



Opening Participatory Spaces for the Most Marginal: Learning from Collective Action in the Honduran Hillsides

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Summary. — Community-driven development faces considerable criticism for excluding the poor. A series of participatory, qualitative, and quantitative assessments of a participatory agricultural initiative in rural Honduras shows that the project, once susceptible to elite capture, over time shifted to include the “most marginal.” Participating farmers—both men and women—demonstrated significant improvements in well-being and new-found capabilities relative to non-participants. Opening a space for the most marginal was achieved through long-term commitment by a local NGO to the principle of inclusiveness, and to research and capability development beyond the guiding methodology for establishing local agricultural research committees (CIALs).
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1. INTRODUCTION

It is increasingly recognized that chronic rural poverty results from a complex combination of

socio-economic, political, natural, human, and geographical factors (Bird & Shepherd, 2003; Hulme & Shepherd, 2003; Sen, 1999). Seeking to address this complexity, development policy

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agendas have shifted away from top-down, technocratic approaches toward participatory ones that encourage collective action in more integrated, community-based, or -driven development. However, the proliferation of “participatory” initiatives has far outpaced the literature on the relationship between participation in community development and benefits—particularly those accruing to the most marginal.

Mansuri and Rao (2004) in a review of the evidence supporting the premise that projects of community participation increase local capacity for collective action found “not a single study establishes a causal relationship” between participation and *any* outcome of community-based development (2004: 1, emphasis added). Moreover, it also showed that participatory development has not been particularly successful in *targeting* the very poor, and that collective action designed to produce public goods is more likely to deliver benefits to the relatively more privileged than it is to poor, or excluded minority groups. Projects commonly target less-remote and better endowed communities, and wealthier members in those communities, precisely because they are better able to absorb the benefits delivered by rural development, and to demonstrate development impact within a specified time frame (Morris, Hoddinott, Medina, & Bergeron, 1999 cited in Mansuri & Rao, 2004). Even when poorer communities are successfully targeted, domination, or capture of projects by elites is frequent (Morris *et al.*, 1999, p. 23). This paper responds to Mansuri and Rao’s (2004) call for studies that help us to understand “what types of checks and balances are most effective in reducing capture and the systematic exclusion of the poor and of discriminated against minorities” (30).

The importance of examining mechanisms that permit the poor and marginal to participate in community development programs comes at a time when doubt has been cast on their ability to tap into, and build social capital through collective action. The optimism of those—principally economists—who seized upon social capital as a kind of *deus ex machina* capable of delivering a range of complementary assets, namely, human, natural, financial and physical capital to the poor, independent of context, has been soundly criticized.¹ Most social scientists recognize that social capital is contingent on political economy, or, in other words, that it is embedded in a wider set of social and political relations that affect social inequality (Bebbington & Perreault,

1999; Fox, 1996; Molyneux, 2002; Mosse, 2006; Woolcock, 2001). These relations of inequality frequently leave the poorest with threadbare social networks that prevent them from taking action (Cleaver, 2005), or even aspiring for change (Appadurai, 2004). Identifying first the factors that marginalize certain groups, and then incorporating those groups in community development, remain challenges.

This article responds to these challenges, reporting the findings of a longitudinal study examining the checks and balances employed to open “political places” and “spaces” for equal participation in community-based agricultural research and development in a remote and mountainous region of northern Honduras. Finding that conventional wealth indicators were inadequate for capturing local power inequalities in poor, remote communities, we argue that a more nuanced approach be taken to pro-poor targeting that considers differences which affect local aspirations for change and capability development. The most important checks and balances required for engaging the most marginal included an institutional framework conducive to facilitating inclusiveness, as well as a focus on building local and regional farmer networks. The best facilitators of this approach were the farmers themselves, supported by compassionate and committed project leaders who resided full-time in the project areas. Using quantitative, qualitative and participatory methods, the article reports on the outcomes of this approach by establishing participation of the most marginal in community-based development as the best explanation for significant economic, human, and social improvements in well-being recorded in project communities. The findings extend those of Sanginga, Tumwine, and Lilja (2006) in southwestern Uganda.

2. THE EVOLUTION OF COMMUNITY PARTICIPATION IN PRO-POOR DEVELOPMENT

Community development has a long history dating back to rural development in India led by Gandhi and Tagore as well as from experience in Britain and the United States during the Depression years. After World War II, these experiences were used to support international development and to guide Britain’s efforts to prepare its African colonies for independence (Holdcroft, 1984). Recognition

of the important role played by power in community participation came much later (Cooke & Kothari, 2001; Guijt & Kaul Shah, 1998; Hickey & Mohan, 2004; Nelson & Wright, 1995).

In the 1980s, rapid, and then participatory rural appraisal tools were designed to provide a quick snapshot of the make-up of communities, including wealth and other ranked differences, and to open the way to social and economic change (Chambers, 1983, 1994). However, these tools were criticized as too extractive, formulaic, and narrowly focused to be able to confront the wider political forces arrayed against the poor, and by the end of the 20th century, even those generally supportive of participatory development were proclaiming it as the “new tyranny” (Cooke & Kothari, 2001) and yet another cog in Ferguson’s (1994) “Anti-Politics Machine” (Cleaver, 1999, 2001; Rahnema, 1997). Changing participation from “tyranny to transformation,” these critics argued, requires that participatory development be associated with broader concerns of citizenship (Hickey & Mohan, 2004). And this called for the creation of “political places” and “spaces” where participation—linked to the development of political capabilities—can occur (Botchway, 2001; Cornwall, 2004; Cornwall & Coelho, 2007; Gaventa, 2004; Williams, 2004). The challenge that remains is the operationalization of participatory approaches in order to open “political places” and “spaces” for the most marginal.

As conceptions of harmonious communities cede to understandings of more contentious communities controlled by ruling elites, participatory approaches to community development have had to be refocused. Elite capture has been documented by a considerable number of researchers and is recognized as a particularly pernicious problem in community-driven development (Kumar & Corbridge, 2002; Mansuri & Rao, 2004; Platteau, 2004; Platteau & Gaspard, 2003). It refers to domination, including acts of malfeasance, by elites, which negatively affect community development outcomes (Dasgupta & Beard, 2007). A study by Humphreys, Masters, and Sandbu (2006) shows that the influence of leaders on the outcomes of participatory decision-making is extremely strong, leaving deliberative processes highly vulnerable to elite influence. Dasgupta and Beard (2007) suggest that it is useful to distinguish between elite control over project decisions, and elite capture of project benefits. In

Indonesia democratic selection supported elite control but not capture of community boards, according to Fritzen (2007) and Dasgupta and Beard (2007), and although non-elite were largely excluded from the community boards, benefits continued to trickle down to the poor. Where capacity building and empowerment are goals, however, trickle down misses its target, and elite control implies elite capture. What is needed is research that tackles the thorny issue of how to prevent elite control, and thus capture of social impacts, and to open spaces that permit direct participation of the most marginal in rural research and development. As Zakarakis and Flora (2005) point out, creating a context in which the previously marginalized feel encouraged to participate, and the most talented to take on leadership roles, is exceedingly complex.

Opening spaces so that the poorest can play an active role in decision-making demands investment in skill- and confidence-building. For this, Platteau and Abraham (2002), Platteau and Gaspard (2003), and Platteau (2004) maintain external facilitation is required. They advise against financial commitments until local institutions are strengthened and training beyond the level of community leaders has taken place. Thorp, Stewart, and Heyer (2005) suggested that certain kinds of groups may provide a context for engaging the marginalized. For example, “claims groups” which focus on giving the poor a voice are likely to be more inclusive and better able to offer the marginal an opportunity for advancement than are so-called “market failure groups” (producers’ organizations or savings and loans groups) which focus on efficiency and access to resources. In the latter case, the poorest are likely to be excluded by virtue of the economic risk they pose to less poor group members. Nevertheless, the authors provide examples where market failure groups have specifically targeted the very poorest. These include scavenger co-ops in Asia and Latin America where members obtained access to side benefits, such as loans and scholarships (p. 916). Such opportunities, which likely hold little appeal to wealthier, or more powerful groups, serve to support advancement of the most marginal.

