

# FROM CONJUGAL CONTRACTS TO ENVIRONMENTAL RELATIONS: SOME THOUGHTS ON LABOUR AND TECHNOLOGY

Cecile Jackson

## 1 INTRODUCTION

The question of how to understand the connection between changing environments and the social relations of people embedded in those environments is an important one. One widely encountered formulation suggests that the well-being of people and resources are unproblematically interdependent. For example: 'the condition of natural resources and the condition of the human communities that depend on those resources are interdependent. As the well-being of one deteriorates, so does the other' (Bruce and Fortmann 1992:12-13).

Yet it can be argued that this assumes away any social differentiation which influences resource access, and ignores the micro-politics of the environment. The Zimbabwean material presented here shows that women's well-being is not significantly related to environmental well-being. On the contrary, women living in the more apparently degraded area are in a stronger conjugal position and experience greater autonomy and control of themselves and others. If we reject the idea of interdependence of the well-being of people and resources, how might we begin to conceptualize this question? From the perspective of gender differentiation it seems that gender relations and environmental change are, like poverty and environmental change, mutually determining.

One of the points made in these recent debates about women and resource relations is that gender and environmental interests are not necessarily either complementary or conflictual. If outcomes are contingent we need to develop analytical frameworks for understanding what factors and processes mediate the gendered experience of environments and resources. The concept of the conjugal contract, which derives from the work of Ann Whitehead (1981), is a potentially useful way to approach such a task since it focuses attention on the expectations of spouses. The conjugal contract may be articulated differently by different actors, and, of course, changes over time, but the consensus around core areas of exchange between spouses indicates the norms which may be utilized in bargaining and intrahousehold 'decision making'.

There has been much attention given to the ways in which gender divisions of labour determine environmental attitudes and behaviour. For example, Davidson, Myers and Chakraborty write 'because of their daily tasks - growing food and gathering water, fuel and fodder - poor women are especially dependent upon the natural resources of the environment and the first to suffer when the environment becomes degraded' (1992: 6). This article examines both the conclusion asserted, that environmental degradation is always harmful to poor women, and the assumptions made about how some of the terms in gender analysis are linked. The conjugal contract is not the same as gender divisions of labour for a number of reasons. Women bear multiple identities, not only that of spouse, which bear upon divisions of labour. There is often a large gap between the expectations in the conjugal contract and actual behaviour and labour allocation; and the obligations in the conjugal contract may be met in a number of ways not only through personal labour time, but also via the control of others or the use of technology. There are a number of ways in which any particular responsibility may be discharged. This article aims to illustrate the last point, and show why we need to understand conjugal contracts and strategies to make progress with a social analysis of environmental change.

Conjugal contracts reveal much about gender relations, such as the terms and conditions of entry to and exit from marriage, and the processes of renegotiation which characterize extant marriages (Jackson 1994). This article uses data from a study in southern Zimbabwe, Chivi Communal Area, to show how conjugal contracts, with the obligations they express, do not generate inevitable gender divisions of labour; they change at least partly as a consequence of women's manipulation of their meaning and content, and that divisions of labour themselves have no linear relationship with resource status but vary, in two differing sites, depending on technology (e.g. Doran 1990), the bargaining power and agency of women and other social relations.

**Table 1: Percentages of women pursuing income earning activities in Gwendomba and Madangombe, 1988**

Figures in brackets indicate the percentages of sample men's mothers doing these activities in the past.

	<b>Gwendomba (n=29)</b>	<b>Madangombe (n=21)</b>
Crafts	34 (71)	33 (59)
Beer brewing	76 (82)	52 (77)
Trading	28 (30)	24 (13)
Crop sales	10 (na)	66 (59)
Livestock products	17 (71)	52 (31)
Prepared food	14 (41)	33 (18)
Farm labour	17 (0)	48 (22)
Collected produce	14 (65)	10 (10)
Cultivated fruit and vegetables <sup>2</sup>	83 (29)	86 (45)

## 2 THE CONTEXT OF CHIVI

The two sites of the research<sup>1</sup> are Madangombe and Gwendomba, in the communal area of Chivi in southern Zimbabwe. Both are in Natural Region IV, which is drought prone and relatively densely settled, and both are culturally similar. Farming systems are based on millet and maize, livestock and migrant male wage work. Adult males obtain arable land use rights from the local authorities, which may be inherited but not sold or rented, and they have rights to use the communal grazing lands for livestock. Cattle are kept largely to provide inputs to cropping (for ploughing and manure especially), and owned mainly by men whilst women keep goats for sale and consumption. About a third of men are absent at any one time, employed in urban areas and mines, but the level of migrancy is somewhat higher in Madangombe and the average length of absence of Madangombe migrants is longer than that of Gwendomba migrants. It is very difficult to assess levels of prosperity, but overall Gwendomba and Madangombe seem to have relatively equal levels of wealth. Madangombe farmers have better access to cattle for ploughing, an indicator of wealth, but worse access to land and more crop mortgaging indicating poverty, and whilst there is lower private access to ploughing cattle in Gwendomba more households there hire labour.

