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Environmental Resettlement and Development, on the Steppes of Inner Mongolia, PRC

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ABSTRACT *The World Bank, other development institutions and a few countries, like China, have elaborated resettlement policies which envisage Resettlement with Development (RwD). However, the understanding of Development embodied in the discourse of RwD is confused. After distinguishing between the concepts of development as outcome and development as process, we investigate two projects of environmental resettlement in Inner Mongolia, PRC. The planning and implementation of these projects reveal the state's interpretation of RwD. There has been some Development (outcome) in some places, notably improvements in material well-being. However, the processes of development have been more extensive, involving increased participation in markets for produce and labour. The state, we conclude, identifies involvement with markets as the principal means of achieving material Development outcomes.*

I. Introduction

Development is an ambiguous concept. As Development (deliberate upper case), the concept refers to an outcome – improved well-being for people. As development, the concept refers to a process – the means through which social structures change. Sen (2000) makes this distinction explicit and Feldman et al. (2003) refer to a similar distinction between poverty as state and poverty as process. A second level of ambiguity arises from disputes over the meaning or the measures of well-being and of social change. Commonly used measures of well-being range over GDP per head, human development index, gender development index, various forms of environment-adjusted GDP and assessments of identity, security and human rights. As a process of social change, development has also been identified diversely – as freedom (Sen, 2000), modernisation (Todaro, 2000), neocolonialism (Escobar, 1995) or capitalist expansion (Rist, 1997), for example.

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In some theories, development as process is linked to Development as outcome. For example, growth theorists (see Todaro, 2000) define measures of well-being and social change in such a way that development logically *entails* Development. They define development as the process of raising gross domestic product per capita through technical change and capital accumulation and then measure well being as GDP per head. However, such approaches to D/development fail, because they do not explain how rates of technical change and capital accumulation are raised. This is the province of development economists (Grabowski and Shields, 1996), who argue that development ought to occur by making competitive markets because such markets maximise rates of technical change and of capital accumulation. But now the argument has become normative rather than concerned with understanding how the developing world actually operates.

Our approach to these ambiguities is first to separate process and outcome, and secondly to approach D/development positively rather than normatively. Thus we follow such authors as Rist (1997) and Feldman et al. (2003) in making the empirical claim that, in the modern world, development (process) typically occurs through the making of capitalist methods of production: the emergence and generalisation of markets, the creation of capital and the making of a working class. In this view, the outcomes that writers on development typically value – physical wellbeing, economic security, control over one's lifeworld, participation in decision making, security of identity, equality and the like – are, if they occur at all, actually effects (perhaps incidental) of the emergence of capitalism. (Our understanding of development as the emergence of capitalism is more restrictive than the interpretation of Escobar, who understands development as the form of modernisation that is imposed within Africa, Latin America and much of Asia; see Escobar, 2003.) We also limit our assessment of well being to only a few measures, including income, access to a variety of services, and freedom. One benefit of separating the definitions of development and Development in this way is that it problematises the relationship between them: since the one does not logically entail the other, does development empirically entail Development?

These ambiguities in the definitions of D/development and the problematic relationship between D/development mean that the concept of Resettlement with Development (RwD) is also ambiguous. Since most of the world's resettlement projects are initiated and implemented by states, the model of D/development (in RwD) is largely determined by those states. This raises the important question: what are states' models of D/development? That question in turn raises other more general debates about who is qualified to define D/development and measure it (see Said, 1978; Escobar, 1995; Weedon, 1999, for example). Thus, when RwD is enacted, those who facilitate resettlement implicitly define D/development. Usually, this means the state, or institutions that fund resettlement like the World Bank.

This paper makes explicit the distinction between development and Development, to illustrate how development may occur without Development, and so to underscore the ambiguity inherent in RwD. Empirically the paper recounts the experiences of households from three Inner Mongolian villages that have recently been resettled, ostensibly to rehabilitate the environment of the grasslands.[1] The paper concerns the experiences of the people who were resettled; it is not about the relationship between environmental management and resettlement. Nor does the paper attempt to account for all the effects of resettlement; rather it identifies some of

those effects that make explicit that which is usually implicit – the Chinese state's model of RwD: resettlement has apparently been designed to achieve development (expanding capitalist methods of production) rather than Development (improvement in peoples' lives). Resettlement has brought development but rather less Development.[2]

The paper opens by briefly reviewing the history of the practice and the conceptualisation of resettlement. The paper then identifies the salient characteristics of the Inner Mongolian environment and the policies that have been applied to resettle people there. The third section summarises the methods that were used to collect the information we deploy. There follow three empirical sections. The first identifies the effects of resettlement on people's income (outcome) and their means of acquiring income (process). The second surveys changes in people's access to services (a second outcome) and the means of achieving that access (another process). The third describes changes in people's perceptions of their degree of freedom to make decisions about land uses (outcome) and the processes that constrain that freedom. The conclusion draws this evidence together into the argument that we have adumbrated.

II. Resettlement with Development

States have forced people to relocate and resettle for many reasons. In the past, people were resettled to make way for large scale, infrastructure related projects, typically dams and freeways (Scudder and Colson, 1982; Cernea and Guggenheim, 1993) – nearly 1.5 million people a year in China in the 1990s (Duan and McDonald, 2004) – but now involuntary resettlement often has a broader focus: an unavoidable outcome of development (Zou, 2002); a means of agricultural intensification (Appleby, 1995); a means of poverty alleviation (Merkle, 2003); a means of facilitating development (Mathur, 1995); or an integral element of modernity and development (Escobar, 2003). In some African countries, conservation projects (such as biosphere reserves and national parks) have been linked to involuntary resettlement (Schmidt-Soltau, 2002; Cernea and Schmidt-Soltau, 2003). In China, environmental resettlement is emerging, ostensibly as a form of sustainable environmental development. Although involuntary resettlement is widespread and often interpreted as an effect or a means of D/development, its effects on communities and people are commonly negative (Cernea, 1997, 2003; Mathur, 1995; Croll, 1999; McElroy, 1999; Parasuraman, 1999; Webber and McDonald, 2004).

Early research models typically conceived of displacement as causing stress (Scudder and Colson, 1982). It was thought appropriate to compensate displaced people for the stresses that they experienced. Evidence indicates, though, that the compensation model is inadequate in determining the replacement value of goods that have non-market values, so resettlers suffer welfare losses (Cernea, 2003; Kanbur, 2003; Duan and McDonald, 2004). Compensation in cash may also disappear through corruption or be squandered on non-resettlement activities (Cernea, 1996). Resettlement thus came to be conceived as entailing potential impoverishment. Cernea's (1997) risk and reconstruction model recognises that all resettlement projects entail some impoverishment risks – of landlessness, joblessness, homelessness, marginalisation, increased morbidity, food insecurity, loss of access to common property resources, increased morbidity, and social disarticulation.

Importantly, Cernea's model positions the reconstruction of livelihoods, and not simply compensation for lost assets, as the central priority in resettlement planning. Both these forms of thinking – compensation and reconstruction – did lead to the conclusion that involuntary resettlement be avoided if possible, a conclusion mirrored in official Asian Development Bank and World Bank policy (if not practice: see Little and Mirrlees, 1990).