However, participation leading to empowerment of the poorest *within* a group unrepresentative of, and nontransferable to, the larger society is not sufficient. We also need to identify factors necessary for “empowered performances to be *sustained beyond* [the field of col-

lective action groups to] everyday spaces governed and constituted by quite different powers” (Kesby, 2005, p. 2057, emphasis added).² There is considerable evidence from the health field that certain kinds of groups, and specific elements of social capital, such as “diverse outward-looking bridging community networks” (Campbell, Wood, & Kelly, 1999), are more conducive to improvements in well-being for different age and gender groups. There is little research, however, to provide a roadmap to the formation of such diverse or equal access, outward-looking groups, or to identify the range of benefits obtainable by the poor by virtue of participation in them.

Evidence from experience with farmer participatory research in Honduras suggests that even in the most marginal communities where livelihood diversity and income inequalities are relatively small, there are power inequalities that can easily lead to benefit capture by certain groups of people. By identifying the range of outcomes ensuing from participation in farmer research and development teams, the research supports arguments for the provision of equal access spaces to strengthen the engagement of the most marginal through capacity development, and to link them to external organizations, in order to sustain empowered performance.

3. POVERTY, INEQUALITY AND SOCIAL ORGANIZATION IN HONDURAS

A World Bank study (2004) on the drivers of sustainable rural growth and poverty reduction in Honduras shows that on average rural households are very poor. With *per capita* rural incomes averaging only \$0.65/day, the average poverty rate is 90%, while the extreme poverty rate is estimated to be 85% (p. 31). Extreme poverty is a consequence of a number of factors. Inequality in access to land is a critical one. More than 70% of Honduran farmers who own less than 5 ha, occupy only 10% of all farmland, while just 1% of land-owners hold as much as 25% of the total (United Nations World Food Program, 2005; World Bank, 2004, p. 12). Indeed, most Honduran farmers are situated on steep slopes which are subject to serious soil erosion and low fertility, and generally considered better suited for forestry than for farming. Another factor responsible for extreme rural poverty is distance from markets and poor communi-

cations. Most transportation links have been concentrated across the north of the country and down the center forming a “T of development” designed to facilitate export production (Jansen, Siegel, Alwang, & Pichon, 2005). The hillside areas where 80% of the rural poor are located (Jansen *et al.*, 2005, p. 1) are cut off from this transportation grid, isolating the poor from markets, and leaving farmers with few options beyond producing basic grains for their own consumption, and a surplus for uncertain sale.

Isolation of hillside communities from markets, low population densities, and poor communication and transportation infrastructure have all contributed to limited social organization and livelihood diversity (Pender & Scherr, 2002; Ruben & Van den Berg, 2001; Wiggins & Proctor, 2001). Nevertheless, as Kees Jansen (1998) illustrated so strikingly in his ethnography of a poor hillside community in western Honduras, the smallest differences in resource ownership (e.g., better quality, or more easily accessible land) and non-commodity relations (e.g., patronage and friendships, *etc.*) can have substantial effects on power, and an individual’s ability to get ahead at the expense of someone else. Specifically, he argues that “everyday forms of exploitation” between the poor and the very poor serve to promote “nickel and dime capitalism” in the poorest hillside communities (pp. 159–161). Such “nickel and diming” within families and between neighbors weakens collective action leaving community councils (*patronatos*) poorly equipped to support community-driven development. These tendencies have been compounded by the proliferation of religious sects—some of which oppose collective action of any kind outside of *their* church, warning of the dangers of the anti-Christ and communist sentiment in any *other* group activity (Humphries, 1996; Probst, 2002).

Gender relations are a further limitation on community organization. According to a 2005 CEPAL study, 61% of Honduran men hold traditional attitudes regarding the roles of men and women, including an exaggerated sense of masculinity associated with *machismo*. This compares to 27% for Costa Rica, 49% for Nicaragua, and 52% for El Salvador (Ortega Hegg, Centeno Orozco, & Castillo Venerio, 2005, p. 143). Moreover, it is in the region’s rural areas where poverty, low levels of education, and religious fundamentalism are most in evidence that *machista* attitudes are most entrenched, and

where women are most marginalized from participation in public life.

Finally, the political system in Honduras acts as a brake on targeted poverty reduction. An economic elite exerts control over the two party political system effectively influencing the electoral process and government institutions at the expense of the most vulnerable (Gold-Bis, 2005). A pro-poor growth and poverty reduction strategy introduced through the HIPC-PRS process failed, according to Cuesta (2007), to achieve a consensus with civil society organizations, despite extensive consultations, and was ultimately "left" to government to manage in a top-down manner (p. 340). Additionally, the absence of a public agricultural research body serves to bias research toward the needs of wealthier farmers who can afford to purchase technical assistance packages.

It was against this unpromising background that a project for farmer participatory research was set up in the early nineties, first as a pilot phase, and subsequently as a fully funded program. The program currently supports 51 (adult) farmer research teams as well as 15 youth research teams involving approximately 850 people in three regions of Honduras.

4. THE CIAL PROJECT IN HONDURAS

The participatory research project utilized the methodology of farmer research teams known as CIALs (comités de investigación agrícola local) developed by the international center for tropical agriculture (CIAT). This extensively documented methodology (e.g., Ashby *et al.*, 2000; Braun, Thiele, & Fernández, 2000) trains groups of farmers to test out new techniques and crop varieties against current practice. Elected CIAL members learn to plan, execute, evaluate, and analyze formal experiments to resolve agricultural challenges identified by the community, and, at the end of the process, to share results with the community. It is a collective action subject to the typical constraints and opportunities associated with collective endeavors. In Honduras, the program to develop farmer research teams began in earnest in 1996, following training in the CIAL methodology.³ The CIAL program supported by the Foundation for Participatory Research with Honduran Farmers (FIPAH), which supports the majority of CIALs in Honduras, has adapted CIAT's methodology in several ways, including the encouragement of voluntary over

lected participation, and the expansion of the process beyond research to incorporate development activities, such as savings and credit, workshops on nutrition, health, gender relations, biodiversity, organic agriculture, household budgeting, group dynamics, leadership, cooking and sewing, among other things.

Data reported in this article were collected as part of a series of project assessments conducted in Yorito in the department of Yoro in 1997, 2002, 2004, and 2006. Yorito is located in a remote mountainous area in the country's north, characterized by very high vulnerability regarding access to food (United Nations World Food Program, 2003, p. 79).

5. ASSESSMENT METHODOLOGY

(a) *Baseline study*

A study was carried out in 1997 in 11 communities where farmer research teams, or CIALs had been set up. Interviews were conducted with 113 people, 55 of whom were project participants. The sample was structured with the goal of learning how to improve the project.⁴ Yorito, one of three areas included in the 1997 baseline study, was the site of an impact assessment in 2004.

(b) *Impact assessment*

The impact assessment comprised qualitative, participatory, and quantitative data collection and analysis. The objectives of the impact study were to understand the social, physical, financial, natural, and human livelihood changes experienced by CIAL participants and their communities, and to gain insight into how those occurred.

(i) *Qualitative and participatory methods*

In 2002, a Masters student conducted thirty-six informal interviews with members of CIALs to identify impact-categories. The respondents were purposively selected to represent a diverse range of participants on various social and economic factors. Project staff and the researcher facilitated focus groups in seven CIAL communities to prioritize impact indicators, and to identify unexpected project effects. Active-learning tools (Simons, 1997; Stalheim-Smith, 1998) assisted in eliciting dialogue during these activities. Follow-up individual interviews with 36 people (purpo-

sively selected from the focus groups to represent the greatest variation among participants, and, in particular, to target shy or more reserved participants) served to cross-check the information gathered, capture negative aspects arising from collective action, and other issues associated with group activities (Classen, 2003). Content analyses of qualitative data helped identify social, human, and financial capital variables related to pre-existing socio-economic status in project communities, and those representing project impact.

