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Land Conflict of the Cotabato Manobo People

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The Manobo peoples consist of some twenty ethnic groups in the highlands of the island of Mindanao in southern Philippines (figure 1). Each group speaks a different but closely related language in the Manobo sub-family of Philippine Austronesian languages (Elkins 1974). For hundreds of years the Manobo have had a bilateral kin-based social structure and a subsistence economy based on swidden agriculture (Elkins 1968). While the Manobo had contact with the lowland peoples around them, their location in the highlands prevented their subordination to any of the dominant peoples of the Philippines until the late nineteenth century (Garvan 1941). Acculturative forces increased slowly during the early twentieth century, and then exploded in the 1950s as the Philippine government encouraged thousands of Filipinos to immigrate to Mindanao from the country's more crowded central and northern regions. By this time the Manobo groups had begun to be incorporated heavily into the global economic system. This was especially so as logging companies and settlers moved into their areas after mid-century, making it increasingly difficult for Manobo farmers to retain sufficient land to make a living.

While the Manobo peoples continue today to be socially structured along kinship lines and to practice a predominantly subsistence economy, drastic acculturative changes have occurred in the last quarter-century (Elkins 1966; Hires and Headland 1977). They are now producing a limited surplus which they sell to buy items from the market, though their efforts remain aimed mainly at subsistence, rather than the accumulation of wealth.

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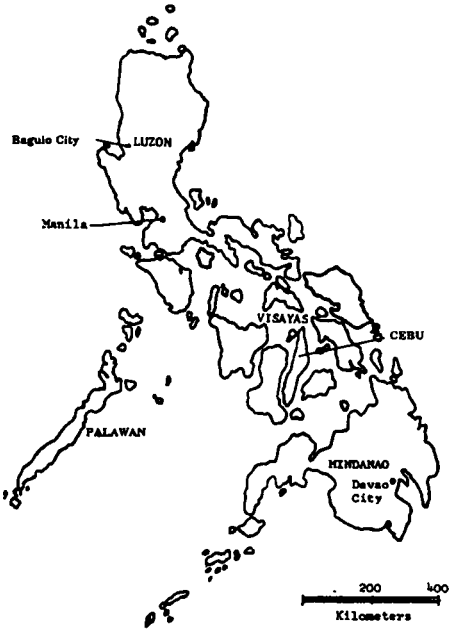

Figure 1. The Philippines

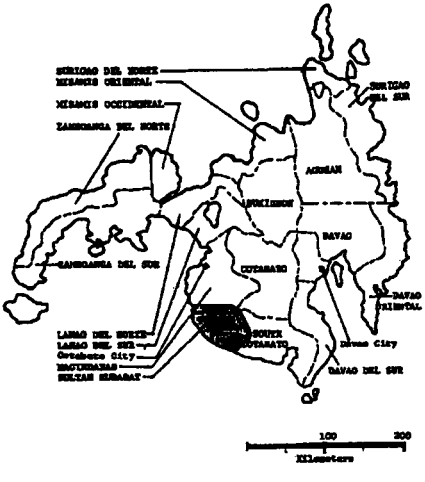

Figure 2. The conflict area
in southern Mindanao

The Cotabato Manobo are one of the Manobo groups. They number around 30,000 people and live primarily in the province of Sultan Kudarat (figure 2). This article focuses on the Cotabato Manobo people. It seeks to understand the process and underlying causes of the land conflicts the Manobo are experiencing today, to determine the probable outcome if the *status quo* is maintained, and to see how the most satisfactory and equitable solution to all the parties concerned might be achieved. To this end, we will be using the analytic hierarchy approach to model the conflict. We begin by examining the social context of the conflict.

The current model of Philippine prehistory is that, with the exception of the thirty or so Negrito groups in the Philippines (who comprise only 0.05 percent of the country's population), today's Filipinos, including the Manobo, are descended from Austronesian-speaking peoples who began migrating into the archipelago around 3000 BC, probably from Taiwan (Bellwood, Fox, and Tryon 1995). While the peoples who settled the Philippines were apparently relatively similar in both language and culture, later differences in their histories have caused considerable differentiation among them.

As time went on, some of the Philippine peoples established trade links with China and the Malaysian archipelago. Heavy trade with China was going on by the time of the Sung Dynasty (AD 969–1279) (Scott 1983). Arab traders also came. Islam, which they brought to Mindanao in the late 1200s, spread throughout the island, and had reached Manila by the time the Spanish conquered it in 1571 (Che Man 1990, 21).