Within the two communities there is probably more social differentiation in Madangombe but the range is not great. Since in no households is this so great as to substantially affect labour profiles, nor were conjugal contracts expressed differently by the different wealth ranks, I have not pursued class based differentiation in what follows.

Madangombe is a relatively more nucleated settlement situated several kilometres from a tarred road with a small truckstop a few kilometres further down the road. It is flat and bare, with few trees and very little wetland. Gwendomba on the other hand is in the central rocky ridge of Chivi communal area, with plentiful trees, good wetlands and sandveld soils, although it is relatively isolated with very few buses serving the area and difficult roads.

Women's livelihoods consisted of own-account farming as well as personal income earning activities. Apart from household farm production women in both areas followed a mean of 2.9 (Gwendomba) and 2.4 (Madangombe) income earning occupations all year round. To obtain an idea of how women's independent livelihood activities have changed I have presented information about the mothers of the respondents as a point of comparison (see Table 1).

<sup>1</sup> This research was supported by ESCOR and carried out over 18 months in 1988-9. The women and men of the 30 core households who participated in the research were chosen in the same way in each area, randomly from a specially compiled and complete listing of women, and with the likelihood of selection related to the population of the area. Households were identified as the group of people who regularly ate with the selected individual women. The

material presented here comes from both individual and group interviews with participants and was collected by myself together with Beauty Musavengana, Esther Tagarira, and Vhenekai Man'ozhe. I acknowledge their contributions gratefully.

<sup>2</sup> Gardening is more consumption oriented in Gwendomba and more market oriented in Madangombe.

One interesting feature here is the slight connection between the character of the resource base and the nature of women's livelihoods. Apart from the incidence of beer brewing (dependent on plentiful fuelwood) in Gwendomba, there is not as marked a division of livelihood activities as one might expect. In the craft category there is less sewing in Gwendomba and slightly more activities which require access to common property resources (basket and mat making, pottery). But the most striking differences are in the greater involvement of Madangombe women with wage labour, crop and livestock enterprises. The availability of markets rather than natural resources is possibly more significant for women's own account activities. The extent of women's well-being, even in simple material terms such as these, cannot be said to be clearly linked to the well-being of resources in the manner Bruce and Fortmann suggest.

### **3 REPRODUCTIVE LABOUR, TECHNOLOGY AND ENVIRONMENTAL RELATIONS**

Here I will try to look at the ways in which conjugal contracts pattern divisions of labour and the connections between these and environmental behaviour. In common with broad cultural norms, both men and women of both research areas expect wives to collect fuelwood and water, and cook for their husbands, and these are general elements of the conjugal contract. However, other social relations, including technology use, intervene between this norm and the actual practice of particular tasks.

In the household context terms such as labour allocation and divisions of labour suggest non-negotiable boundaries and complete control by others, yet a detailed look at the content of work reveals the much more open character, the options and choices and the opportunities for strategizing which confront women in rural Chivi. The following material shows the range of options and strategies available to Chivi women in discharging some of their conjugal obligations. I also try to indicate variation in the room for manoeuvre in Gwendomba and Madangombe.

#### **3.1 Access to the labour of other women**

One space around reproductive labour strategies arises from the internal differentiation amongst women, who are not uniformly placed within marriages or households let alone in society at large. Thus wealthier women are able to employ poor women to do domestic labour in many rural African and Asian societies. This is rare in Chivi. But although there are no domestic labour markets, senior women can, given the age based hierarchy within domestic groups, delegate domestic labour to junior women, sons' wives or second wives in polygynous marriages. The extent to which this strategy is viable depends on demographic factors which are themselves partly the product of other gender struggles.