(ii) *Quantitative methods*

Indicators of impact and social change identified during the interviews and focus groups, as well as those of interest to project staff and academic researchers, were incorporated into a survey.⁵ The survey was delivered by a group of 10 local, high school students already familiar with the CIAL process, trained in interview techniques, to over 300 randomly selected project participants and non-participants in 10 project communities with over five years experience with the CIAL, as well as two counterfactual communities.⁶

(iii) *Tools and methods for data analysis*

Statistical analyses were performed on survey data using SPSS version 12.0. In the first stage, the independent samples *t*-test was used to compare socio-economic measures identified as salient in qualitative data of executive participants in 1997 and 2004, and also of participants and non-participants in 2004. In the latter groupings, categorical and ordinal variables were compared using the chi-square, and Mann–Whitney *U*-tests, respectively. In the second stage of the analysis, participants and non-participants in 2004 were compared, again using *t*-test, chi-square, and Mann–Whitney *U*-tests on variables identified from the qualitative data to represent project impact.

(iv) *Follow-up focus groups*

Upon completion of the quantitative analyses, a preliminary report was discussed during focus groups with CIAL participants from the 10 CIAL communities included in the study, and 10 other project communities located in the regions under study. A combination of graphs, photos, and stories was used to convey the survey results, and to elicit dialogue on how, and why different changes occurred, and to explain unusual, or unexpected results.

(c) *Project histories*

Thirty-one life/project histories, recorded for a separate research initiative in 2006 (ASO-CIAL & Classen, 2008), and coded using Nvivo qualitative analysis software, were very important to understanding how impact occurred for the most marginalized in the CIAL project.

6. RESULTS

The results of the assessments are divided into three sections: (i) Evidence of elite capture at project start-up; (ii) Shifting from elite capture; (iii) Financial, human, and social capital development among the most marginal.

(a) *Evidence of elite capture at project start-up*

As is the case in many participatory projects (Mansuri & Rao, 2004), the participants in the first couple of years of the CIAL project, represented the community elite (Humphries, Gonzales, Jiménez, & Sierra, 1999, 2000). However, this was not the case in 2004. Significant differences were found between members of the CIAL executive in 1997 and 2004,⁷ in local measures of relative wealth, including small and large livestock, and coffee groves, and although cultivated land area was not found to be significantly different, land quality (due to valley, and foothill locations) in 1997 was superior, and better connected to roads. Such lands permit higher yields relative to the hillsides, and therefore improve food security outcomes.⁸ Moreover, as demonstrated by the high variance around the mean for cultivated land, each CIAL in 1997 contained one, or two farmers with substantial holdings.⁹

Community positions/linkages to projects and organizations were also found to be highly significantly different, and the density of social networks among the 1997 participants did not vary with the amount of cultivated land, or number of animals owned. Thus regardless of other differences, a key characteristic of the participants in 1997 was that they were all well-linked.¹⁰ The average number of such linkages of 1997 participants prior to joining the CIAL was 4.27 with a minimum of 3; whereas in 2004 participants had an average of just one link and over 50% of female participants had no links at all prior to joining the CIAL (Table 1). The gender composition of the participants also differed significantly from

1997, when no women were elected to the CIAL executive, to 2004 when women made up 48% of CIAL executive members.¹¹

(b) *Shifting from elite capture*

The 2004 survey also compared participants and non-participants on a range of social and economic variables identified as appropriate in previous qualitative research (Classen, 2003). Women made up 40% of total participants indicating that in a short period of time women were playing a role that was becoming increasingly equal with men, both as project participants and leaders, overcoming a significant challenge in communities with a strict gender division of labor that militates against women working in agriculture. Additionally, there were no differences between participating households and non-participating households on most measures of socio-economic status (SES), including different measurements of land area, the percentage of land dedicated to coffee production, weeks of farm wage labor, any characteristics of household structure (Table 2), or house quality.¹² This indicates that participating households in 2004 were representative of their communities in nearly all measures of SES.

Membership in the CIAL, however, does appear to appeal to *individuals in local households* with higher levels of education. The survey found a significant difference among male participants and non-participants of 1.5 years of elementary school education (male participants—4.03 years elementary school education, male non-participants—2.37 years).¹³ However, once one family member works with the CIAL, qualitative data indicate that others are more likely to join. Additionally, some participants explained during data interpretation that prior to their involvement with the CIAL, they were not literate, and frequently had less than two years of education but since joining the CIAL they have begun to take adult education classes offered over the radio, or from local elementary school teachers. Thus the higher educational level of participants is, in some part at least, a product of the CIAL process and represents one aspect of human capital development associated with participation in collective action through the CIAL. Nevertheless, lower education and illiteracy may deter participants from joining in the beginning.

(c) *Financial, human, and social capital development among the most marginal*

While CIAL members in 2004 were not significantly different to other community members on key socio-economic indicators, *there are some significant differences, which can best be explained as the results of the project itself, that relate to the growth of human, social, and financial capital.* These statistical differences were all confirmed as project impacts with participants during data interpretation focus groups.¹⁴

(i) *Financial asset building*

Distinguishing features between project and non-project participants include small but significant differences in animal ownership.¹⁵ The largest difference was in the poultry category with participating households owning an average of 5.53 more chickens than non-participating households. In interviews many women explained how their cooperation with the CIAL has enhanced their capacity for social mobilization, and they had requested aid from the municipality and other organizations for things such as community infrastructure, education, and training, including poultry care and chick donations. It is therefore members' level of social and human capital development that has permitted them access to these productive assets. There are also small differences between the number of pigs and pack animals owned by participant and non-participating households. During participatory analyses of the survey results, participants explained that the pigs represented increased savings on the part of CIAL members resulting from improvements in maize and bean production. This is further confirmed by the fact that the wealthier farmers in the 1997 data, who had larger cultivated land areas, and more cattle, did not have a significantly larger number of pigs (Table 1). A key difference related to the above is that 55% of participating households had savings compared to only 10.8% of non-participating households. Differences in the average number of pack animals are due to the participants' use of live grass barriers in their fields as a soil conservation technique learned with the CIAL. During participatory data analyses, participants explained that these barriers provide enough food to sustain one pack animal. More generally, participants described new attitudes regarding planning for the future: "As a result of the CIAL we have learned a new consciousness.

Table 1. *Socio-economic profiles of CIAL executive in 1997 and 2004*

	Survey (1997/2004)	N	Mean	Minimum	Maximum	Std. dev.
Cultivated land area (mz) ^a	Baseline 1997	12	5.583	0.5	34	9.160
	Impact 2004	28	1.9018	0	7.00	1.458
Coffee area (mz) [*]	Baseline 1997	12	2.4583	0	12	3.414
	Impact 2004	29	0.5948	0	3	0.958
Number of poultry [*]	Baseline 1997	12	20.50	0	46	14.951
	Impact 2004	29	11.38	0	50	11.271
Number of pack animals [*]	Baseline 1997	12	3.50	0	14	3.729
	Impact 2004	29	1.52	0	8	1.920
Number of cattle ^{b*}	Baseline 1997	12	3.83	0	29	8.441
	Impact 2004	29	0.46	0	12	1.232
Number of pigs	Baseline 1997	12	0.42	0	3	0.900
	Impact 2004	29	0.86	0	6	1.575
Years of education	Baseline 1997	12	4.75	1	6	0.479
	Impact 2004	28	4.64	0	8	0.396
Number of dependents	Baseline 1997	12	7.42	4	13	2.429
	Impact 2004	29	6.55	3	12	2.369
Institutional links before CIAL ^{c**}	Baseline 1997	11	4.27	3	7	1.191
	Impact 2004	29	1	0	5	1.225

^a One manzana (mz) in Yorito is equivalent to 0.83 ha (Beaudette, 1999, p. 84). This is larger than the “official manzana” which is 0.697 ha (Jansen, 1998).

^b One outlier was removed from this analysis as she indicated that her ex-husband owned 12 cattle at the time of this survey but the extent to which she has access to the income generated from these cattle is unknown, and likely to be highly limited.

^c This was determined by asking informants to indicate when they began to participate with institutions, or organizations in their communities besides the CIAL, and how long they participated. Only those organizations in which they participated prior to joining the CIAL are included in this table.

* Indicates significance at the 95% level (*t*-test).

** Indicates significance at the 99% level (*t*-test).

We want to save, and have money in the future, we want to invest in things like animals. . . Before the CIAL, we did not think this way.” Improvements in savings and animal ownership are reflected in increased yields and food security.