However, reconstruction of livelihoods is only a sophisticated form of compensation. If a project promises to improve average wellbeing, but displaced people have their livelihoods simply reconstructed, they can hardly be said to have shared in the benefits of the project (Cernea, 2003). Consequently, resettlement with development (RwD) has become the new mantra that dominates involuntary resettlement policy (Duan and McDonald, 2004). It is the official policy of both the Asian Development Bank (2002) and the World Bank (2001). Resettlement in this model is portrayed as an opportunity for development, positioning resettlers as beneficiaries of project outcomes and enabling them to 'share the gains, not just the pains, of development' (Cernea, 1999: 4). Even so, few countries have official resettlement policies; China, heralded by the World Bank as the world leader in resettlement policy (Zou, 2002), has adopted RwD into its legal framework.

The link in RwD between forced displacement and intended D/development enables states to justify involuntary resettlement. Thus new forms of resettlement may not only affect the people directly displaced by the projects but provide models for other countries to emulate (Voutira and Harrell-Bond, 2000; Meikle and Walker, 2000), making involuntary resettlement even more common. This would be unfortunate, because the principles of RwD have been applied in China with only mixed success, at least if success is interpreted as improvements in people's material well being (de Selincourt, 1993; Cernea, 1997; Croll, 1999; Deng, 2003), and because the ambiguities of D/development mean that RwD is itself ambiguous: the model of RwD adopted by the Chinese state has yet to be identified precisely.

III. Resettlement and Environment

The meaning, rate and causes of grassland degradation in Inner Mongolia are all disputed (for evidence, see SMHRIC, 2005). Environmental degradation on the grasslands of Inner Mongolia includes reduced vegetation cover and density, loss of species diversity and loss of landscape diversity (Williams, 1996; Tai, 2000; Xingqi, 2003). Mongol[3] herders also evaluate environmental degradation in terms of loss of water access, windbreaks and medicinal resources (Williams, 2002). Many Mongol people associate the grasslands with freedom: accordingly, environmental degradation symbolically represents political marginalisation and loss of identity of Mongol peoples (Bulag, 2000; Williams, 2002; Jiang, 2004).

There is evidence of extensive desertification and environmental degradation in Inner Mongolia (Hinton, 1990; Huer and Gang, 2000; US Embassy, 2001b; Jia, 2003). Herders and personal observation informally confirm these reports. Williams (2002) quotes a rate of degradation of approximately 2,460 km^2 per year, compared to perhaps 1,560 km^2 per year in the 1980s, though SMHRIC (2005) offers other estimates. As grasslands retreat, Inner Mongolia's steppes and mountains become increasingly desert-dominated landscapes.

Environmental degradation in Inner Mongolia is significant. As one of the most biodiverse grasslands in the world, loss of Inner Mongolia's grasslands affects global biodiversity (Heilig, 1999; Huer and Gan, 2000). Environmental degradation also means that Inner Mongolians lose economic, social and environmental resources (Tai, 2003). Environmental degradation is manifest in frequent, severe dust storms in Beijing (Soil and Water Conservation Commission, 2002), Korea and Japan (US Embassy, 2001b) and (more weakly) as far as north America (MacLeod, 2001). These distant negative effects of Inner Mongolia's environmental degradation have intensified China's attempts to manage the problem (US Embassy, 2001a). Accordingly, the central government has invested heavily in environmental protection in Inner Mongolia (Jin, 2001; Duan, 2003). The state's principal policies now include environmental resettlement; prohibitions on pastoralism in springtime (when grasses regenerate); tree and grass planting restoration projects (US Embassy, 1999); planting a 'Green Great Wall' around dune areas to prevent dust storms in Beijing (US Embassy, 1999); and incentives that encourage people to begin alternative (non-land based) activities such as tourism (Xingqi, 2003).

The origins of Inner Mongolia's environmental problems are disputed. The causes probably include natural resource endowment (Inner Mongolia's steppes are covered by highly erodable loess sediment; see Xingqi, 2003); climatic conditions (variable rainfall, possibly exacerbated by climate change; see MacLeod, 2001); over population, exacerbated by the immigration of Han Chinese since the establishment of the Republic of China (Hinton, 1990; Humphery and Sneath, 1996; Davin, 1999); and overstocking and other unsuitable agricultural and farming practices (Huang, 1998). However, analyses of the causes of Inner Mongolia's environmental degradation – and attempts to reverse it – are necessarily ethnicised processes, as SMHRIC (2005), Sodbilig (2005) and Togochog (2005) all indicate.

The interaction between environmental degradation and land use in Inner Mongolia is contentious because land use practices are ethnically demarcated. Mongol farmers formerly engaged in nomadic pastoralism, Han farmers in more sedentary farming practices. Today, nearly all Mongols are sedentary (Williams, 1996), largely as a consequence of post-revolutionary policies (Williams, 1996; Jiang, 2004). At times, as in the mid 1980s, such policies as 'chant the doctrine of the grass and tree, develop the pastoral economy' dominated development (Sneath, 2000: 252) and encouraged traditional Mongol land uses (pastoralism). But policies have been subject to sharp turns in orientation (Heilig, 1999), and more recently the central and Regional governments have discouraged pastoralism as being no longer compatible with state-led development polices that encourage agricultural intensification. Notwithstanding the complexity of the relation between land use and degradation, pastoralism as now practised is alleged to accelerate environmental degradation (Xinhua News Agency, 2001; Xu, 2000; Tai, 2000; Yao et al., 2003; Ji, 2003). Consequently, Mongols have been pressured to participate in the state's economic development policies by abandoning their traditional land practices. Environmental resettlement is one of the means of discouraging or even outlawing pastoralism (SMHRIC, 2005, has many accounts of disputes between local governments and peasants over land uses and resettlement).

Environmental resettlement has been implemented in regions including Qinghai and Tibet (Hansen, 1999; Xinhua News Agency, 2002) and now in Inner Mongolia,

ostensibly to reconstruct grassland environments (Li, 2002; SMHRIC, 2005). Environmental resettlement in Inner Mongolia pulls entire (often, dispersed) communities of herders and pastoralists off the land and resettles them, with government assistance and compensation, in different (nucleated) villages. Environmental resettlement reduces the density of stock and humans that rely upon the degraded landscape, thereby attempting to stop degradation of the grasslands and mountains at former villages (Yao et al., 2003; Ao, 2003; Ji, 2003). Environmental resettlement is linked to poverty alleviation: many resettlers are from poverty-stricken areas, where environmental degradation has reduced the resources for land-based production and led to loss of livelihoods. The resettlement program seeks to alleviate poverty by resettling people in new villages and offering new education, service and work opportunities. Environmental resettlement in Inner Mongolia thus has combined goals of environmental restoration and poverty alleviation. Government leaders perceive that environmental resettlement is 'the only way to get rid of poverty while protecting the ecology at the same time' (Jin, 2001: 3).