Households are differently constituted in the two areas, with Madangombe households being somewhat larger, and with a higher proportion of women than Gwendomba households. In Madangombe, older women are able to delegate domestic labour responsibilities to younger women more effectively than in Gwendomba. Field data revealed that in Gwendomba 41 per cent<sup>3</sup> of women were the sole water collector, whilst this figure was only 24 per cent for Madangombe. Similarly, only 23 per cent of women were the sole wood collector in Madangombe compared to 48 per cent in Gwendomba. Cooking was shared amongst several women in Madangombe households whilst in Gwendomba 76 per cent of women were the only cook in their household.

Whilst it appears that women in larger households are in a more favourable position regarding domestic labour, this is only a partial view. In households with more than one generation younger women face extremely heavy domestic labour obligations<sup>4</sup>. The gender struggles of daughters-in-law and mothers-in-law which drive household partition (Jackson 1994) are strongly related to the ways in which the latter seek to control the labour of the former. One element of the conjugal contract, respect for the mother of the husband, is utilized by older women to delegate domestic labour, but is increasingly successfully resisted by younger women demanding household partition which liberates these women. The significance of household partition for resource use

<sup>3</sup> The use of percentage figures in this paper is not intended to suggest quantitative accuracy, especially for the more evaluative questions for which this would be entirely spurious. They are given to indicate the rough extent of variation (rather than relying on the frustratingly vague alternatives of most, some, many etc.) and to summarise qualitative material.

<sup>4</sup> In the particular case of Madangombe larger household size was not always from multiple generations cohabiting but also resulted from the accretion of divorced, widowed and separated women in households of their kin. In such households domestic work was shared as much as delegated.

is variable since new households may not change their farming arrangements for some time, but women do recognize that there are efficiencies in production and consumption in larger units which are forfeited when they nucleate.

The conjugal contract establishes the responsibility of wives for certain services, but it clearly does not overtly specify that they must do those tasks in person. Thus, gendered labour allocation is distinct from the terms of the conjugal contract which are about rights and responsibilities. This is not to deny that the pinnacle of achievement as a good wife does imply, in Chivi as in Britain, a personal involvement of the wife. Purchased maize meal is rather disapproved of, just as 'shop cake' is in middle class Britain.

### **3.2 Access to male incomes**

How does responsibility for food processing affect resource management and environmental relations? If we leave aside the delegation option, then one strategy can be to grow crops which are easier to process or can be consumed with less processing. This option depends upon control over crop choice in circumstances where men and women have differing preferences and varying ability to influence the final choice. In Chivi control over crop choice is greater for the wives of migrants who are largely absent and such women are more likely to be able to grow the crop of their choice. Maize is ground, without dehulling, at the mills generally located in small 'business centres'. The nearest mills are only a few kilometres from Madangombe but further from Gwendomba. Smallgrains (millets and sorghums) have to be dehulled by hand, a tedious process, before grinding. There are distinct differences in the cropping patterns of Madangombe and Gwendomba, which cannot be explained by agroecological variation, and the much more widespread cultivation of maize in Madangombe and millet in Gwendomba does reflect gender preferences. The stronger conjugal position of Madangombe women does influence cropping patterns towards maize because it is easier to process, although it is not seen as appropriate by the Ministry of Agriculture because it is a more risky crop in Natural Region IV, and has been linked to food crises and consequent environmental pressure.

The use of mills for grinding smallgrains is practically universal in Madangombe but around a third of Gwendomba women do this task by hand. This

is very onerous work since millet is much more widely cultivated and consumed in Gwendomba. The millet based farming system of Gwendomba imposes heavier labour demands on women than the maize based system of Madangombe, yet Gwendomba women have been less able to secure effective access to processing facilities. The greater concentration of settlement and commercial activity around the road in Madangombe creates more favourable market conditions for mill owners, to the benefit of local women. Conservationists and farming systems analysts may approve of the millet orientation of Gwendomba as more sustainable and appropriate to the rainfall patterns of Natural Region IV, but in the absence of smallgrain dehulling, and given the inability of all women to use mechanical smallgrain milling, millet cultivation imposes heavy costs on women. Viable markets and accessible technology would have a great deal to offer Gwendomba women. In terms of the debate over how far gender interests and environmental interests are necessarily synergistic this is an example showing that whilst access to maize milling is good for women but negative for the environment, access to smallgrain milling would be positive for both women and the environment.