(ii) *Food security*

Nearly all the experiments elected by the teams and their communities focused on traditional subsistence crops—maize and beans (Humphries *et al.*, 2000, 2005)—and the majority of members have seen significant improvements in their yields (Table 3).

Both the qualitative data (see ASOCIAL & Classen, 2008), and the 2004 survey data indicated that participating households have enhanced their food supply, effectively cutting down, and in many cases eradicating, the period of food insecurity (Table 4).¹⁶

(iii) *Human capital and sustainable innovation*

The survey also found that compared to non-members, CIAL members have a significantly higher capacity for problem identification and

appropriate solution development that effectively enables them to find solutions to problems of food availability.¹⁷ Significantly more male and female CIAL members have changed from “planting one variety/using one technology one year, and another the next year,” or from “mixing different varieties of seed all together” in a single plot to “running investigations [where they compared small plots of different varieties or planting techniques] to compare different technologies to see which is most suited to [their] soil conditions” (Table 5). In short, CIAL participants are performing experiments on their own farms to look for solutions to agricultural problems, indicating higher levels of confidence, and capacity.

In CIAL communities, 76.2% of CIAL participants and 60.2% of non-participants recognized a CIAL participant to be the “agricultural experimenter” in their community. As well, 81% of all those recognized as the “most knowledgeable about agriculture” by participants and 61.7% of those recognized by non-participants were again associates of the CIAL in their community.¹⁸ These qualities are mak-

Table 2. *Land ownership, productive characteristics, and household structure of participating and non-participating households, 2004*

	Household CIAL participation	N	Mean	Minimum	Maximum	St. dev.
Cultivated land area (mz)	Participating	44	1.8580	0.00	7.00	1.458
	Non-participating	32	2.0703	0.00	6.00	1.228
Coffee area (mz)	Participating	50	0.6800	0.00	6.00	1.226
	Non-participating	38	0.5428	0.00	4.00	0.869
Weeks farm wage labor	Participating	50	17.36	0.00	124	25.212
	Non-participating	38	24.89	0.00	96	27.465
Number of cattle	Participating	50	1.02	0.00	12	2.325
	Non-participating	38	0.26	0.00	8	1.309
Number of other ruminants	Participating	50	0.20	0.00	4	0.670
	Non-participating	38	0.21	0.00	5	0.935
Number of dependents	Participating	50	6.40	2	12	2.433
	Non-participating	38	6.29	2	11	2.167
Number of productive adults	Participating	50	3.62	2	8	1.510
	Non-participating	38	3.21	1	6	1.527
Number of productive males	Participating	50	1.98	1	5	0.958
	Non-participating	38	1.76	0	4	1.125
Age of respondent	Participating	61	45.18	19	86	14.996
	Non-participating	96	46.79	19	87	14.558

All non-significant (*t*-test).

Table 3. *Percentage of participating and non-participating households that reported changes in maize and bean yields, 2004*

	HH CIAL participation	N	Improved (%)	Stayed same (%)	Worsened (%)
Changes in maize yields*	Participating	49	61.2	16.3	22.4
	Non-participating	34	29.4	29.4	41.2
Changes in bean yields*	Participating	49	56.3	25.0	18.8
	Non-participating	34	32.4	29.4	38.2

* Indicates significance at the 95% level (Mann-Whitney *U*).

Table 4. *Comparing length of the period of food insecurity measured by number of weeks per year when food access is problematic for participating and non-participating households, 2004*

	HH CIAL participation	N	Mean (wks)	Minimum (wks)	Maximum (wks)	Std. dev.
Hungry season*	Participating	16	1.63	0.00	8.0	2.655
	Non-participating	38	5.63	0.00	20.0	5.730

* Indicates significance at the 95% level (*t*-test).

ing CIAL members agricultural leaders in their communities.¹⁹ The survey data also indicate that because they involve user participation, CIAL-recommended technologies may be more appropriate, and hence easily adopted by entire communities. Sixty-four percent of non-participants indicated that they had learned something from the CIAL in their community,

although only 3% of non-participants indicated that they had improved their *own* capacity for experimentation, or solution development. The majority, 64%, said that they had learned, and adopted improved farming techniques of various sorts from the CIAL, 21% said they had learned how to prepare new crops such as soy to eat, and 12% have learned about new

Table 5. *Experimentation skills of CIAL participants and non-participants, 2004*

		CIAL participation	N	Percentage (%)
Improved forms of determining technology appropriateness	Men**	Participant	31	51.6
		Non-participant	67	7.5
	Women*	Participant	29	37.9
		Non-participant	74	8.1
Independently experiment to find solutions to agricultural problems	Men*	Participant	24	75.0
		Non-participant	61	44.3
	Women*	Participant	23	65.2
		Non-participant	54	29.6

* Indicates significance at the 95% level (chi-square).

** Indicates significance at the 99% level (chi-square).

Table 6. *Relationship between CIAL participation, and association with various local institutions, 2004*

		CIAL participation	N	Number of institutional linkages			
				Mean	Minimum	Maximum	Std. dev.
Men**	Participant		32	3.06	0	7	1.759
	Non-participant		73	1.43	0	6	1.433
Women**	Participant		33	4.00	1	12	2.640
	Non-participant		77	0.94	0	8	1.331

** Indicates significance at the 99% level (*t*-test).

crop varieties. Eighty-six percent of the non-participating respondents found the activities and solutions presented by the CIAL so relevant to their needs that they would pay for their services, either through trade or cash.

(iv) *Social capital*

The data also show that CIAL participants have become “organizational joiners” since entering the CIAL at a rate that significantly outstrips non-participants (Table 6). Contrasting this situation to CIAL participants’ organizational linkages *prior to* their participation with the CIAL (which were an average of .94 links for men and .52 links for women) reiterates the point that CIAL participants surveyed in 2004 were previously among the most marginal members of their communities, isolated from local and external project activities.

7. DISCUSSION

(a) *“Pro-poor” development: a blunt instrument for identifying the “most marginalized”*

The failure to acknowledge inequalities, even in poor communities, frequently leads to project capture by the least poor. However, short

of discarding participatory approaches there is little in the literature about (a) what are appropriate indicators of power inequalities in communities, particularly very remote, poor communities, or, (b) what kinds of organizational and project contexts might challenge these inequalities, shifting the benefits to include the most marginal. Our research provides some insight into answering both these questions.

Understanding inequality requires going beyond conventional measures of wealth such as land ownership. Cultivation of annual crops on steep hillsides is so labor-intensive there is a limit on the amount of land that can be cultivated relative to the amount of available labor. Therefore, land quality, along with animal ownership,²⁰ and permanent hillside crops, such as coffee, are more important indicators of wealth in this context. Additionally, regardless of wealth, several more subtle but equally important indicators of inequality were apparent. First, the 2004 survey clearly captured the importance of the number of linkages to local organizations in differentiating individuals in the project communities, which may be related to increased political capabilities as Bebbington (1997) had shown was the case in poor, remote Andean communities. In a context where up-

ward mobility is limited by poor quality land, and isolation from markets, outside projects provide one of the few opportunities for getting ahead. Recognition of the importance of social capital developed through such linkages was evident in the way that female CIAL participants, in particular, began joining other local and regional organizations with alacrity once they had acquired experience and confidence through the CIAL. Furthermore there was a clear segregation between individuals who were described during interviews as *futuristas*, with the capacity to aspire for change (Appadurai, 2004), and those whom participants labeled *conformistas*. "Conformism [is the feeling that] one can only be one way;" a *conformista* is a person who "conforms to existing but not to living," who accepts the fact that s/he has "been born poor, and will die poor."

We advocate the use of "most marginalized" rather than pro-poor as a concept in rural livelihoods development as it better encapsulates the diverse factors influencing power at the local level. Poverty must be defined with respect to power. Summarizing Sen's arguments (1984, 1995), Conning and Kevane, 2002, stated that:

[R]ather than focus on income deprivation, poverty ought to be understood as a deprivation in a minimum acceptable set of functionings. These include not only basic physical functionings such as being well nourished, having adequate clothing, and shelter, or avoiding preventable disease, but also social functionings such as being able to participate in the life of the community, to be in public without feeling shame, etc. The problems of social exclusion and entitlement failure that dictate and condition a person's capability deprivation are often deeply rooted in local social divisions and the way the community operates and regulates access to resources (p. 389).