The Spanish found the influence and power enjoyed by traditional community leaders to be well suited to governing the Philippines, and made them government agents. Class divisions present before the Spanish conquest deepened, while benefits the more powerful class originally provided their dependents declined, until common Filipinos found themselves powerless without a patron (Phelan 1959; Kerkvliet 1977). The Spanish initially used the Philippines as a trade center, transshipping merchandise from China to Mexico and Spain (Schurz 1939). They also exacted taxes from the Filipinos. However, even with later efforts to develop the archipelago's agriculture, the Philippines never became profitable for the Spanish to hold (Phelan 1959).

After nearly four centuries of tolerating Spanish rule, the Philippines revolted against Spain in 1896. Spain soon after became em-

broiled in war with the United States. As the Spanish-American War drew to a close, the Philippines declared its independence from Spain in 1898. Spain, however, on its defeat by the U.S., ceded the Philippines to the States, and independence was denied to the Philippine people. Thus, the U.S. became the new colonial power.

While U.S. rule may have been more benign, it was far from altruistic. Powerful business lobbies in the U.S. strongly affected American policy toward the Philippines. Free trade was instituted with the Philippines under the guise of granting the Philippines equality with the U.S. The net effect, though, was to open the Philippines to American manufacturers as a market, while limiting the Philippines to being a supplier of primary products (George 1980, 107). The Philippines became part of the U.S. periphery.

American investors and wealthy Filipinos began to look south to Mindanao as a new territory to exploit. It had mineral deposits, vast areas of forest, and a relatively low population density, suggesting the ready availability of land for plantations. Additionally, Luzon and the Visayas had large populations that lacked adequate land. The way for business investment was cleared by the extension of the Public Land Law to Muslim provinces in 1906. The law provided for the granting of title, with the stated intention of helping Muslims escape the burden of serfdom. However, it served to allow newcomers to claim land at the locals' expense. Large rubber and peanut plantations, owned by individual Americans, soon arose. This was followed in 1913 by other laws encouraging migration to Mindanao (George 108–9).

The Commonwealth government (1934–1941) accelerated migration. The government wanted to exploit the timber and agricultural potential of its southern territory. However, it was also concerned with forging a national identity. Settlement of the island would help ensure that Mindanao not become a primarily U.S. investment. Perhaps more important, the Philippine population is comprised of about 120 different language groups.[1] The mingling of settlers with each other and with the indigenous peoples of Mindanao would help to forge a more homogeneous population and thereby encourage national unity. Encouraging the settling of Mindanao by the peoples of Luzon and the Visayas would satisfy all these aims.

In 1938, General Paulino Santos (for whom one of the major cities of Mindanao is named) led a project to survey the Koronadal Valley for settlement. Two years later, the Allah Valley to the west was opened. (This borders current Manobo territory.[2]) Settlement continued

at a high rate for many years; as late as the 1960s, as many as 3,200 people per week were arriving in Mindanao (George 1980, 111–14).

Differences in perspective contributed heavily to the conflicts between immigrating lowlander settlers from the Visayas and Luzon and the Muslim residents of Mindanao. A fundamental distinction is that the Muslims have understood land to belong to the community, not to individuals. The *datu*, or chief, decided who would occupy what fields.[3] Since the Muslims considered the land to be communally owned, they often failed to recognize titles as legitimate, getting them in trouble with the law. The discord between lowlanders and Muslims was compounded by the Muslim practice of collecting in-kind levies (*kawali*) on farm produce; the settlers considered it equivalent to extortion. The mutual ill-will between lowlanders and Muslims was further exacerbated by the Bureau of Forestry's practice of including in logging concessions areas which Muslim communities had already planted to coconuts and other trees (George 1980, 115–16). (A "logging concession" is an area that a company has been granted permission to log. A single company may be granted several concessions.)

The Manobo view of land has been similar to the Muslims', and they have had similar conflicts with lowlander settlers. The Manobo view land as essentially semi-communal: when asked whose a plot of land is, they often answer "*nami*," meaning "ours," but they recognize individuals as occupying a given plot. In a practice paralleling the Bureau of Forestry's treatment of Muslim community plantations, the Bureau has included entire areas the Manobo have depended on for their livelihood in logging concessions to the company active in their region. The Manobo have been subjected to an additional force dispossessing them of their land in the government's occasional release of logging concession land for settling.

Lowlander settlers have followed the logging roads into new logging concessions, settling the logged-out land along those roads. After a sufficient number of settlers arrive in a given area, the government, to prevent friction between the settlers and the logging company, releases the settled land from national forest and makes it available for titling. The Manobo, meanwhile, have been forced off by the logging company and settlers. As logging and the settling that accompanies it are pursued first in the most geographically accessible areas, the mountain valleys, the dispossession of the Manobo from their land forces them into the steep mountains, with thin soils that are quickly eroded and lose their fertility.