Although planning started in 1998 according to Togochog (2005), Inner Mongolia's environmental resettlement policy was initiated in 2001 (US Embassy, 2001a; Xingqi, 2003) and is applied in all eight leagues of Inner Mongolia (Duan, 2003).[4] The policy is centrally initiated and locally implemented. Whilst this system of central initiation and local implementation can accommodate local variability, local processes sometimes deviate significantly from central plans (Voutira and Harrell-Bond, 2000; Jia, 2003). Furthermore, the system may induce leagues to favour resettlement as a tool of environmental management. For example, the central government provides additional funds to localities that develop explicit, complete resettlement policies (Duan, 2003). Local leaders thus come to see resettlement as an effective means of gaining funds to initiate development and of gaining approval from higher level governments. Thus localities begin to implement resettlement as a preferred method of environmental management, despite its financial, social, cultural and environmental costs and the availability of other, potentially more effective, environmental management tools (Tai, 2003).

It is difficult to identify the number of people affected by Inner Mongolia's environment resettlement policy. Some have claimed that 450,000 people (Jin, 2001) or even 650,000 people (Togochog, 2005) will be resettled by 2011. More conservative estimates suggest that 200,000 people face resettlement (Xinhua News Agency, 2003). However, Inner Mongolia's resettlement policy is a pilot program for ecological restoration and poverty reduction throughout the pastoral lands of China's north and west (Li, 2002). If deemed successful, resettlement will become even more common. It is estimated that PRC investment in resettlement amounts to between RMB 20 billion (Xinhua News Agency, 2003) and RMB 54 billion (US Embassy, 2001a) per year.

IV. Method

Both authors have conducted fieldwork on the grasslands of Inner Mongolia. Between 2001 and 2005, Webber has spent about six weeks on the grasslands and in the mountain regions of Baotou, Hohhot[5] and Xilingol league, discussing issues of ethnicity, environmental change and farm management with herders, farmers and village and town leaders. Detailed plans to collect the data reported in this paper

were drawn up during a visit to Inner Mongolia by Dickinson in February 2003, and in July 2003 she collected these data.

The data principally derive from two questionnaires. One questionnaire was administered to people who had been resettled and were living in new resettlement villages; the other was administered to leaders of these villages. Both questionnaires asked people about working arrangements and living conditions now (July 2003) and before the resettlement. The data are thus pseudo longitudinal, since change is identified by recall rather than repeated measurement over the same individuals. Questions were asked about a variety of topics, but three principally concern this paper: production systems (land use, marketing decisions, employment and income); the provision of services (access to and the cost of electricity, water, education and health services); and freedom (to make decisions over land use). Additional questions were asked about the manner in which the resettlement was carried out. Dickinson also met with local leaders, resettlement officials and local environmental experts, conducting semi-structured interviews and informal discussions about the resettlement process.

Two separate resettlement projects are reported on. (Figure 1 identifies the locations of places mentioned in the text.) The resettlement projects were selected according to four criteria:

1. Villages had already been resettled.
2. One village should have been relocated from the mountains (where people are typically Han), and the other should have been relocated from the grasslands (where people are typically Mongol).

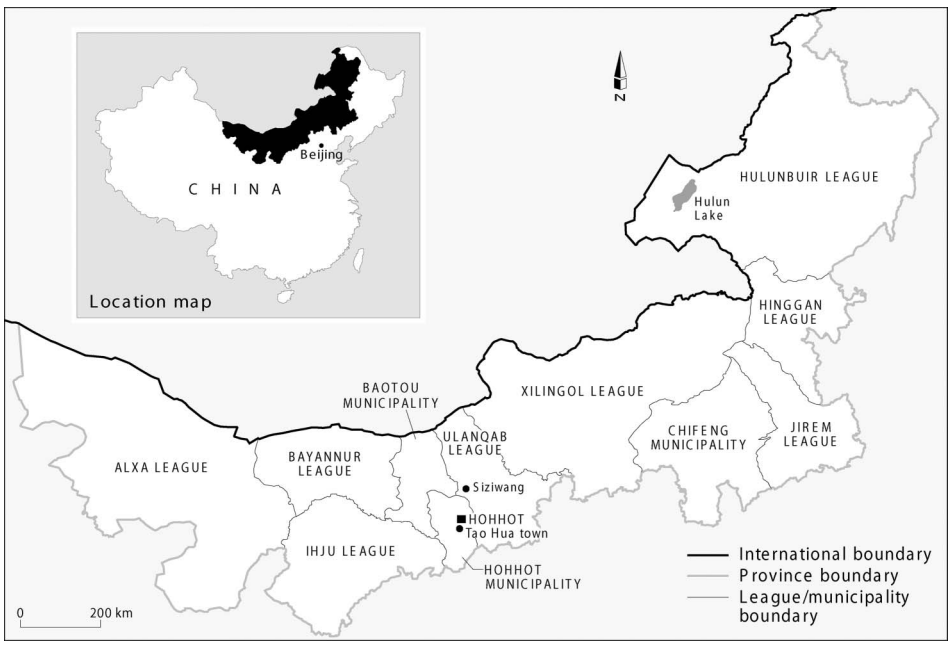

Figure 1. Locations of resettlement villages

3. Both villages should have been relocated at least in part for environmental reasons.
4. Both villages were accessible, in terms of permission to study and travel from Hohhot.

The first site is a resettlement project in Hohhot league. It included two neighbouring small villages, *Yan Jia Yingze* and *Xin You Jia*, each within *Tao Hua* town, which had both been relocated from the grasslands. At least 97 per cent of the population of these villages was Mongol. The second site is a project in Siziwang banner,[6] *Xin Yi Men* village, which had been relocated from the mountains. In this village, the population was 99 per cent Han. Both the original and the resettled villages lay within the same league.

Before resettlement, villages were typically small, with low population density and widely spaced dwellings. Some villages contained 100 people, others even fewer; the villages were surrounded by lots of space, either grasslands or mountain slopes. The post-resettlement villages contain a higher population than pre-resettlement villages (*Xin Yi Men* had a population of 2300 people). New villages also represent higher density living conditions compared to life before resettlement. People are sometimes relocated into pre-existing buildings that are no longer in use; other times, villages are purpose built to accommodate resettled people. People are typically resettled with others from their former villages, though the larger, purpose built villages may host people from several villages.

In total 173 household questionnaires were completed, 71 in the Hohhot villages and 102 in the Siziwang village. Approval for the research was first sought from the village leaders and government officials. The sample of households was obtained by knocking at the door of each house or walking through the fields, asking for volunteers to answer the questionnaire. People readily gave consent and were keen to spend some time talking and drinking tea with the foreigner.

The quality of the data is influenced by several factors. All questionnaires were administered verbally in Mandarin. Likewise, interviews were in Mandarin. Translators were employed to help question and interview, supplemented if necessary by local villagers who translated between Mandarin and Mongol. Thus some information was lost in translation and each interview took a long time. Secondly, though, by administering the questionnaires verbally, we avoided the problems posed by illiteracy; increased the likelihood of the questions being accurately and completely answered; and importantly, helped ensure that individuals' responses were accurately recorded without interference from officials (McDonald and Webber, 2002). And finally, resettlement is a sensitive political subject in China: although we tried to ask questions that were specific and factual, nevertheless people may have felt constrained in talking openly about their experiences.