Shifting local power relations through the building of bonding and bridging networks (Narayan, 1999) for the most marginalized is a central component of challenging inequalities and capability deprivations, and in the end, these may be as important as building those capitals more conventionally associated with wealth. Certainly, the emphasis on group formation, and the resulting friendships that formed among CIAL participants played an important role in enabling the most marginal to withstand the social and financial risks of participating, as is explained further below.

(b) *Opening participatory spaces for livelihood improvements by the most marginalized*

Shifting power to the marginalized did not occur without outside intervention. Our results showed that the first CIALs, set up in lower elevation communities, were dominated by a few local elites and self-serving community members who regarded the experiments as means for private gain rather than as vehicles for the provision of public goods. Thus the most opportunistic members of the farmer research teams clamored to have an experimental replication plot—for example, trials to promote soil improvement through green- or chicken-manure—on their property as a means to improve their own soil quality without any real interest in the broader research benefits to the community. Others regarded the CIAL experiment fund as personal booty, and made off with it. And the community was powerless to prevent such abuses because community organizational capacity was generally low (see Pender & Scherr, 2002; Probst, 2002; World Bank, 2004, p. 29). In short, the farmer research teams operated independently of the community, and were frequently hijacked by the most powerful members for their own personal gain (Humphries *et al.*, 2000). Thus, the stated goal of the CIALs to provide a research service to the community (Ashby *et al.*, 2000) was largely absent.

The change in CIAL membership to include the most marginal was both purposive, on the part of the NGO, and more circumstantial in nature. We identified five main factors contributing to the opening up of participatory spaces for the most marginal: (i) promoting inclusiveness, (ii) building capabilities over the long-term, (iii) facilitating participation and social learning, (iv) broadening CIAL activities beyond research toward development, and (v) building social capital among members and other local institutions. We discuss these points below.

(i) *Promoting inclusiveness*

The CIAL methodology developed by CIAT calls for democratic election of a CIAL executive, conducted at a community meeting through secret ballot. At the time of the 1997 survey, the CIALs comprised only a four-person executive. What became clear from the 1997 survey is that community members customarily tend to vote for traditional leaders, rather than for those who might best represent them, and that this tradition favored elite

capture (see Esman & Uphoff, 1984 cf. Dasgupta & Beard, 2007; Fritzen, 2007). The deliberative process subsequently conducted within each CIAL was almost entirely self-serving in nature and led to the misappropriation of resources destined for the community (see Platteau & Gaspard, 2003).

Realizing this, FIPAH, the facilitating NGO, began in 1998 to encourage the most marginal community members, particularly women, to join in the capacity of non-elected collaborators. To achieve this, one of the project agronomists would visit those communities that had expressed an interest in forming a CIAL. Many of these were quite remote, and the agronomist would stay in the community, going house to house personally inviting residents—both men and women—to attend the initial motivational meeting. This helped to ensure that typical non-joiners would have an opportunity to become involved. In essence, the goal of the project was to create open access spaces where marginalized collaborators might rise through the ranks of each CIAL, eventually being elected to an executive, or leadership position. And this is indeed what has occurred as evidenced by the percentage of women in 2004 in leadership positions. Since project agronomists resided within each locality where CIALs were clustered, the ethic of inclusiveness was continuously enforced, initially by project staff, and later on by farmer facilitators who worked with the resident agronomist at each location. As others have noted (Agarwal, 2001; Agarwal & Gibson, 1999; Guijt & Kaul Shah, 1998; Mosse, 1997), the idea that communities are homogeneous and governed by shared interests is largely mythical, and various external parties (government, NGOs) are likely required to build checks and balances into community decision-making affecting natural resources and other assets, especially where gender relations are concerned.

Additionally, within the first few years the experiment fund provided to the CIALs was discontinued by the NGO, while group experiments were focused almost solely on seeds, which are easily converted into public rather than private goods. Soil conservation and other private investments were encouraged through group learning but the practices themselves were left to individual property owners to implement. The lack of easily accessible private benefits deterred the “usual suspects” (Cornwall, 2004, p. 86) and opened the way for shy members of the community to become involved

in the CIALs. As one farmer facilitator explains:

A lot of those people who left [the CIAL] were the wealthy farmers. At first the wealthy farmers thought they would get handouts, as they were accustomed to with all previous projects. The rich are not in the CIAL today because they do not have the spare time to do research. They are waiting for the CIAL to test new seeds, and sell the better varieties to them.

If elite capture is to be avoided, a commitment to long-term capacity building and empowerment, over easy handouts, is critical (Platteau, 2004; Platteau & Gaspard, 2003).

(ii) *Long-term capacity building*

Lack of past project experience, particularly among women, and the sheer poverty of the group combined with the absence of technology suited to hillside conditions, made capacity building a protracted process. The lack of *appropriate* technology also meant that participatory research had to develop and adapt technologies. In particular, participatory plant breeding (PPB), in this case the application of the CIAL methodology to develop varieties from landraces, was required for upland communities (Humphries, Gallardo, Jiménez, & Sierra, 2005, 2006; Humphries, Jiménez, Sierra, & Gallardo, 2008). The PPB process took more than five years to complete and required a good deal of facilitation. But as one male participant put it

“One should not be organizing the small farmer into short term things. For participatory investigation the minimum is twelve years. At the beginning, the process is slow. One must wait until an investigation produces the new varieties, or cultivars.”

The payoff from the investment in capacity building is seen in higher yields from PPB-improved maize and bean landraces that have led to a willingness on the part of farmers to pay a premium for locally produced seed. That demand for the new seeds outstripped local supply in the 2007 spring planting season²¹ also suggests that these new varieties are valuable beyond the CIALs.

(iii) *Facilitating participation and social learning*

Since CIAL participants today are, in general, new players in community projects, exceptional facilitation was required to build research capacity and other skills. To do this, a chain of facilitators was set up to encourage supportive training for CIAL members, many of whom were very shy, and uncomfortable col-

laborating in a participatory process. Facilitation required confidence-building as well as instilling a sense of hopefulness and forward thinking. As discussed earlier, those without a drive for change, or lacking a sense that things can ever be different are referred to locally as “*conformistas*.” Some CIAL members admitted to previously being *conformistas* who were challenged into thinking differently through the facilitation process. Farmer facilitators have an understanding of individuals to how best to approach reticent individuals to encourage them to assert their opinions. For instance as one farmer facilitator explained:

Now, when I [as a farmer facilitator] go to make [erosion] barriers with a CIAL group, I don't even tell the producers how they should be made, because they know how they like it. I know that theoretically the “law” says that the steeper the slope, the closer the barriers should be. However, there are times when the producers may like it done another way. . . . This is where sharing, and taking into perspective the ideas of others comes into play. Some producers say, “*no hombre*, let's do a few closer, and some others further to see which is going to give better results.” Now this is participatory research.

Backstopping the farmer facilitators in their work with local farmers are project agronomists, in particular, José Jiménez, the charismatic project leader:

I say that the success we have achieved has been through the training and the examples given by the technicians who initiated this process. The people here aren't so used to experimenting. What they are accustomed to, is feeling humiliated by the new *ingenieros*²² who arrive. The *ingeniero* would say, “This is what you are going to do, no ifs, ands or buts.” So the people would look at Jiménez getting out of the car, removing his shirt to work, and opening his truck door for anyone at all to enter. . . . what respect he received! [The CIAL is] a process in which the *ingeniero* changes his relations with the people, and then people begin to change how they feel about extensionists, and themselves.

Other projects, other methodologies, which say they say are participatory—which many projects call themselves—simply disregard other people's opinions. The methodology may be participatory, however, the people who “participate” and “facilitate” are not [male participant/farmer facilitator].

The CIALs, supported by compassionate leadership and local facilitators, have provided an appropriate environment for social learning (Woodhill & Roling, 1998). Similar to farmer field schools in South East Asia reported on by Roling and van der Fliert (1998), the CIALs act as “learning communities” where members

become empowered through knowledge generated by discovery learning, especially through group research and experimentation.