Violence broke out in 1970 as the peoples inhabiting the conflict area (see figure 2) fought for control of the land. The alliances formed crossed cultural lines, and were not always stable. The lowlander Ilaga movement (perhaps derived from "Ilongo Land Grabbers' Association") declared war on the Muslims. The Muslims fought back, while the Manobo responded by attempting to drive the lowlander settlers from the Kulaman Valley during the 1970s, thus allying themselves with the Muslims. The Manobo have cultural similarities to the Tiruray, an indigenous group living to the north and northwest of the Manobo, and there is significant intermarriage between them. Yet, the Tiruray fought alongside the Ilaga (George 1980, 143–50) and have displaced the Manobo from the northern reaches of their territory.

More recently, however, the Manobo have been threatened by the Muslims and have now lost land to them as well. The Tiruray also see themselves as exploited by the Maguindanao people, the largest Muslim population in their area; among their complaints are the imposition of produce levies and other "contributions" and the threat and use of force should they appeal their situation to the authorities. Hence, the Manobo and Tiruray now have more interests in common and can be seen as loose allies. Both fear Muslim encroachment and violence. However, the Tiruray are less concerned than the Manobo about being dispossessed by lowlander settlers, as the Tirurays' longer contact with lowland society has enabled them to understand and make use of its laws and customs.

As pointed out in Schmink and Wood (1987), the state, while controlled in large measure by the economically powerful, must also be responsive to the concerns of the weak to maintain its legitimacy. The central government initially imposed control on Manobo territory through the creation of administrative districts (barangay)[4] and the appointment of officials. These officials are now elected, but since the majority of the population in the districts are lowlanders, the Manobo have continued to have little influence in the government. During the last decade, though, the mayor of Lebak municipality has taken an interest in the Manobo and has provided help in various conflicts. This suggests that the Manobo are beginning to have somewhat more influence in the political structure.

While the municipal government is becoming more responsive to the Manobo, it appears the Manobo influence on the agencies they deal with remains limited. The Office of Southern Cultural Affairs (OSCC) was formerly charged with the welfare of the non-Muslim

minority peoples. (OSCC has been replaced by the National Council for Indigenous Peoples (NCIP) since the signing of the Indigenous Peoples' Rights Act in October, 1997.) However, its field officers' infrequent contact with the Manobo limited the agency's effectiveness. The Manobo are also greatly affected by the Department of Environment and Natural Resources (DENR), as it has jurisdiction over logging concessions. Tax and concession income from the logging company is of direct benefit to the government, while subsistence farmers provide it with nothing. Consequently, the concerns of those whose ancestral lands have been granted as concessions receive less attention than the concerns of logging companies. The tilt, then, toward the logging companies is due to the idea, widely accepted in government and industry, that the best enterprise is the one that contributes most to GNP. Schmink and Wood (1987) observed this same phenomenon in land conflicts in the Brazilian Amazon. The logging company generates a large and highly visible cash flow, while the contribution of subsistence farming to the population's well-being is easily overlooked.

All told, the logging company's political access and influence far outweighs that of the Manobo. Added to this is the company's large number of security guards—what Filipinos call a "private army." In this setting, one of the Manobo's most promising strategies may be the formation of networks with other parties, such as non-governmental organizations (NGOs). For example, PAFID (the Philippine Association For Indigenous Development) for several years has provided legal guidance and assistance to indigenous groups seeking rights. Now that the Manobo have made contact with them, PAFID personnel are counseling them as well. There are also environmental NGOs in the Philippines that could be interested in helping the Manobo.

The conflict over Manobo land involves a variety of groups, with the Manobo, many Tiruray, and a number of lowlander and Muslim smallholders concerned mainly with making a basic living on one side, and the logging company and its employees and the business concerns associated with it on the other. However, there is considerable fighting within these two main groups, leaving substantial room for the Manobo to make alliances in their quest for a decent and secure living. Networking with NGOs may further level the playing field.

Modeling the Conflict

In our pursuit of an equitable and acceptable solution to the land conflict, we now turn to modeling—the explicit linking of the elements

of the conflict, quantitatively or causally, so that we see the underlying structure of the problem and can, to some degree, predict the effects of a given action on the outcome. Models are not an end in themselves; they are tools to help us understand and manage complex situations. Saaty and Alexander (1989, 6) summed it up well when they wrote:

> We recognize that developing a good model for a problem, and then using the model to analyze the problem, is not the same as finding a solution. However, a good model lays bare the structure of the problem and shows where there is room for constructive change and where there is room for compromise.