V. Income

Local government and resettlement officials champion the claim that people are richer now than they were before being resettled. The evidence is more ambiguous than this, however. In this section we first discuss changes in total incomes within the

villages and then consider how production and livelihood strategies have changed. Finally, the section examines some of the other implications of changes in production strategies.

Outcome: Total Income Per Household

Total income per household includes the total value of farm production (whether sold or consumed in the household) plus all income from off-farm employment. In the Hohhot villages, the sample mean annual income per household was RMB 12,921 ($SD = 7{,}735$) before resettlement and RMB 14,349 ($SD = 10{,}578$) after resettlement. This difference is not significant (Table 1); it is not evident that people in the Hohhot villages have on average become richer though resettlement. In the Siziwang village, the sample mean annual income per household was RMB 3,445 ($SD = 2{,}030$) before resettlement and RMB 9,243 ($SD = 13{,}286$) after. This increase is significant (Table 1), implying that on average, people in Siziwang are experiencing higher incomes since resettlement than before. In both resettlement projects, resettlement has also brought increased inequality, as demonstrated by the significant increases in the standard deviation and coefficient of variation of annual household incomes.

However, individual households have experienced resettlement differently. In the Hohhot villages, 34 per cent of households were poorer after the resettlement than before and another 8 per cent experienced no change in income. In the Siziwang village, 11 per cent of households lost income over the course of the resettlement and 25 per cent reported no change in income. That is, 42 per cent and 36 per cent of villagers (in Hohhot and Siziwang villages, respectively) did not become richer after resettlement. In both villages, the post-resettlement incomes of villagers appear to be proportional to pre-settlement incomes, though with wide errors of estimate: there is no evidence that richer households were able to improve their incomes at a faster rate than the poorer households. (Indeed, if anything, the data from Siziwang suggest that changes in income were less than proportional to pre-existing incomes.) Figures 2 and 3 illustrate the relationships between pre- and post-resettlement incomes in the villages.

These data suggest three conclusions about changes in total household incomes during the resettlement. First, there is evidence of an increase in average incomes in the Siziwang village but not in the Hohhot villages. Secondly, there has been a

Table 1. Hohhot and Siziwang: mean change in total annual household income since resettlement

	Total income after – total income before				
	Mean	SE mean	*t*	*df*	Significance
Hohhot	1428.17	1173.980	1.217	70	0.228
Siziwang	5797.31	1298.550	4.464	101	<0.001

Note: The test is a paired sample *t*-test, with two-tailed significance test. Mean denotes the average difference between post and pre-resettlement income; SE mean denotes the standard error of the mean difference; *t* denotes the test statistic; *df* denotes degrees of freedom.

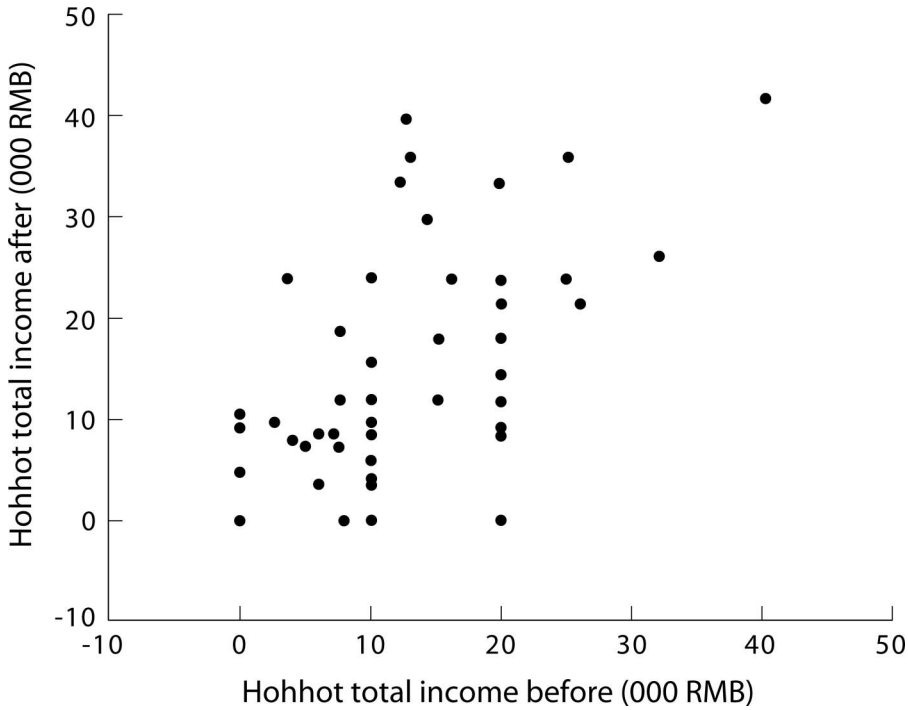

Figure 2. Hohhot villages: total annual household incomes before and after resettlement. *Note*: data are in thousands of RMB

substantial increase in inequality within both groups of villages, though not apparently because the rich have become relatively richer. And thirdly, there a large minority of households (about 40 per cent, in aggregate) have not benefited from the resettlement.

Process: Production and Livelihood Strategies

These changes in income reflect changes in the degree to which villagers' livelihoods have become oriented towards markets since resettlement. There are two main ways in which market orientation has increased since resettlement. First, the major farm production systems have changed, so that production is more commercial than formerly; and second, farmers seek jobs within nearby towns. Government and resettlement officials encourage both forms of market orientation as they are deemed more economically productive than farming, and are perceived to enable villagers to raise their incomes (Ji, 2003; Yao et al., 2003). These changes also meet broader development needs in Inner Mongolia and China, enabling both Inner Mongolia's dairy industry (Webber and Wang, 2005) and the urban labour force to grow even more.

The villages had and still have quite different economies. Pastoralism was the basis of livelihoods before resettlement in the Hohhot villages: 78 per cent of all household production derived from large animal husbandry. On average households sold