Responsibility for food processing has different meanings where commoditization offers a means for women to reduce drudgery through the use of commercial mills. Since the market option requires money we will look at conjugal finances and the question of who pays for milling. The responsibility of paying for grinding fees is met by men according to 75 per cent of Madangombe women, but in Gwendomba there is more ambiguity with a small majority seeing grinding mill costs as women's responsibility, and only 38 per cent as men's. On other occasions Gwendomba women predominantly asserted that mill payments were the responsibility of men, but there was generally a less certain view than in Madangombe that men should pay. Men's view of the responsibility for paying for grain grinding is, in Madangombe a very clear view (81 per cent) that men should pay, whilst in Gwendomba around half the men thought that men should pay and the rest said that it should be a joint responsibility. The current situation regarding maize milling is that whilst men in both areas are mainly responsible for milling costs, this is more exaggerated in Madangombe than in Gwendomba, where a larger proportion of women pay their own milling costs.

Table 2: Payment for smallgrain dehulling

	'Men will pay' data from:		'Women will pay' data from:		'Both will pay' data from:	
	Women	Men	Women	Men	Women	Men
Gwendomba	7%	38%	17%	8%	76%	54%
Madangombe	52%	70%	30%	10%	19%	20%

The ambiguity expressed by Gwendomba women over maize milling costs revealed itself also in the discussions and individual interviews held before the installation of a smallgrain dehuller (a novelty in the area), where the great majority of Gwendomba women would not go further than saying they expected that both men and women would meet the fees, whereas in Madangombe 52 per cent of women were confidently expecting their husbands to pay. Table 2 (above) summarizes the responses.

Part of the variation seen here between Gwendomba and Madangombe stems from the generally more unified conjugal fund in Gwendomba and the much greater separation of husbands' and wives' incomes in Madangombe, but those Gwendomba women who did not expect a joint responsibility for payment (whatever that means, and usually it reflected recourse to the ideal of the joint household as an interim bargaining ploy) were more likely to expect to pay themselves. There seems a clearer sense of divided responsibilities in Madangombe in which the expectations of men are plainly identified.

One interesting feature, consistent with other data in this study, is the extent to which both men and women are more likely to see their own gender as responsible, even where there is overall agreement. One tends often to assume that each party would wish not to bear the costs, yet this may not be so. Bearing responsibility, supporting others, having the cash to afford to pay for such domestic needs is also part of conceptions of being a good father, mother or spouse. There is a tension here between narrow material self-interest and the satisfaction of good role performance more broadly.

To summarize, in Madangombe, women are responsible for food processing but this in practice, for many, means taking the grain to a relatively close mill for grinding, for which husbands pay. In Gwendomba the same conjugal responsibility in-

volves considerable energy intensive dehulling of smallgrains and transportation to distant mills for grinding as well as the hard work of hand grinding for a considerable proportion of women. The discussion of different forms of transport below amplifies these differences. The conjugal responsibility for processing does not mean that women uniformly carry out processing labour or experience it in the same way. Wives may ameliorate the obligations of this responsibility in a number of ways, they may use their ability to control the labour of others, they may use money from various sources, in particular from husbands, to pay for mechanized milling and they may exercise their ability to avoid high processing requiring crops by making careful crop choices.

### 3.3 Access to technology

Conjugal obligations of fuelwood, water and food provision imply labour by women in many collecting and transport activities. The delegation option is open here, as suggested above, but markets in wood and water do not exist in either Madangombe or Gwendomba. However, access to transport technology offers important possibilities for limiting labour time and intensity as well as inducing male participation.

Access to and control of means of transport varies strongly in the two areas. Madangombe women most commonly get to grain mills on scotchcarts, but this is only possible for a small number of Gwendomba women, most of whom walk with donkeys carrying the grain, or headload it, even though they have considerably further to travel to milling facilities.

There are more households with scotchcarts in Madangombe (55 per cent) than Gwendomba (30 per cent) but, as discussed above, Madangombe households cannot be seen as wealthier in general than Gwendomba households. What I think it does reflect is different consumption priorities in which Madangombe households appear to emphasize

transport. One reason for this seems to be the stronger bargaining position of women in Madangombe and their wish for scotchcarts because of the degree to which they relieve domestic labour. One might have expected that people in Gwendomba would be more inclined to purchase scotchcarts because of the greater distances to markets and facilities in Gwendomba but this is not the case. One interesting implication of this is that the assets possessed by people which are commonly used to assess poverty may tell one less about household wealth and more about the effectiveness of gender differentiated consumption preferences.