The value of a model is that the process of constructing it forces one to become precise and explicit. Furthermore, a properly constructed model not only describes what happens and predicts likely outcomes, but also suggests what the alternatives are, which ones best satisfy one's objectives, and how they can most probably be brought to pass. While a good model exposes the structure of the problem and reveals where there is room for change, it also should not be unduly complicated. We do want to include those factors which substantially affect what transpires in a social system, but complex models, which require vast amounts of data, may introduce a number of assumptions and approximations. If too many of these are wrong, the resulting model may well be untrustworthy. A model, therefore, should adequately describe the problem, but beyond that be as simple as possible. A number of modeling approaches were considered for use: energy process modeling, systems dynamics, analytic hierarchy, multiple goal programming, and parital optimization. While each has its merits, the analytic hierarchy approach is the simplest technique that deals directly with conflicts. The approach is explained below and then applied to the Manobo situation.

The analytic hierarchy technique was developed for conflict resolution. Its originators, Saaty and Alexander (1989),[5] model a conflict in terms of the parties involved, their objectives, and the possible outcomes. In any conflict there is, at any one time, a given amount of total power involved, which is divided (usually unequally) among the parties. Each party invests what power it has in meeting its objectives. Some of those objectives are more important than others, so parties invest their power unequally among their objectives. Finally, the various possible outcomes differ in how well they satisfy a given objective of a given party, so the power invested by a party in a particular objective will in turn be divided unequally among all the possible outcomes.

We begin by noting that party II is significantly more powerful than party I; it holds 80 percent of the total power. We then see that the objectives differ in their importance, and that this varies between parties. Party I invests only 10 percent of its power in objective A, and 90 percent in objective B. Party II invests 60 percent of its power in objective A, and 40 percent in objective B. Finally, the results differ in how well they satisfy an objective for a given party. If we look at the power which party I is investing in objective A, party I will invest only 30 percent of that amount in result 1, but 70 percent in result 2.

This still leaves open the question of how to assign relative weights to the various parties' power, the importance of their objectives, and the satisfactoriness of the possible outcomes. We begin with the question: given two parties to a conflict, which has the greater influence on the outcome, and how much greater? If there are n parties and we compare each pair of parties, we end up with an n n matrix of values. Table 1 provides a way of quantifying the pair-wise comparisons. If two parties are matched in power, we place a 1 in the appropriate slot in the comparison matrix. If one party has an overwhelming advantage, we place a nine in the slot. The other values fall in between these two extremes. Table 4, which compares the power held by each party in the Manobo land conflict, is an example. Note that $P_{ji} = 1/P_{ij}$; that is, the strength of party i with respect to party j is the reciprocal of the strength of party j with respect to party i.

Table 1. Ratios for comparison of parties' power. After Saaty and Alexander (1989)

Intensity of importance on an absolute scale	Definition
1	the two parties are equally powerful
3	one party is moderately more powerful than the other
5	one party is significantly more powerful than the other
7	one party is much more powerful than the other
9	one party is overwhelmingly more powerful than the other
2,4,6,8	intermediate values between the two adjacent judgments
reciprocals	if activity I has one of the above numbers assigned to it when compared with activity J, then J has the reciprocal value when compared with I

Once the comparison matrix has been constructed, we normalize within each column, so that the values maintain the same proportion to each other, but add to 1. (See table 5.) In Alexander and Saaty's procedure, we then calculate the principal eigenvector for the matrix to determine the relative power of each party. However, we can approximate the same result by averaging within the rows, a simplification that has been used in this paper.

The example above has been confined to determining relative power, but the same procedure is used in weighting objectives and outcomes. (See table 2 for the numbers used for relative importance of objectives, and table 3 for the numbers used for relative satisfactoriness of results.) To summarize: by weighting the relative power each party commands, the relative importance to it of each of its objectives, and

Table 2. Ratios for comparison of objectives. After Saaty and Alexander (1989)

Intensity of importance on an absolute scale	Definition	Explanation
1	equal importance	two activities contribute equally to the objective
3	moderate importance of one over another	experience and judgment moderately favor one activity over another
5	essential or strong importance	experience and judgment strongly favor one activity over another
7	very strong importance	an activity is strongly favored and its dominance demonsrated in practice
9	extreme importance	the evidence favoring one activity over another is of the highest possible order of affirmation
2,4,6,8	intermediate values between the two adjacent judgments	when compromise is needed
reciprocals	if activity I has one of the above numbers assigned to it when compared with activity J, then J has the reciprocal value when compared with I	

the relative satisfaction each outcome provides to each objective of each party, we can determine how much total power flows to each of the possible outcomes, and which outcome is therefore most likely.