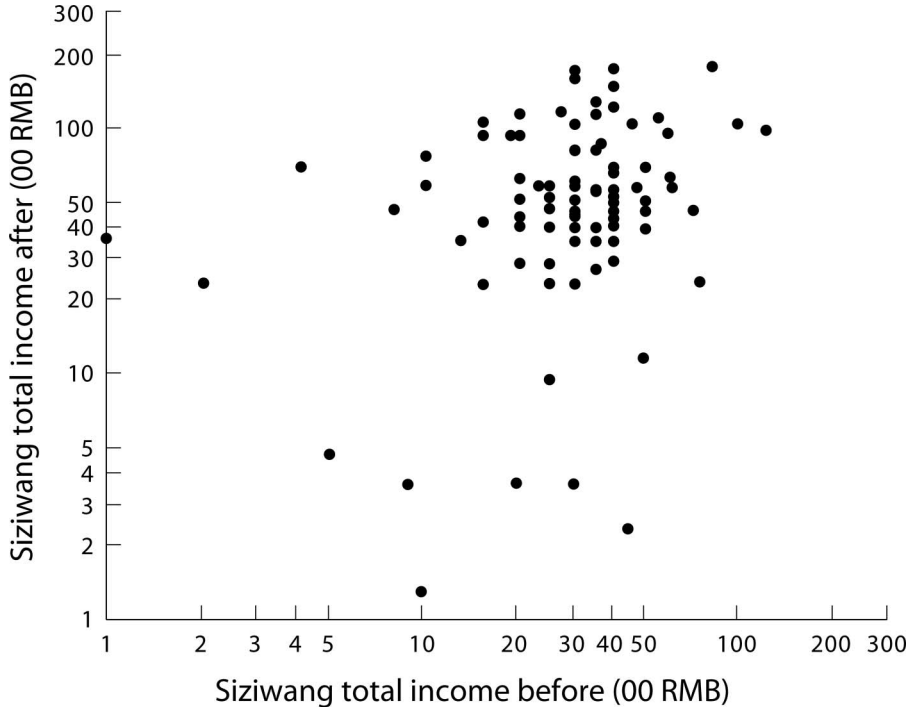

Figure 3. Siziwang village: total annual household incomes before and after resettlement. *Note*: data are in hundreds of RMB and the scales are logarithmic. Five cases (in which reported post-resettlement incomes are suspiciously high and suspiciously unrelated to pre-settlement income) have been omitted

approximately 40 per cent of their production. Since resettlement, the dominant production type has changed to commercial dairy farming, with 97 per cent of villagers engaged in dairying. Dairying has a strong market orientation: on average these households sell nearly 99 per cent of their total production. By contrast in Siziwang, production before resettlement was based on grain production (84 per cent of households), slightly oriented to the market: only 59 per cent of households sold any produce on the market, and even those who did sold on average only 15 per cent of their production. Since resettlement, most (69 per cent) households are now involved in economic crop production (such as grain or medicinal plants), all of which is sold on the market.

Despite this change in production systems and increased orientation to the market, the households in none of the villages were able to increase their farming incomes. The sample mean annual household farming incomes increased, in Hohhot from RMB 11,831 to RMB 13,107 and in Siziwang from 2,612 to 2,813. But these differences are not nearly significant (Table 2), implying that there is no evidence of an increase in farming incomes amongst the villages' populations since resettlement.

In other words, at both the Hohhot and the Siziwang villages the new commercial focus of farm production has had little impact on incomes. These findings directly oppose one of the reasons for changing production systems. Although the change

was partly intended to alleviate environmental pressure, the other principal reason for changing the system of production was to ensure increased income for villagers. Village leaders continue to espouse the benefits of changing production systems on incomes: 'Selling is a good way to be rich. The government suggests that people [grow] economic crops . . . so that in the future everyone will make more money' (Yao et al., 2003). 'Mongols are helped by selling milk . . . some herdsmen have become rich and can even build houses. Everyone wants to be rich . . . people admire those who have resettled and become rich' (Ji, 2003). Some individuals claimed similar benefits: 'It [selling milk] is good . . . we get paid every month. We have . . . the opportunity to develop now' (Hohhot villager). 'It [selling produce] is OK . . . the income's good. . . . I needn't worry about food anymore. I'd say I'm very satisfied' (Siziwang villager).

Despite these comments from leaders and some fortunate individuals, the evidence is that the new systems of agricultural production offer little benefit in higher incomes. As another villager pointed out: 'I feel sad because now we have to buy everything and our income is too low' (Hohhot villager).

Participation in the market has also increased as off-farm employment has become more prevalent. In the Hohhot villages, there was no increase in income from off-farm employment (Table 3). Indeed, there was very little off-farm work in the Hohhot villages, either before or after resettlement. (The relative contribution of off-farm work to total village income was 9 per cent and 10 per cent, before and after resettlement, respectively). At Siziwang, there was a significant increase in off-farm

Table 2. Hohhot and Siziwang villages: mean change in total annual household farming income since resettlement

Farming income after – farming income before					
	Mean	SE mean	*t*	*df*	Significance
Hohhot	1146.479	1208.069	0.949	70	0.346
Siziwang	201.529	564.800	0.357	101	0.722

Note: The test is a paired sample *t*-test, with two-tailed significance test. Mean denotes the average difference between post and pre-resettlement income; SE mean denotes the standard error of the mean difference; *t* denotes the test statistic; *df* denotes degrees of freedom.

Table 3. Hohhot and Siziwang villages: mean change in annual household off-farm income since resettlement

Off-farm income after – off-farm income before					
	Mean	SE mean	*t*	*df*	Significance
Hohhot	281.690	279.366	1.008	70	0.317
Siziwang	5595.784	1135.516	4.928	101	0.000

Note: The test is a paired sample *t*-test, with two-tailed significance test. Mean denotes the average difference between post and pre-resettlement income; SE mean denotes the standard error of the mean difference; *t* denotes the test statistic; *df* denotes degrees of freedom.

income (Table 3). Off-farm work contributed 30 per cent of total village income before resettlement, which increased to 70 per cent after resettlement. In this village, increased participation in the market for labour (via off-farm employment) has contributed to poverty alleviation. Those who can work off their farm celebrate its benefits: 'I have more chances to work now [than before resettlement]. There are more opportunities in the city, and it's very convenient. I will work very hard to ensure a good future for my family . . .' (Siziwang villager). Others reflect on the constraints upon their participation in the urban labour market: 'We can't be self sufficient any more and we're too old to work in the city. All we can do is to rely on the money from before' (Siziwang villager). 'I have to depend on my daughter who works in the city. We don't have enough money for food and clothes. I hope that the children have a better future' (Siziwang villager).

The increase in mean income via off-farm employment and individual celebrations of the benefits of off-farm work suggest that access to, and participation in, an urban labour market may be integral to poverty alleviation. Questions remain, however, for those who are unable to access off-farm employment – for example, the elderly or unskilled. That villagers in Hohhot were (largely) not involved in urban labour force raises questions about the equity of access to urban markets.

The net effect of these changes in livelihood strategies is summarised in Figure 4. In the Hohhot villages, total incomes have changed little because both land and nonland incomes have changed little; principally, increased sales of farm output have replaced subsistence production. In Siziwang, total incomes have increased, principally because off-farm incomes have risen. Although incomes from farming have changed little, commercial farming has tended to replace subsistence farming.

The Consequences of Market Orientation

The increase in market orientation has other consequences for villagers, beyond those on incomes. These consequences are common to both forms of market orientation – via commercialised farm production (itself having little effect on income) and off-farm employment (having a positive effect on income at Siziwang). The consequences of increased market orientation include: individual discontent about market conditions (including increased competition, vulnerability and unfair

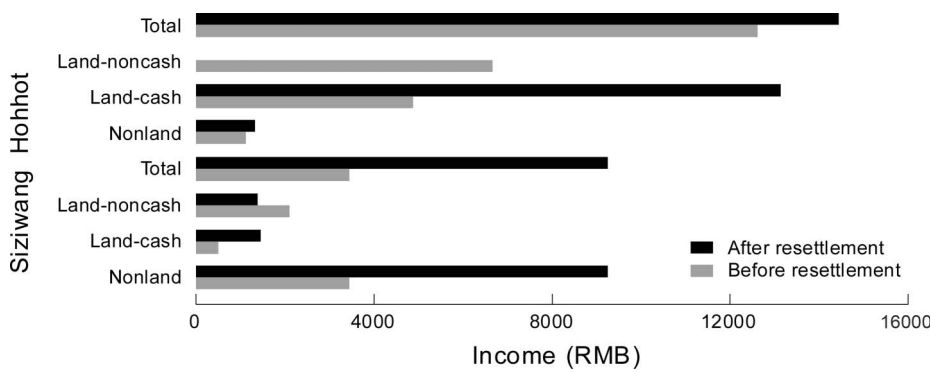

Figure 4. Sources of income, before and after resettlement in Hohhot and Siziwang villages

contracts); constraints on market access (especially to urban labour markets); and the cultural implications of changed production types.

