	428745	0.7652		Sargan test. H0: residuals uncorrelated with instruments				
OtherStat:	distance	language	ecology	Weak.Id	R2.final	R2.UR.model	nimp	nobs	BClambda
	1	0	0.64	0.36	19.564	0.365	0.375	5	104
									none

Table 1: Correlates of Generosity (v334) in the SCCS

6. Maps of the Generosity Dependent Variable and Independent Variables for Sealevel (Fishing and Marine Mammals), Low Agriculture (proxy for Hunting), Fathers' Warmth and Affection, and Male Oriented Creation Stories (told by men)

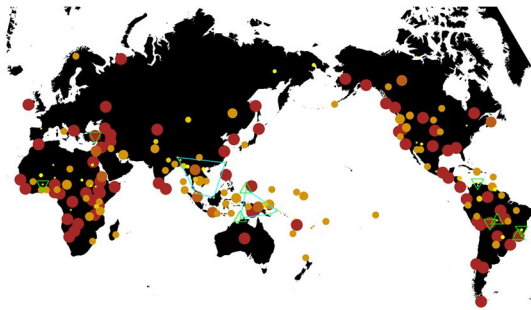
The maps show how each variable occurs in geographic clusters that are frequently replicated by each of the independent variables. The large red nodes in each map are agricultural, with low generosity, while high generosities are found in societies more oriented

to hunting and fishing. What is surprising is that while three of the scores of coders vary – 0-10 for Generosity (Map 1A v2137), 0-1 Hunting versus Agriculture (Map 1B v334), and 2-8 for Father’s Affection (Map C v486) – these three codes are highly correlated with each other. Map 1B and 1C scores are also highly correlated. Each of these correlations is significant at $p < 0.01$. Other correlations between independent variables are not significant.



Map 1A: Codes for Generosity (v334) **Map 1B: Codes for Agriculture (v2137) Moderate-Strong Weak-0-Hunting proxy vs. 1-Agriculture**

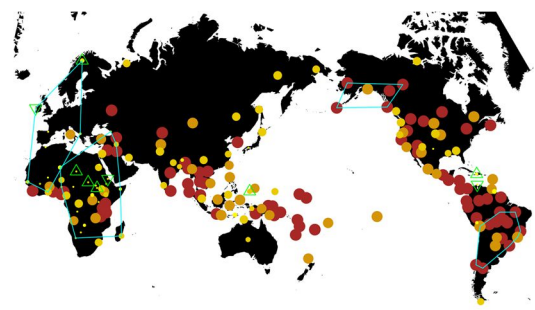
0	1	2	3	4	5	6	7	8	9	10	Score by Coders	0	1
0	1	4	6	4	24	31	2	27	4	1	Generosity	28	76
0	0	0	0	1	6	7	1	10	2	1	No Agriculture = More generosity		
1	1	4	6	3	18	24	1	17	2	0	Agriculture = Less generosity		



v676

Map 1C: Gender Creation Stories (v676)

1 Fem.	2 Couple	3 Masc.	Score by Coders
20	36	56	Creation Stories
2	5	31	Non-Agricultural
18	21	35	Agricultural



v486

Map 1D: Fathers' Affection (v486), similar to the distribution of Map 1B

2	4	5	6	7	8	Score by Coders
2	4	5	6	7	8	Codes
8	3	2	5	5	37	

The model predominant in the maps 1A, 1B, 1C follow a general evolutionary trend toward more complex subsistence regimes but the distribution of Generosity is far more persistent than might be expected from that trend with the development of complex societies at the level of kingdoms and states. The father’s warmth variable is also more persistent in this respect. Contrastively, the regions of Christianity and Islam at the Western edge of Map 1D are regions of sparse displays of Generosity.

Six regions tend to occur in Maps 1A-1B-1C-1D, one each in West and East Africa, and others in Continental Southeast Asia, the neighborhood of New Guinea, West Coast North America, and Central America-Adjacent South America (note that West African market women might also be likely to be perceived as Generous). These represent parts of common language and similar ecological autocorrelation shown in Table 1 although autocorrelation (Wy) overall is not significant. The Generosity variable in Map 1A and the independent variables in Maps 1B-1C-1D show the worldwide breadth of distribution of Generosity.

7. Conclusion

Opportunities for the expression of Generosity are variable among societies but tend to follow three patterns. The data support our initial hypotheses regarding the greater prevalence of loci for the expression of generosity among hunters and fishers relative to agriculturalists. Generosity is most commonly attached to hunting, fishing or marine hunters, and trading societies. Generosity approaches a near universal for technologically simple societies. Second, these Generosities tend to persist in time into higher political structures such as chiefdoms, states, cities, and empires. These prototypes of generosity tend to provide leverage for power. While the domestic household might be a universal locus for potential manifestations of Generosity, its appearance at other levels is variable among social structures. The generosity and self-sacrifice by women in domestic resource allocation is often underappreciated whereas similar behavior by men is more likely to be noted ethnographically.

Within the very limited perspectives of methodological individualism, one cannot observe variations of behavior as a function of social structure. Indeed, Methodological Individualism abandons social structure in favor of the positing of idealized independent, utility maximizers. In this study, however, thoroughly unexpected social variables have come into prominence, prompting the need for additional study of social organization and social process. For one, severe gender biases are evident in a wide variety of social contexts. This applies to studies in economic development and a host of related issues which MI simply avoids.

8. Postscript

Our section on Ethnographic Examples of Generosity was not our original approach to understanding contexts discussed in ethnographies concerning Generosity. It began as a simple expedient for finding out how our coders were dealing with the topic. A quick perusal of ethnographies showed that had very little to do with parents' behavior in relation to their children, and Herb Barry confirmed that a different approach was taken. Topics related to Generosity were also unlikely to be found in chapter headings or indexes. A novel approach was simply to extract using a non-commercial search engine a sample of societal names and the noun "Generosity" where it occurs in the relevant body of text. We use it to pair co-occurring nouns so as to select multiple examples of what ethnographers state about Generosity in the SCCS sample. This approach could easily be expanded into a full fledged coding project for the majority of SCCS societies. The results could provide a whole new database for a reanalysis of ideas in this chapter and other aspects that we not explored.

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