Alexander and Saaty (1977) refer to this use of the model as the forward process of conflict analysis. The model also can be used for backward analysis: examining what changes in the values used in the model would probably lead to a desired outcome. Examples of changes are a shift in relative power, due to the formation of alliances, or a decision by a party to abandon one objective in order to more effectively invest what power it has in another more desired objective. The analytic hierarchy model depends on mathematics to help determine which outcomes to a conflict are most probable. At the same time, it is looking at *human* conflicts, and anthropology—the study of humans—provides us tremendous insights into the parties' power and objectives. Power, for instance, can be due to the use or threat of violence, but can also come from having access to the state, from social standing (rank), and from the ability to appeal to (or change) the dominant ideology (Schmink 1982; Schmink and Wood 1987). Consideration of the interactions between dominant and subordinate classes likewise enables us to see more clearly just how much power a given party has. Awareness of class, and of the relations between classes, suggests the objectives a particular party may have.

Table 3. Ratios for comparing how well two results satisfy a given objective. After Saaty and Alexander (1989)

Intensity of importance on an absolute scale	Definition
1	the two results are equally satisfactory
3	one result is moderately more satisfactory than the other
5	one result is significantly more satisfactory than the other
7	one result is considerably more satisfactory than the other
9	one result is overwhelmingly more satisfactory than the other
2,4,6,8	intermediate values between the two adjacent judgments
reciprocals	if activity I has one of the above numbers assigned to it when compared with activity J, then J has the reciprocal value when compared with I

Simplifications

We can now proceed to analyze the land conflict between the Cotabato Manobo people and the logging company. We will employ some simplifications to keep the model from being unnecessarily complicated. In order to limit the amount of data needed, and thus the opportunity for error, we will exclude parties not immediately involved in the land conflict between the Manobo and the logging company, namely, the Tiruray, lowlanders, Muslims, and OSCC. The Tiruray, lowlanders, and Muslims are involved in the larger picture of land conflict, but as there are few of them in the area considered, we can safely exclude them from an initial analysis. Likewise, while OSCC was formally charged to care for the Manobo, its limited communication with them limited its influence, making it unnecessary to include the agency in an initial analysis. However, a more in-depth study should definitely include these parties.

We can similarly simplify the initial analysis by considering the parties involved to be characterized by their dominant elements. For instance, the logging company has not only an owner, but also managers, guards, employees, and contractors. However, the vast majority of its policy is made by the owner, so we can assume the company will act as the owner would. Likewise, the Manobo are not a homogeneous group. Gender and age strongly affect their roles, power, and objectives, and the leadership is a complex mix of elected or appointed government officials, elders, and church leaders. Even so, each subgroup has similar objectives on a coarse scale, so we can for the initial analysis consider the Manobo as a single group.

Initial Analysis

We can now analyze the conflict. The calculations in this analysis were carried out using a computer program written in QBASIC. The initial comparison of the parties' power is presented in table 4. We see that the logging company is "seven times" more powerful than the Manobo, and the Manobo "one-seventh" as powerful as the logging company. The matrix with normalized columns is given in table 5, and the relative power held by each party in table 6. We see in table 6 that the logging company holds 29 percent of the power, the provincial government 26 percent, and the Manobo 3 percent.

Table 4. Comparison of the parties' power

	logging company	Manobo	barangay government	municipal government	provincial government	DENR	NGO	PAFID
logging company	1	7	5	4	1	3	7	4
Manobo	1/7	1	1/4	1/5	1/7	1/7	1	1
barangay government	1/5	4	1	1/3	1/5	1/4	2	1
municipal government	1/4	5	3	1	1/3	1	3	1
provincial government	1	7	5	3	1	3	5	3
DENR	1/3	7	5	3	1	3	5	3
NGO	1/7	1	1/2	1/3	1/5	1/2	1	1
PAFID	1/4	1	1	1/2	1/3	1/3	1	1

Table 5. Normalized comparison of the parties' power

	logging company	Manobo	barangay government	municipal government	provincial government	DENR	NGO	PAFID
logging company	0.3013	0.2121	0.2532	0.3859	0.2823	0.3252	0.3182	0.2500
Manobo	0.0430	0.0303	0.0127	0.0193	0.0403	0.0155	0.0455	0.0625
barangay government	0.0603	0.1212	0.0506	0.0322	0.0565	0.0271	0.0909	0.0625
municipal government	0.0753	0.1515	0.1519	0.0965	0.0941	0.1084	0.1364	0.1250
provincial government	0.3013	0.2121	0.2532	0.2894	0.2823	0.3252	0.2273	0.1875
DENR	0.1004	0.2121	0.2025	0.0965	0.0941	0.1084	0.0909	0.1875
NGO	0.0430	0.0303	0.0253	0.0322	0.0565	0.0542	0.0455	0.0625
PAFID	0.0753	0.0303	0.0506	0.0482	0.0941	0.0361	0.0455	0.0625