(iv) *Broadening the CIAL process*

As project leaders gained more experience working with the most marginalized people in the most isolated communities, it became apparent that support to the CIALs had to go beyond research, while avoiding the usual project paternalism. For instance, critical to the success of reducing the severity of the hungry season were CIAL activities such as learning to calculate annual grain consumption and storage, so that families could avoid purchasing grain at a higher price later in the year. Access to group credit for collective and individual production plots, in addition to group experiments, helped to break dependence on money lenders, and to free CIAL members from selling at discounted prices before the harvest (*a futuro*). It also provided CIAL members the opportunity to put new technologies into practice on their own plots, and supported the process of innovation. Without this, CIAL members might have been less enthusiastic about conducting research. In the survey, 72% of CIAL members had taken out individual loans via their CIAL over the past five years; all but one of the CIAL loans had been repaid in full. And since members are required to have savings worth half the value of the requested loan, this process has aided considerably in raising members' savings, and has served to underscore the importance of planning for the future.

The support members receive outside of research (through credit, seed banks, post-harvest grain storage, sewing and cookery classes, biodiversity competitions, seed fairs, exchange visits, and training sessions in gender, health, nutrition, and group dynamics) strengthens the group, and offsets some of the opportunity costs associated with participatory research—particularly long-term research, such as PPB (see Humphries *et al.*, 2005, 2006, 2008). Nevertheless, support, such as group credit for individual and collective use, has only been provided to CIALs that have a good record of working collectively over time. The introduction of credit early on, before group cohesion is evident, would almost certainly produce individual rent-seeking behavior, and weaken the CIALs (see Platteau, 2004; Platteau & Gaspard, 2003).

(v) *Building social capital*

Evidence of bonding between participants was very clear in the project histories. These friendships have increased local confidence, effectively enabling marginalized people to gain leadership skills as many members rise from non-elected, collaborator status to the executives of their CIALs. Although women CIAL members, in particular, still face criticism for their involvement in activities outside their homes,²³ nevertheless the CIAL helps to provide the support to withstand this.²⁴ As one CIAL member explained, the CIAL plays a key role in integrating women into the community:

The participation of women is important because we need to know the type of work that goes on in the field, and in the community. But before . . . we were embarrassed to work beside our husbands and other people, and now we are not . . . it doesn't matter if they are our husbands, or not because [in the CIAL] we are a *family* who works together, and that is very important.

In the CIAL *family*, as participants discussed in the project histories, there is *love* and *support*, and members now borrow and lend things when someone is in need; this is different from the past, prior to the organization of the CIAL, "when people didn't trust one another." Social capital development has been recognizably high among CIAL members, and this has played a role in empowering previously marginalized community members.

Evidence of networking and socio-political capital is most apparent at the level of the second-order organizations, or regional Association of CIALs (ASOCIALs). At the national level, the Association of Honduran CIALs (ASOHCIAL) links five regional second-order groups in a national CIAL federation. As others have noted (Bebbington, 1997; Pretty & Ward, 2001), federations are indispensable for bridging to bodies and organizations at the local regional, and national levels, and for promoting social capital. In addition to the obvious links to FIPAH, the supporting NGO, network mapping identified the regional ASOCIAL as having strong relationships with three local and national organizations, and two international organizations, as well as more diffuse relations with 11 national and international organizations. CIAL membership in a national ecological federation has involved the development of political consciousness lead-

ing to collective action to protest the introduction of genetically modified maize, and support for farmers' rights regarding access and control over local varieties. CIAL members, especially women members, have also been active in the *cabildos abiertos*, (open councils) where a participatory budgetary process associated with HIPC-related debt relief is now used to determine local spending priorities, and two farmer facilitators were recently elected to a three-member committee to conduct a transparency audit of council. More generally, the regional ASOCIAL works directly with farmer facilitators to assist in communication between the NGO and community-level participants. The project-level institutional framework therefore plays a crucial role in helping to open up "political spaces" for conventionally marginalized people.

8. CONCLUSION: PARTICIPATION AND PRO-POOR POLICY

Where markets are largely absent, or extremely uncompetitive, food security is likely to be the main driver of long-term farmer participation in research. Similarly, it is where micro-climatic, economic, cultural, and social factors often make "off-the-shelf" technologies inapplicable that long-term participatory research is necessary to develop appropriate local technologies. Asset building for sustainable community development among the most marginal requires labor-intensive facilitation, and the unflinching commitment of a local organization to see it through, as well as donors willing to support it; but, contrary to Kumar and Corbridge (2002), it is *not* an unrealistic expectation.

Pro-poor rhetoric is insufficient to capture nuances of inequalities, and to understand conditions favoring elite capture in marginal, remote communities. Researchers need to direct their attention to what contexts or types of groups are conducive to challenging inequalities in community-based development, and how to achieve this. Using qualitative and participatory assessment tools will help to get at these nuances more effectively than surveys with pre-determined sets of impact indicators (Mayoux & Chambers, 2005).

Given the demands on facilitation, and local social development, scaling-up may be an

unreasonable goal. Rather, scaling-out of more widely applicable technologies is more likely, as we are finding with the popularity of new seed varieties developed by the CIALs. However, further research is necessary to determine

which technologies are more easily diffused, and what kinds of groups, or organizational procedures are necessary for promoting diffusion within, and beyond project communities.

NOTES

1. [ce:cross-ref](#) for a critical/[ce:cross-ref](#) for a critical discussion of the tendency of World Bank economists, among others, to theorize “the social” (especially social capital) for inclusion in economic models. [Bebbington, Guggenheim, Olson, and Woolcock \(2004\)](#) describe the struggles between economists, and more socially-oriented social scientists at the World Bank over the concept of social capital.
2. [Kesby \(2005\)](#) suggests that key factors may include opening project spaces where “empowerment can be reperformed” to reinforce new power relations (2058).
3. The team that led this subsequently evolved into a research foundation, La Fundación para la Investigación Participativa con Agricultores de Honduras (FI-PAH).
4. A locally contracted researcher lived in each of the villages for a week at a time, collecting both quantitative and qualitative data from respondents. Information collected from this assessment was subsequently written up ([Humphries et al., 1999](#)), and published ([Humphries et al., 2000](#)).
5. The 2004 assessment, and follow-up focus groups were led by Lauren Classen (former University of Guelph Masters student), who was contracted by CIAT (by Susan Kaaria), and Sally Humphries, University of Guelph. Statistical analysis of the data was conducted by her, and a quantitative methods specialist, John FitzSimons, University of Guelph. None of the original Canadian, or Honduran research team, nor any researchers from CIAT, was involved in data analysis.
6. The counterfactual communities were subsequently discarded from the analysis because of differences from CIAL communities, best illustrated by their failure to ever request a CIAL.
7. In 1997 all CIAL participants were part of an elected executive. In 1998 the CIAL methodology changed to include collaborators who were not part of the elected committee executive. For this reason, we have compared the 1997 data with the executive members in 2004. This means that the socio-economic data differ slightly but not significantly for 2004 participants in [Tables 1 and 2](#).
8. Maize maturation in the upper hillsides is 210 days compared to 120 days in the valley/foothills. Higher average yields at lower elevations are a function of better soils, multiple crop cycles and improved techniques (better fertilization, pest control, *etc.*) often associated with previous projects. CIAL members who had been part of previous projects had superior storage facilities (silos), and were better able to conserve grain, and to avoid post-harvest sales, and the subsequent purchase of higher priced grain for consumption. None of the CIAL members in the 1997 baseline study mentioned food security as a priority.
9. While there was no statistically significant difference between the 1997 and the 2004 cultivated land area, in 1997, each CIAL was dominated by at least one powerful member, with average landholdings of 30 mz, over 20 times the average cultivated land size in these communities. These powerful elites tended to dictate CIAL activities.
10. This includes community organizations and outside projects.
11. This percentage is above the figure for *all* Yorito CIALs, suggesting that women take on more leadership as CIALs mature.
12. Housing materials are a local indicator of socio-economic status, and were used in this survey by allocating a number value to each material with the help of local participants. The higher the number, the better the material, relative to the best housing materials, and worst housing materials in these communities. Participating households scored 6.62/14, whereas non-participating households scored 6.13/14.
13. There were no significant differences in the education level of female participants and non-participants (participants—3.19, non-participants—2.77).