Many villagers were disillusioned by market orientation and were discontent with market conditions. A common concern was increased competition between villagers: 'There are many poor people in this village. But some other people have good opportunities . . . they will have a good future' (Siziwang villager). Heightened market competition was often related to increased vulnerability: 'At least before [resettlement] we didn't have to buy our food . . . and we could produce enough to eat. Now we have to buy it [food] and other items for everyday from the market and it's very expensive' (Siziwang villager). 'Sometimes we sell too much and we don't have enough left over for ourselves to eat' (Siziwang villager). Unfair contracts, that villagers often felt locked into, were another consequence: 'Village leaders should ensure we get paid after we work . . . because sometimes we are cheated . . . and suffer loss . . . from working in the city' (Siziwang villager).

Alongside the discontents about market conditions are those about market access. The factors enabling, or constraining, market access are most evident in the off-farm sector. Tables 1–3 indicate that off-farm employment at Siziwang provided the only source of income that grew significantly during the resettlement. Individuals at Siziwang recognised the benefits of off-farm employment. Those who did not work in the city raised concerns about truncated opportunities for their family and future: 'Here you can only work in the city to earn a living. I have small land, no income, fewer chances, my child has no job . . . sometimes . . . I want to go back, and be self-sufficient again' (Siziwang villager). This reliance upon the city for income particularly affects vulnerable groups, such as the elderly. One elderly couple voiced their concerns: 'I'm not so optimistic about making a living, sometimes we worry a lot. Two old people can only live by depending on the climate. We would like to go back and plant crops. We are concerned that the government will not help the old' (Siziwang villager). Villagers identify age and skill as constraining market access at Siziwang. Thus, access to urban labour markets is unequal at two levels. First, one must be able to access off-farm employment; secondly, one must remain competitive in it.

In the Hohhot villages it was even more difficult to access urban labour markets. In addition to the Siziwang villagers' complaints about market conditions, people in the Hohhot villages were also constrained by distance and language. Although the post resettlement villages were closer to the city of Hohhot than the pre-resettlement villages, travel distances for work remained high. After resettlement, the cost of travelling to the city to work prevented some villagers from accessing the city's opportunities. One Hohhot individual claimed it cost RMB 8 to travel by motorbike (along poor roads) to the nearest town. A further RMB 2.5 bus ride took him to the city (in about 45 minutes). This makes a round trip of approximately RMB 21. This individual and his family were wealthy (their household income was nearly twice the village mean); even so, their earnings per person per day were RMB 23.[7] Given that a trip to the city cost nearly all a person's daily earnings, his concerns about expensive transport were obviously well founded. It is unlikely that he, or his family, could afford to work in the city. The second constraint that Hohhot villagers face when accessing urban markets relates to language. In the Hohhot villages, 97 per cent of villagers were Mongols. Whilst many villagers had a working knowledge of

Mandarin, the Mongol language was preferred by most, and some spoke only Mongol. Urban markets have a high proportion of Han Chinese and business in Hohhot itself is largely conducted in Mandarin.[8] Access to employment opportunities in the city are constrained by this language barrier.

Concluding Remarks

Some Development (as outcome) goals have been realised through resettlement: at Siziwang, mean income increased, mostly through increased off-farm employment; and in both Siziwang and Hohhot, some individuals reported higher income. But this achievement has been limited. The Hohhot villages experienced no increase in mean incomes; and in all villages a high proportion of people experienced zero or negative income growth. Inequality has grown substantially. However, development (as the process of making capitalist methods of production) has certainly occurred: in all villages, commercial agriculture is replacing subsistence production and in Siziwang, off-farm work is growing rapidly and providing an increased share of villagers' incomes. Apparently, constraints of distance from urban labour markets and language have prevented the Hohhot villagers from sharing in this growth in off-farm work.

VI. Services

Before they were resettled, the villagers lived either on dispersed farms or in small, remote mountain settlements. Such services as education, health, power and water were either not provided by the local governments or were available only at distant locations. As the resettlement villages are nucleated settlements, larger and closer to large towns, so the local governments can improve access to these services. Better services are an important form of Development and are commonly perceived, by leaders and resettled villagers alike, as a positive (Development) outcome of resettlement (Ge and Wu, 2003).

Outcome: Provision of Services

Different services are offered to the Hohhot and Siziwang villagers (see Figure 5). Here we consider changes in the level of provision of running water, electricity, doctor and primary school. Provision is measured as the proportion of villagers who state that they had (before) or now have (after resettlement) access to these services.

Both before and after resettlement, the Hohhot villages are relatively service poor. Access to electricity did increase: 25 per cent of villagers claimed access before resettlement and 100 per cent after. But in the new villages, people have no access to running water (nor was there running water before resettlement), primary school (1 per cent had access before resettlement) or a doctor (8 per cent had access before resettlement). The provision of electricity was certainly appreciated: 'We now have electricity and didn't before' (Hohhot villager).

Government leaders anticipated broad benefits, since the new villagers were closer to Hohhot than the old villages: 'Now people are near the city and hospitals [and other services] are closer. It's easy for them to do business in the city, too' (Hohhot

HOHHOT VILLAGERS

	Running water				Electricity				Doctor				Primary school			
	Before		After		Before		After		Before		After		Before		After	
Did you have / do you have access?	No 100	Yes 0	No 100	Yes 0	No 75	Yes 25	No 0	Yes 100	No 92	Yes 8	No 100	Yes 0	No 99	Yes 1	No 100	Yes
What is / was the cost?					RMB /kWh	1		0.6	RMB /visit	35				??		
Are / were you satisfied with the cost?					No 60	Yes 40	No 0	Yes 100	No 0	Yes 100			No ??	Yes ??		

SIZIWANG VILLAGERS

	Running water				Electricity				Doctor				Primary school			
	Before		After		Before		After		Before		After		Before		After	
Did you have / do you have access?	No 100	Yes 0	No 0	Yes 100	No 75	Yes 25	No 0	Yes 100	No 62	Yes 38	No 0	Yes 100	No 31	Yes 69	No	Yes 100
What is / was the cost?			RMB/ person/ month	2.8	RMB /kWh	0.75		0.75	RMB /visit	15		7	RMB /year	125		200
Are / were you satisfied with the cost?			No *	Yes *	No 54	Yes 46	No *	Yes *	No 75	Yes 25	No 0	Yes 100	No 62	Yes 38	No 8	Yes 92

Figure 5. Access to and cost of services, before and after resettlement, in Hohhot and Siziwang villages. *Note:* *indicates that the question was not asked. Numbers in 'No/Yes' boxes are percentages of respondents indicating that response

village leader). But for most villagers, the level of service provision was the same as before resettlement; they were confused about the purpose of moving if the promises of a changed life had not followed: 'There hasn't been an obvious life change . . . it's the same as before' (Hohhot villager). For these villagers, just as access to Hohhot for work was constrained by distance and language, so access for education and health was also constrained. After resettlement, the Hohhot villages were still small, lacking services and distant from the city.