Table 6. Comparison of the parties' relative power

logging company	Manobo	barangay government	municipal government	provincial government	DENR	NGO	PAFID
O.2910	0.0336	0.0627	0.1174	0.2598	0.1366	0.0437	0.0553

The comparison matrices for objectives and results are not included in this article, but are given in Fraiser (1999, 16-21). Calculations were followed through to determine how much power each party is investing in each of the possible outcomes. Summing across parties for a given outcome reveals how much total power—that is, by all the parties, for all their objectives—is being invested in each outcome. These figures are given in table 7.

As we can see from table 7, two outcomes are tied as most probable: the formation of a reservation for the Manobo and the granting of a community stewardship agreement to the Manobo. Each of these is receiving an investment of almost 23 percent of the total power present in the conflict. The release of the land for individual titling is a close runner-up, receiving about 20 percent of the total power available. The removal of everyone from the land except for logging company employees is a somewhat distant third, with 16.4 percent of the power. The imposition of a logging ban, or the rescinding of the company's logging concession, are fairly distant possibilities, receiving only 8.8% of the total power each.

Backward Analysis

To this point, we have been using forward analysis—determining the most probable outcome in the current situation. However, we can also examine what elements in the situation might be changed to enhance the probability of a more just and equitable outcome. Networks among the parties could be formed, and new parties might be brought in. A relatively weak party might choose to abandon some of its objectives, in order to invest more heavily in those it considers most important. Additionally, some of the possible outcomes may be ruled out during the conflict; they may become implausible, or might be dis-

Table 7. Total power invested in each result

	formation of a Manobo reservation (result 1)	issuing of a Community Stewardship Certificate (result 2)	release of the land for titling (result 3)	removal of residents other than logging company employees (result 4)	imposition of a logging ban (result 5)	rescinding of logging concession (result 6)
logging company	0.0520	0.0520	0.0316	0.1312	0.0133	0.0108
Manobo	0.0112	0.0112	0.0036	0.0007	0.0028	0.0041
barangay government	0.0130	0.0130	0.0212	0.0015	0.0059	0.0079
municipal government	0.0303	0.0303	0.0254	0.0030	0.0133	0.0151
provincial government	0.0581	0.0581	0.0746	0.0064	0.0311	0.0315
DENR	0.0356	0.0356	0.0255	0.0187	0.0131	0.0082
NGO	0.0130	0.0130	0.0085	0.0014	0.0035	0.0043
PAFID	0.0167	0.0167	0.0102	0.0012	0.0044	0.0061
TOTAL	0.2298	0.2298	0.2006	0.1641	0.0875	0.0882

carded in formal or informal negotiations. The discarding of possible outcomes is especially pertinent to the Manobo situation. The difference between results 1 and 2 (formation of a reservation and issuance of a community stewardship agreement) on the one hand, and result 3 (release of the land for titling) on the other, is not so great that we can conclusively say that result 3 is improbable. However, result 4 (the removal of all but company employees) does seem relatively unlikely, while the logging ban and rescinding of the concession seem distinctly improbable. This conclusion is reinforced by an examination of table 7: 13.12 percent of the 16.41 percent of total power invested in result 4 comes from just one party, the company. The only other party with any significant interest in result 4 is DENR. It seems unlikely the company would almost unilaterally pursue an option when it risks antagonizing all elements of the government except DENR. A more likely outcome is that the company would abandon result 4 once genuine negotiations begin. In return, the other parties could abandon their pursuit of a logging ban or a formal revocation of the concession (results 5 and 6).

In order to test how the elimination of the less likely options would affect the probable outcome, the calculations were performed again after deleting the result data for options 4, 5, and 6. The results are given in table 8.