14. *In lieu* of baseline data on measures of food security, savings, and overall well-being, this impact assessment relied on three tools to understand which indicators indicated prior wealth, and which provided the best explanation of project impact. These were the inclusion of two counterfactual communities in the survey (subsequently excluded) an element of the impact survey that asked participants to compare present day circumstances with previous five years, and extensive qualitative data collection both before, and after the survey. The latter proved most useful in highlighting the difference between prior wealth, and project impact.

15. These were the average number of poultry (participating household (hh)—14.36, non-participating hh—8.79), pigs (participating hh—1.26, non-participating hh—0.34), and pack animals (participating hh—1.46, non-participating hh—1.13).

16. In parts of Honduras, the hungry period known as *los júnios* is extremely severe, lasting as long as four months between June and September, and local people are regularly pushed toward a gathering economy once food stocks are exhausted.

17. To measure this we used a number of different questions and scenarios to get at how people determined the appropriateness of new farming practices/technologies for implementation on their own farms in the past and today.

18. Additionally, when farmers were asked where they seek agricultural advice in their communities, 78.1% of the CIAL members said that they can rely on the CIAL to find solutions to agricultural problems, and 31.0% of non-members said the same. Another 33% of non-members said that they go to a local organization, without being more specific—most of which would be the CIAL, or CIAL members, but they call the CIAL by another name.

19. These new agricultural leaders are not the most powerful, wealthy, or elite community members. Community members noted in several qualitative interviews

that the elite community members tend *not* to be CIAL members as they have other sources of information and they regard the CIAL a “waste of time,” and “for those who have nothing to do.”

20. Beaudette (1999) in a study of three Yorito communities found that pig ownership was more important among the middle group of farmers (level 2) than among the least poor (level 1), or poorest groups of farmers. Group 1 farmers had the highest percentage of households with cattle, pack animals, chickens, and coffee (p. 139).

21. In 2007, CIAL members in the community of Santa Cruz produced enough PPB maize seed to plant approximately 64 manzanas. Nevertheless, local farmers demanded locally improved maize seed in excess of this amount. FIPAH estimates that 200 quintals of PPB bean seed had been produced since 2004, enough to plant approximately 190 manzanas.

22. Ingeniero (from Ingeniero Agrónomo) is the title used to describe agronomists in the region.

23. As participants explained, “The people from the community would comment about us—the CIAL people, “those crazy people, what are they up to now” [male participant]. Others say the CIAL women neglect their children and husbands, or they insult the members’ husbands by saying they are “under the thumb of their wives” [female participant].

24. In interviews women explained that the group helped them to “defend their rights” because “in the group we have confidence in all we do,” and both men and women explained that the social aspect of the group helps to mitigate the challenge of failed experiments: “Agricultural research brings moments of happiness, and other moments of failure. Alone, we would become sad but in a group, through our sadness we also share times of joy. So, in a group one doesn’t have to feel so sad, and continue to think about failures” [male participant].

REFERENCES

- Agarwal, B. (2001). Participatory exclusions, community forestry, and gender: An analysis for South Asia and a conceptual framework. *World Development*, 29(10), 1623–1648.
- Agarwal, A., & Gibson, C. (1999). Enchantment and disenchantment: The role of community in natural resource conservation. *World Development*, 27(4), 629–650.
- Appadurai, A. (2004). The capacity to aspire: Culture and the terms of recognition. In V. Rao, & M. Walton (Eds.), *Culture and public action*. Stanford, CA: Stanford University Press.
- Ashby, J., Braun, A., Gracia, T., Guerrero, M. P., Hernández, L. A., Quirós, C., et al. (2000). *Investing in farmers as researchers*. Cali: CIAT.

- ASOCIAL *et al.*, & Classen, L. (2008). 'Campesinos Científicos'. In L. Fortmann (Ed.), *Participatory research in conservation and rural livelihoods: Doing science together*. Oxford: Blackwell.
- Beaudette, A. (1999). *Household well-being and natural resource management in three rural communities in the municipality of Yorito, Yoro, Honduras*. Unpublished MA thesis. Ontario: University of Guelph.
- Bebbington, A. (1997). Social capital and rural intensification, local organization and Islands of sustainability in the rural Andes. *Geographical Journal*, 163(2), 189–197.
- Bebbington, A., Guggenheim, S., Olson, E., & Woolcock, M. (2004). Exploring social capital debates at the World Bank. *The Journal of Development Studies*, 40(5), 33–64.
- Bebbington, A., & Perreault, T. (1999). Social capital and development in highland Ecuador. *Economic Geography*, 75, 395–418.
- Bird, K., & Shepherd, A. (2003). Livelihoods and chronic poverty in semi-arid Zimbabwe. *World Development*, 31(3), 591–610.
- Botchway, K. (2001). Paradox of empowerment: Reflections on a case study from Northern Ghana. *World Development*, 29(1), 135–153.
- Braun, A., Thiele, G., & Fernández, M. (2000). *Farmer field schools and local agricultural research committees: Complementary platforms and integrated decision-making in sustainable agriculture*. AgREN Network Paper No. 105. London: ODI.
- Campbell, C., Wood, R., & Kelly, M. (1999). *Social capital and health*. London: Health Education Authority.
- Chambers, R. (1983). *Rural development: Putting the last first*. England: Longman Group (FE) Ltd.
- Chambers, R. (1994). Participatory rural appraisal (PRA): Analysis of experience. *World Development*, 22(9), 1253–1268.
- Classen, L. (2003). *Assessing sustainable rural development: A participatory impact assessment of the IPCA project in Honduras*. Unpublished Masters Thesis. Ontario: University of Guelph.
- Cleaver, F. (1999). Paradoxes of participation: Questioning participatory approaches to development. *Journal of International Development*, 11, 597–612.
- Cleaver, F. (2001). Institutions, agency and the limitations of participatory approaches to development. In B. Cooke, & U. Kothari (Eds.), *Participation: The new tyranny?* (pp. 36–53). London: Zed Books (pp. 36–55).
- Cleaver, F. (2005). The inequality of social capital and the reproduction of chronic poverty. *World Development*, 33(6), 893–906.
- Conning, J., & Kevane, M. (2002). Community-based targeting mechanisms for social safety nets: A critical review. *World Development*, 30(3), 375–394.
- Cooke, B., & Kothari, U. (Eds.) (2001). *Participation the new tyrannys?* London: Zed Books.
- Cornwall, A. (2004). Spaces for transformation? Reflections on issues of power and difference in participation in development. In S. Hickey, & G. Mohan (Eds.), *Participation: From tyranny to transformation?* (pp. 75–91). London: Zed Books.
- Cornwall, A., & Coelho, V. S. P. (Eds.) (2007). *Spaces for change? The politics of citizen participation in new democratic Arenas*. London and New York: Zed Books.
- Cuesta, J. (2007). Political space, pro-poor growth and poverty reduction strategy in Honduras: A story of missed opportunities. *Journal of Latin American Studies*, 39, 239–254.
- Dasgupta, A., & Beard, V. (2007). Community driven development, collective action and elite capture in Indonesia. *Development and Change*, 38(2), 229–249.
- Esman, M. J., & Uphoff, N. T. (1984). *Local organizations: Intermediaries in rural development*. Ithaca: Cornell University Press.
- Ferguson, J. (1994). *The anti-politics machine: Development, depoliticization, and bureaucratic power in Lesotho*. Cambridge: Cambridge University Press.
- Fox, J. (1996). How does civil society thicken? The political construction of social capital in rural Mexico. *World Development*, 24(6), 1089–1103.
- Fritzen, S. (2007). Can the design of community-driven development reduce the risk of elite capture? Evidence from Indonesia. *World Development*, 35(8), 1359–1375.
- Gaventa, J. (2004). Towards participatory governance: Assessing the transformative possibilities. In S. Hickey, & G. Mohan (Eds.), *Participation: From tyranny to transformation?* London: Zed Books.
- Gold-Bis, M. (2005). Countries at the crossroads: country report—Honduras. In M. A. McFaul, S. Repucci, & C. Walker (Eds.), *Countries at the crossroads 2005: A survey of democratic governance*. Freedom House: Rowman & Littlefield Publishers, Inc.
- Gujit, I., & Kaul Shah, M. (Eds.) (1998). *The myth of community*. London: Intermediate Technology Books.
- Hickey, S., & Mohan, G. (Eds.) (2004). *Participation: From tyranny to transformation?* London: Zed Books.
- Holdcroft, L. (1984). The rise and fall of community development. In C. Eicher, & J. Staats (Eds.), *Agricultural development in the third world*. Maryland: Johns Hopkins University Press.
- Hulme, D., & Shepherd, A. (2003). Conceptualizing chronic poverty. *World Development*, 31(3), 403–423.
- Humphreys, M., Masters, W., & Sandbu, M. (2006). The role of leaders in democratic deliberations: Results from a field experiment in Sao Tome and Principe. *World Politics*, 58, 586–622.
- Humphries, S. (1996). *Migrants, dairy farmers and agricultural land use in the humid tropical hillside of Northern Honduras. Mimeograph: Project for improving agricultural sustainability and livelihoods in the Central American hillsides*. Tegucigalpa, Honduras: (CIAT).
- Humphries, S., Gonzales, J., Jiménez, J., & Sierra, F. (1999). *Searching for sustainable land use practices in Honduras: Lessons from a program of participatory research with hillside farmers* (pp. 1–90). Unpublished report for IDRC. Ottawa: IDRC.
- Humphries, S., Gonzales, J., Jiménez, J., & Sierra, F. (2000). *Searching for sustainable land use practices in Honduras: Lessons from a programme of participatory*