In comparison, the Siziwang village has better access to services. Although more (income) poor than the Hohhot villagers, some of the Siziwang villagers had access to electricity, a doctor and a primary school before resettlement. After resettlement, the villagers claimed universal access to all these services as well as to running water. As one pointed out: 'Life is more convenient now; we can use water and electricity' (Siziwang villager).

To some extent, and especially in the Siziwang village, there has been Development in the sense that people now have improved access to essential services, and this is recognised by the villagers. In all the villages, improved access to services is the most liked aspect of resettlement.

Process: The Cost

Improved access to services has obvious benefits to individuals. However, access is sometimes associated with increased costs (see Figure 5). Since all respondents claimed that households directly paid for all these services both before and after resettlement, changes in cost arise from changes in price or in rates of use. The price of electricity remained constant or fell slightly after resettlement; and in Siziwang it was now cheaper to visit the doctor than formerly; but the price of attending primary school had increased sharply, and the cost of running water had become significant for many people.

In their evaluation of life after resettlement, many villagers expressed concern about the higher cost of living, in part attributed to payment of services: 'But this has brought us some trouble, like having to pay for services' (Siziwang villager). 'The cost of daily life is higher' (Hohhot villager). 'The cost of daily life is higher . . . we have water now but we have to pay for it too'[9] (Siziwang villager). 'Transport is the gateway to development . . . but we are too poor to use [the bus]' (Hohhot villager).

For individuals living in poverty, the benefits of access to services may not be immediately recognised if that service is expensive. This was a particular problem in the Siziwang village, where the price of water was an important issue. There, being competitive in commercial farming requires high yields, and farmers perceive that such yields demand high levels of irrigation. So farmers irrigate out of necessity. And, whilst yielding benefits, water comes at a price: about 4 per cent of total land based income is spent on water.

Concluding Remarks

The Siziwang villagers had, after resettlement, improved access to services, which they evaluated positively. There was Development. At the same time, however,

improved access has increased the (cash) cost of living for many people, so they have to sell more (produce or labour) on the market than before resettlement. In this sense, the pressure on people to develop has increased. The Hohhot villagers now enjoy access to electricity, but the other services are still missing. Relocation near to a big city has not improved peoples' ability to access services, due to distance and transport constraints.

The difference in outcomes between the two projects is perhaps related to the manner of execution of the resettlements. The new Siziwang village was purpose built for resettlement. In contrast, the Hohhot project relocated people into pre-existing buildings that were uninhabited at the time of resettlement. *Yan Jia Yingze* village was a former army base; *Xin You Jia* a former chicken factory. Perhaps the Hohhot governments were seeking to resettle villagers cheaply and made few improvements to the facilities that already existed.

VII. Land Use: Issues of Culture and Freedom

The *involuntary* nature of resettlement implies that individual freedoms have been constrained. Resettled people made few choices: decisions about who is resettled, when and where; the forms of production they undertake; the nature of labour contracts; the levels and forms of compensation – all are largely decisions of the state. When combined, these decisions represent a significant restriction on people's freedom to control their daily lives. In China, despite claims about community participation (Zou, 2002), involuntary resettlement, its outcomes and successes, are largely determined by the framework that the central government has adopted and that the Regional and league governments have chosen to implement. Constraints on freedom affect Development as outcome; in addition, since individual freedom permits resettled people to deploy their cultural and ethnic resources to reconstruct their livelihoods (Behura and Nayak, 1993; Appleby, 1995), development as process is affected too.

This section analyses some resettlement induced changes to individual freedom and the interaction between freedom and ethnicity, using the lens of decisions about land use. Individual freedom has changed in many ways since resettlement (not least through the lack of choice about whether to resettle), but for farmers and pastoralists constraints on their land use decisions have broad cultural effects. The implications of resettlement for Mongol culture are profound indeed, as SMHRIC (2005) makes clear, since the links between their environment (the grasslands), their economy (pastoralism) and their ethnic identity are so close (Tai, 2003; Jiang, 2004). The state's failure to plan for freedom and culture has constrained both Development and development.

Individual Freedom

Farmers' ability to decide how to use their land is an important form of individual freedom. Of course, many factors constrain choices about use of land; nevertheless farmers' freedom to make decisions in the context of these other factors represents a form of autonomy over their life.

Before resettlement, 48 per cent and 96 per cent of Hohhot and Siziwang villagers, respectively, claimed that land use was a matter of individual choice. Three main factors – culture, environment and poverty – influenced individuals' choices. Cultural significance was especially important for Mongols, whose culture is closely linked with the grasslands and a particular form of land use. In the Hohhot villages especially (where 97 per cent of villagers were Mongol), culture was a guiding choice in pre-resettlement land use: 'We're herdsmen . . . we were pastoralists because the old generation did it that way . . . we're used to old local traditions and customs so we did it that way, too' (Hohhot villager). The second guiding influence over pre-resettlement land use was environmental: 'The land was dry . . . too small to farm so we didn't plant any crops . . . farming would have destroyed the grasslands' (Hohhot, villager). 'It all depended on the climate . . . it really was the best way according to our local situation' (Siziwang villager). The third factor that influenced land use before resettlement was poverty: 'No development meant we had little other choice' (Siziwang villager).

After resettlement however, individual choices about land use have become restricted, especially at Siziwang. After resettlement, only 41 per cent (Hohhot) and 57 per cent (Siziwang) of people claimed that they were free to make their own land use decisions. The loss of individual choice about land use derives, in part, from leaders' encouragement of land uses that are thought to promote economic development. The guiding factors that previously had influenced land use (culture, environment and poverty) have been largely dismissed as leaders espouse economic growth. There is little space for individual choice when the outcomes of resettlement are premised on economic development: 'The purpose of resettlement is to make people richer. . . . Now people are raising cows and crops that make more money and so they will have a good future . . . [and] people resettle from a poor area to a good area. They feel happy now' (Yao et al., 2003).

Culture and Ethnicity

Given the leaders' worldview that land use should be shaped by the need for economic development, there is little room to recognise how culture and ethnicity affect decisions. Leaders recognise that culture and land use are related, but largely perceive the link as unimportant, subordinate to the pursuit of economic development: 'To themselves they [the villagers] think they don't want to leave [their hometowns] . . . they think they still want to be herdsmen. But making a living is more important than doing what the old generation did' (Ji, 2003).

This recognition of culture, followed by its dismissal, reflects the premise that Development is measured as income rather than through broader understandings of well-being. Notwithstanding the complex debates about the interaction between land use, culture and environmental degradation in Inner Mongolia (Xingqi, 2003; Jiang, 2004), the central and Regional governments discourage pastoralism as being *the* cause of environmental havoc and as being out of step with growth models that favour agricultural intensification for economic expansion. To disparage pastoralism is implicitly to blame those who practice it: Mongols, who are already marginalised within their own 'autonomous' region.