Table 8. Total power invested in each result, after deletion of results 4, 5, and 6

	formation of a Manobo reservation (result 1)	issuing of a Community Stewardship Certificate (result 2)	release of the land for titling (result 3)
logging company	0.1183	0.1183	0.0545
Manobo	0.0146	0.0146	0.0045
barangay government	0.0177	0.0177	0.0272
municipal government	0.0424	0.0424	0.0326
provincial government	0.0755	0.0755	0.1087
DENR	0.0540	0.0540	0.0286
NGO	0.0168	0.0168	0.0102
PAFID	0.0208	0.0208	0.0138
TOTAL	0.3600	0.3600	0.2801

As we can see, should the parties rule out results 4, 5, and 6 (either by considering them unlikely and therefore not worth pursuing, or in the process of negotiations), results 1 and 2 become substantially more probable than result 3. This suggests that 1 or 2 is the most likely outcome, especially as time goes on.

At this point in the process we may wish to introduce objectives that were not pertinent earlier. It may have been evident in the above analyses that results 1 and 2—the formation of a reservation or the granting of a community stewardship agreement—have had equal scores throughout. This is because both arrangements equally satisfy (or dissatisfy) the various parties' objectives. However, acquaintances of the author who are involved with indigenous land rights in the Philippines have observed that the government more often approves a community stewardship agreement than a reservation. They suggested that the legal process for approving a stewardship agreement is

easier than that for a reservation, and therefore costs DENR (the agency which often oversees the transfer of land from national ownership to indigenous groups) less. With this understanding, we can eliminate result 1 as an option, as it is essentially the same as 2, but slightly inferior. The effect of running the model with only results 2 and 3 is seen in table 9.

Table 9. Total power invested in results 2 and 3

	power invested		ratios between power invested in results 2 and 3	
	result 2	result 3	2:3	3:2
logging company	0.201	0.09	2.24	0.45
Manobo	0.026	0.008	3.48	0.29
barangay government	0.025	0.037	0.68	1.47
municipal government	0.068	0.05	1.37	0.73
provincial government	0.116	0.144	0.81	1.24
DENR	0.091	0.046	1.96	0.51
NGO	0.028	0.016	1.77	0.57
PAFID	0.034	0.021	1.60	0.63
TOTAL	0.589	0.411	1.43	0.70

If the negotiations proceed as we have anticipated above, by the final round of negotiations, the community stewardship agreement (result 2) will be strongly favored over releasing the land for individual titling. A look at how much power is invested by each party (table 9) reinforces this conclusion. The company, Manobo, and DENR strongly favor the stewardship agreement, as do the municipal government and NGOs. Only the *barangay* and provincial governments favor releasing the land for titling, and their preferences are not strong.

Conclusions

The Cotabato Manobo people have found it increasingly hard to retain enough of their ancestral lands to make a living. The situation is complex—many players are involved, and some are quite powerful.

In this context, we have sought to use modeling to enable us to explicitly understand the process of the conflict in order to determine the probable outcome and to see how a just outcome satisfactory to all the parties might be encouraged. The analytic hierarchy technique has proven a useful tool. It forced us to clearly identify the parties in the conflict and the objectives that motivate them, and the possible outcomes. It facilitated the weighting of those parties and objectives and outcomes, by calculating the relative values from simple pair-wise comparisons. It enabled us to determine the probable outcome of the conflict and suggested that the passage of time may increase its probability. At the same time, the model is highly dependent on the accuracy of the pair-wise comparisons. Application of the model depends on an accurate understanding of the social environment of the conflict—what institutions are at work in the conflict, how power is exerted between the parties, what values they hold and how strongly they hold them, how feasible a given action might be in that political system, etc. There is much room for error, but that can be lessened by a careful anthropological analysis of the situation.

The results of this analysis give hope for the Manobo's plight. If the data are correct, there is a substantial probability that the Manobo will be granted access to the land they need, either through a reservation or a community stewardship agreement. At the same time, the model results are only probabilities, not guarantees. As the model points out, the Manobo are fairly weak. The NGOs, which can be expected to aid the Manobo, also have relatively little power. However, the Manobo have partial backing from the local, municipal, and provincial governments. Their cause would be strengthened by focusing on the ideological debate, to show how those outcomes which most favor the Manobo also satisfy the state's ideological goals better than the alternatives. This would tilt the state further in the Manobo's favor and possibly lessen the company's influence with the state. The Manobo could also benefit from inviting the involvement of other parties with compatible goals, such as national environmental groups. All of these options would help to increase not their power, but that of their "camp," and hence help to ensure the reaching of an equitable solution.

This analysis was done in 1994. Developments since that time, while not all anticipated, have largely confirmed its validity. One unanticipated development is that the land rights process has focused on approval of a reservation (technically, a Certificate of Ancestral Domain Claim, or a Certificate of Ancestral Land Claim), rather than the issu-

ance of a Community Stewardship Certificate. Apparently the Manobo and PAFID perceived the reservation as far preferable to the stewardship certificate, and they put much more of their power into that option than anticipated. This has meant their power is more concentrated and therefore more efficacious, and has also meant the reservation has, at this point in the process, won out over the stewardship option.