Scotchcarts are available for hire, or sometimes can be borrowed, and Gwendomba households without their own scotchcarts can obtain access by these means. The extent to which non-owning households do hire scotchcarts varies by task, reflecting the priorities of individuals and their influence over money and decisions. When a scotchcart needs to be hired, men are expected to pay the charges. This was more strongly put in Madangombe where 92 per cent of women reported husbands paying for scotchcart hire compared to 74 per cent in Gwendomba.

In farm production women are heavily involved in crop and stover transportation from field to home. In Gwendomba 29 per cent of women headloaded crops home and 42 per cent did this for stover whereas only five per cent of Madangombe women headloaded crops or stover. Interestingly, for the more male sex specific tasks such as transportation of manure to fields and the collection of antheap for fields Gwendomba men all managed to obtain scotchcarts for these tasks. The differential access to transport of men and women in Gwendomba seems to reflect the weak bargaining position of women rather than any absolute shortage of equipment.

Of those households with scotchcarts in Gwendomba and Madangombe it was much more common for Madangombe women than Gwendomba women to have the ability to use the cart by themselves, and furthermore, only 17 per cent of those with scotchcarts had to ask permission to use them in Madangombe whilst 71 per cent in Gwendomba had to do so. The significance of transport for women's workload is of course, not merely the availability of carts but the capability and right to use them independently.

In comparing fuelwood collection, Gwendomba women make somewhat fewer wood gathering

trips in both seasons than Madangombe women, but this is offset by the transport situation. In Gwendomba nearly every woman headloaded wood home whereas in Madangombe 52 per cent of women brought fuelwood home by scotchcart. Thus although Gwendomba women live closer to good supplies of fuelwood it is not clear that they do not experience a greater sense of shortage.

Other studies of fuelwood use have suggested that when fuelwood becomes scarce people manage their supplies more efficiently - by protecting fires from draughts, putting out fires after cooking and by lowering the grate height. The shortening of the legs on the commonly used metal grate conserves fuelwood quite dramatically. In Gwendomba, given the much better availability of wood, I expected to find higher grate heights than in Madangombe where deforestation is severe. However our careful measurement of grate heights in the two areas revealed that mean height was 12.0 cm in Gwendomba and 14.2 cm in Madangombe. It seems possible that women in Madangombe experience less fuelwood shortage because they are able to use scotchcarts and thereby collect more wood with less effort. The consequence for the environment of transport technology is negative, since the disincentive of extended labour time in wood collection is removed, along with the downward pressure on fuel consumption.

The limits to the room for manoeuvre should also be recognized. Laziness is a common ground for divorce invoked by men, and Madangombe women steer a fine line between acceptable labour saving strategies and unacceptable ones which may be seen as shirking. In this context Madangombe women have explicitly used the 'fact' of deforestation to argue for access to scotchcarts for fuelwood collection. This has also induced men to become involved in fuelwood collection and Madangombe men more commonly help with this task than Gwendomba men do.

Technology has in this instance been an arena of bargaining in which the prize for women is the reduction of both time spent in fuelwood collection and in work intensity (from headloading to cart riding) as well as the cooption of male labour in meeting the expectations of the conjugal contract. The terms of the conjugal contract and the state of the resource base cannot by themselves generate an adequate understanding of gendered environmental relations.

#### 4 CONCLUSIONS

The comparison of Madangombe and Gwendomba has revealed that women in Gwendomba, although they live in an area in which natural resources are more plentiful and in better condition, have fewer options open for coping with the labour demands of the conjugal contract. In Madangombe the existence of markets, the relative availability of technology, the growing dissociation of women from household based farming units and the direction of change in the content of conjugal obligations as a consequence of women's bargaining have all contributed to a shift in the position of women which is largely progressive. Where, as in relatively infrastructurally undeveloped areas like Gwendomba, market relations are not so extensive, women remain more embedded in household farming units and male out-migration is less, there appears to be more limited space for women to

strategize around reproductive labour demands, to their advantage.

The importance of distinguishing between conjugal contracts and divisions of labour in domestic work has been indicated here, as has been the fallacy of assuming that women's actions are entirely circumscribed by the structures of control, such as the conjugal contract, that they experience. Structures such as conjugal contracts are themselves products of a multitude of daily actions which either reinforce or undermine them, and their reproduction over time is not automatic, but the outcome of the everyday remaking of their meaning by women and men. The significance of women's agency has yet to be adequately acknowledged in women and environment discourses, beyond assertions that women mobilize to defend their environments.

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