The state's model of Development does not accord with the understanding of villagers. Although villagers recognise the importance of economic Development, they also want to be consistent with their culture and ethnicity. Since this freedom has been taken away, cultural and ethnic difference is being constrained. Villagers recognised that resettlement had brought about changes to their culture: 'I've lived all my life in the grasslands. Of course I prefer it to living here . . . the grasslands are large and I feel happy and free . . . [there are] no limitations at home' (Hohhot villager). 'I don't feel we belong here. I miss everything about the grasslands' (Hohhot villager).

There is a long, close association between the grasslands and Mongol culture. Yet land use in Inner Mongolia has changed because of the way that resettlement has been used to achieve economic development. The two principal forms of development have been the expansion of markets for village labour and the increased interaction of villagers with markets for their products and services. Environmental resettlement has transformed the steppes, paradoxically, into a land scarce but labour abundant region, little different to other parts of Han China; the resulting intensification of agriculture has pushed aside the Mongol traditions of pastoralism – and therefore the cultural baggage that pastoralism carries. Of course, culture is always subject to change, but in the context of already complex Han-Mongol relations, these resettlement schemes represent further challenges to the integrity of Mongol culture (SMHRIC, 2005).

Environmental resettlement does not intentionally discriminate ethnically: both Han and Mongols are resettled. However, different ethnic groups interpret the resettlement process differently: personal comments and SMHRIC (2005) indicate that many Mongols regard resettlement as simply another attempt by the Chinese state to destroy their culture. As others have noted, in comparison to other groups, marginalised ethnic minorities experience disproportionate negative effects of resettlement and are 'further disempowered . . . by . . . the forced change of lifestyle [that] atomises existing social links' (Cernea and Schmidt-Soltau, 2003: 18). Resettlement outcomes are potentially differentiated by ethnicity.

VIII. Discussion and Conclusion

This paper has examined the impacts of two resettlement projects in three villages on the lives of Inner Mongolian villagers. These impacts relate to income and livelihoods; the degree of access to a variety of services; and villagers' freedom to make decisions about their lives and livelihoods. The evidence suggests that there has been a little Development (outcome) and much development (process).

There have certainly been some forms of Development. First, average incomes have risen in the Siziwang village, principally because off-farm incomes have risen. By contrast, in the Hohhot villages, average incomes have changed little. In all villages there has been an increase in inequality, and a substantial minority (40 per cent) of villagers has not shared in the increased incomes. Secondly, the Siziwang villagers gained improved access to electricity and water, education and health services as a result of the resettlement. The villagers in the Hohhot scheme lacked access to many services, even after the resettlement. Thirdly, though, villagers evaluated negatively the effects of the resettlement on their freedom to make

decisions: the villagers were not free to decide whether or not to move and felt less free than before to make their own decisions about land uses.

There has also been development, in the sense of increased participation in market related forms of activity. First, in both projects, subsistence production has been replaced by commercial farming; in the Siziwang village, too, people increasingly work off their farms. To the extent that there has been an increase in income, it has occurred because of these new forms of involvement in market directed activity. Secondly, the increased access to services in the Siziwang villages has come at the price of increased costs. This means that the (cash) cost of living has increased and villagers have to sell more produce or labour than before resettlement. Thirdly, though, there has been little choice about involvement in these new forms of market related activity: whether demanded by the resource constraints under which the farmers now operate, encouraged by the village leaders, or constrained by linguistic and spatial barriers, some farmers have gained access to the produce and labour markets of a city while others have been prevented from doing so.

These findings prompt several conclusions about the visions of D/development embodied within the resettlement policies of the central, Regional and local governments. The outcomes of the resettlement schemes imply what the visions might have been. First, it is clear that Development has been focussed on material well-being – income and the provision of services. Freedom to make decisions and recognition of cultural heritage have been sacrificed to this end. Secondly, the Development gains of some villagers are largely attributable to development – to increased involvement of urban produce and labour markets. Evidently, these farmers are not yet creating capital of their own, but they are becoming participants in markets and, by their labour in cities, are becoming incipient members of a working class. Thirdly, development (process) as freedom has little purchase in the design and implementation of these schemes of resettlement. Fourthly, development is more nearly universal in these villages than is Development: there has been increased involvement in markets, but in only Siziwang has that involvement translated into material improvements that could be understood as Development. And finally, the differences in outcomes between the two projects probably reflect the price that governments were willing to pay in order to construct the resettlements; these differences indicate that the goal of environmental resettlement was more important than the Development outcomes of those projects.

Certainly, such resettlement projects must be designed for conditions of land scarcity, high population density and extensive rural poverty. These conditions do constrain the forms of livelihoods in the new villages. Nevertheless, the choice of resettlement as a means of development and the design of these particular schemes do suggest that governments have been focussed on the conditions that facilitate development (creation of labour force, urban markets and monetary economy) rather than on the Development gains themselves (such as improvements in people's well being and freedom to make decisions). They also indicate that Development is principally envisaged as being about material well-being rather than about cultural heritage and decision making power, which are being sacrificed at the altar of rising income. Unfortunately, the examples deployed here demonstrate that development is not an unerring path to Development.

In other words, these are processes of Resettlement with development rather than Resettlement with Development. The development has in some places brought some Development; but it has also wrought changes that some people view negatively – increased inequality, market provision of services, and the loss of some freedoms to make decisions about livelihoods. These projects imply a highly particular understanding of RwD. They also imply that there is in China a continuing need to aim directly for Development rather than relying simply on development (a particular process) as the means of achieving Development (as a particular outcome) and to recognise the role of freedoms of choice (to enter the market place, to decide land uses, to retain important historical legacies) in linking development and Development.

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Notes

1. We use Inner Mongolia as the official name of the Autonomous Region in the People's Republic of China, but acknowledge that groups concerned with Mongol identity often use the term Southern Mongolia.
2. Therefore the paper pays little attention to the differences between the two projects and to differences in outcome that might be associated with gender, age and ethnicity.
3. Like others, we use the word Mongol to refer to people who are identified as or claim ethnic Mongol status; we use Inner Mongolian to refer to the people (whether Mongol, Han or other) who inhabit the space of Inner Mongolian Autonomous Region.
4. A league is a prefectural-level administrative unit in Inner Mongolia.
5. Baotou and Hohhot are prefecture level cities; they comprise both the cities of the same names and the surrounding rural areas.
6. A banner is a county-level administrative unit.
7. That is, yearly income of RMB 33 600/365 days/4 people = RMB 23 per person per day. Even if only two income earners are counted, daily personal incomes are only RMB 46 per person per day, and transport would absorb over 45 per cent of that.
8. In Inner Mongolia, approximately 80 per cent of the population is Han (Inner Mongolia Bureau of Statistics 2002).
9. Villagers and leaders in Siziwang disputed the cost of water. Leaders claimed that the government provided all water (irrigation water and domestic water), stating that 'Villagers are never out of pocket for water' (Yao et al., 2003). But all the villagers who were interviewed stated that they paid for water, at the average price indicated in Figure 5.

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