Most importantly, though, the Manobo have made progress in developing new allies. The analysis had anticipated that this was one way they could increase their camp's power. The Manobo have involved several other NGOs in their efforts to obtain land rights. These have not been environmental groups, as had been speculated, but rather have focused on legal counsel and assistance. The involvement of these new groups substantially increased the power of the Manobo camp and tilted the balance further in their favor. While the balance has been tilted in the Manobo's favor, it is still a balance—not all of the power is on their side.

Progress will probably continue, though it may be slow, and there will undoubtedly be compromise by both sides. Still, it does appear that they will eventually gain some rights to the land of their ancestors. For the sake of all involved, may it come soon, and may all find their needs met.

Notes

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1. McFarland (1980:62) lists 118, while Walton (1979:78–79) lists 122.

2. From this point on, "Manobo" is used to refer specifically to the Cotabato Manobo.

3. This practice originally benefited the entire community, but many *datu* have utilized the system for their own advantage since the intrusion of capitalism.

4. The primary political divisions in the Philippines are, from largest to smallest, provinces, municipalities, and *barangay* (also called *barrios*). Provinces are headed by a governor, municipalities by a mayor, and *barangay* (*barrios*) by a *barangay* captain (*barrio*

captain). In U.S. terms, provinces are equivalent to states, municipalities to counties, and *barangay* to districts or towns.

5. This discussion of the technique is based on Alexander (1983), Alexander and Saaty (1977), and Saaty and Alexander (1989:3–28). Saaty and Alexander (1989) expand on the technique and apply it to several cases. The mathematics behind the approach are thoroughly explained in Saaty (1980).

References

Alexander, Joyce M. 1983. Priorities and preferences in conflict resolution. *Mathematics and Computers in Simulation* 25:108–19.

Alexander, Joyce M. and Thomas L. Saaty. 1977. The forward and backward process of conflict analysis. *Behavioral Science* 22:87–88.

Bellwood, Peter, James J. Fox and Darrell Tryon, eds. 1995. *The Austronesians: Historical and comparative perspectives.* Canberra: The Australian National University.

Che Man, W. K. 1990. *Muslim separatism: The Moros of Southern Philippines and the Malays of Southern Thailand.* Oxford: Oxford University Press.

Elkins, Richard E. 1966. Culture change in a Philippine folk society. *Philippine Sociological Review* 14:160–66.

_____. 1968. Three models of Western Bukidnon Manobo kinship. *Ethnology* 7:171–89.

_____. 1974. A proto Manobo word list. *Oceanic Linguistics* 13:601–41.

Fraiser, Douglas M. 1999. In search of a place: Analysis of a land conflict involving the Cotabato Manobo people. *SIL Electronic Working Papers* 1999-007:1–24.

Garvan, John M. 1941. *The Manobos of Mindanao.* Government Printing Office, Washington.

George, T. J. S. 1980. *Revolt in Mindanao: The rise of Islam in Philippine politics.* Oxford: Oxford University Press.

Hires, George A. and Thomas N. Headland. 1977. A sketch of Western Bukidnon farming practices, past and present. *Philippine Quarterly of Culture and Society* 5:65–75.

Kerkvliet, Benedict J. 1977. *The huk rebellion: A study of peasant revolt in the Philippines.* Berkeley: University of California Press.

McFarland, Curtis D. 1980. *A linguistic atlas of the Philippines. Study of languages and cultures of Asia and Africa Monograph Series No. 15.* Tokyo: Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies.

Phelan, John Leddy. 1959. *The hispanization of the Philippines.* Madison: University of Wisconsin Press.

Saaty, Thomas L. 1980. The analytic hierarchy process. New York: McGraw-Hill International.

Saaty, Thomas L., and Joyce M. Alexander. 1989. *Conflict resolution: The analytic hierarchy approach.* New York: Praeger.

Schmink, Marianne. 1982. Land conflicts in Amazonia. *American Ethnologist* 9(2):341–57.

Schmink, Marianne and Charles H. Wood. 1987. The "political ecology" of Amazonia. In *Lands at risk in the third world: Local level perspectives,* ed. Peter D. Little and Michael M. Horowitz. Boulder, Colorado: Westview Press.

Schurz, William L. 1939. *The Manila galleon.* New York: E. P. Dutton.

Scott, William H. 1983. Filipinos in China before 1500. *Asian Studies* 21:1–19.

Walton, Charles. 1979. A Philippine language tree. *Anthropological Linguistics* 21(2):70–98.