- research with hillside farmers (pp. 1–16). AgREN Network Paper No. 104. London: ODI.
- Humphries, S., Gallardo, O., Jiménez, J., & Sierra, F. with members of the Association of CIALs of Yorito, Sulaco and Victoria. (2005). *Linking small farmers to the formal research sector: Lessons from a participatory bean breeding programme in Honduras* (pp. 1–14). AgREN Network Paper No. 142. London: ODI.
- Humphries, S., Jiménez, J., Sierra, F., & Gallardo, O., and the Association of CIALs of Yorito, Victoria and Sulaco. (2006). Working with farmer research committees in participatory bean breeding in Honduras. In C. Almekinders, & J. Hardon (Eds.), *Bringing farmers back into breeding: Experiences with participatory plant breeding and challenges for institutionalization. Agromisa special 5*. Wageningen: Agromisa Foundation.
- Humphries, S., Jiménez, J., Sierra, F., & Gallardo, O. (2008). Sharing in innovation: Reflections on a partnership to improve livelihoods and resource conservation in the Honduran hillsides. In L. Fortmann (Ed.), *Participatory research in conservation and rural livelihoods: Doing science together*. Oxford: Blackwell.
- Jansen, K. (1998). *Political ecology, mountain agriculture and knowledge in Honduras*. Amsterdam: Thela Publishers.
- Jansen, H., Siegel, P., Alwang, J., & Pichon, F. (2005). Geography, livelihoods and well-being in rural Honduras: An empirical analysis using an asset-base approach. In *Paper for the conference on poverty, inequality, and policy in Latin America, University of Goettingen, Germany: July 14–16, 2005*.
- Kesby, M. (2005). Rethorizing empowerment-through-participation as a performance in space: Beyond tyranny to transformation. *Signs*, 30(4), 2037–2065.
- Kumar, S., & Corbridge, S. (2002). Programmed to fail? Development projects and the politics of participation. *Journal of Development Studies*, 39(2), 73–103.
- Mansuri, G., & Rao, V. (2004). Community-based and—driven development: A critical review. *The World Bank Research Observer*, 19(1), 1–39.
- Mayoux, L., & Chambers, R. (2005). Policy Arena. Reversing the paradigm: Quantification, participatory methods and pro-poor impact assessment. *Journal of International Development*, 17, 271–298.
- Molyneux, M. (2002). Gender and the silences of social capital: Lessons from Latin America. *Development and Change*, 33(2), 167–188.
- Morris, S., Hoddinott, J., Medina, J. M., & Bergeron, G. (1999). *Will rural development enhance food security? A case study of Western Honduras*. Washington, DC: International Food Policy Research Institute.
- Mosse, D. (1997). The symbolic making of a common property resource: History, ecology and locality in a tank-irrigated landscape in South India. *Development and Change*, 28, 467–504.
- Mosse, D. (2006). Collective action, common property, and social capital in South India: An anthropological commentary. *Economic Development and Cultural Change*, 59(3), 695–724.
- Narayan, Deepa. (1999). Bonds and Bridges: Social Capital and Poverty. Policy Research Working Paper 2167. World Bank, Poverty Reduction and Economic Management Network, Washington, DC.
- Nelson, N., & Wright, S. (1995). *Power and participatory development: Theory and practice*. London: Intermediate Technology Books.
- Ortega Hegg, M., Centeno Orozco, R., & Castillo Venerio, M. (2005). *Masculinidad y factores socio-culturales asociados al comportamiento de los hombres: estudio en cuatro países de Centroamérica*. Mexico: Sede Subregional de CEPAL.
- Pender, J., & Scherr, S. (2002). Organizational development and natural resource management: Evidence from Central Honduras. In R. Meinzen-Dick, A. Knox, F. Place, & B. Swallow (Eds.), *Innovation in natural resource management: The role of property rights and collective action in developing countries*. Baltimore and London: Johns Hopkins University Press.
- Platteau, J. (2004). Monitoring elite capture in community-driven development. *Development and Change*, 35(2), 223–246.
- Platteau, J., & Abraham, A. (2002). Participatory development in the presence of endogenous community imperfections. *The Journal of Development Studies*, 39(2), 104–136.
- Platteau, J., & Gaspard, F. (2003). The risk of resource misappropriation in community-driven development. *World Development*, 31(10), 1687–1703.
- Pretty, J., & Ward, H. (2001). Social capital and the environment. *World Development*, 29(2), 209–227.
- Probst, K. (2002). *Participatory monitoring and evaluation. A promising concept in participatory research? Lessons from two case studies in Honduras*. Margraf Verlag Ph.D. thesis. Kommunikation und Beratung #49, Weikersheim, Germany: Hohenheim University.
- Rahnema, M. (1997). Participation. In W. Sachs (Ed.), *The development dictionary: A guide to knowledge as power*. Hyderabad: Orient Longman.
- Roling, N. G., & van der Fliert, E. (1998). Introducing integrated pest management in rice in Indonesia: A pioneering attempt to facilitate large-scale change. In N. G. Roling, & M. A. E. Wagemakers (Eds.), *Facilitating sustainable agriculture*. Cambridge: Cambridge University Press.
- Ruben, R., & Van den Berg, M. (2001). Non-farm employment and poverty alleviation of rural farm households in Honduras. *World Development*, 29(3), 549–560.
- Sanginga, P. C., Tumwine, J., & Lilja, N. K. (2006). Patterns of Participation in Farmers' Research Groups: Lessons from the Highlands of Southwestern Uganda. *Agriculture and Human Values*, 23(4), 501–512.
- Sen, A. (1984). *Resources, values and development*. Cambridge, Mass: Harvard University Press.
- Sen, A. (1995). The political economy of targeting. In D. Van de Walle, & K. Nead (Eds.), *Public spending and the poor: Theory and evidence* (pp. 11–24). Baltimore and London: Johns Hopkins University Press.

- Sen, A. (1999). *Development as freedom*. New York: Anchor Books.
- Simons, P. R. J. (1997). Definitions and theories of active learning. In D. Stern, & G. L. Huber (Eds.), *Active learning for students and teachers*. New York: OECD, Sonderdruck, Offprint.
- Stalheim-Smith, A. (1998). *Focusing on active, meaningful learning*. IDEA Center: Kansas State University.
- Thorp, R., Stewart, F., & Heyer, A. (2005). When and how far is group formation a route out of chronic poverty? *World Development*, 33(6), 907–920.
- United Nations World Food Program (2005). *Honduras: Market profile for emergency food security assessments*. Rome: FAO.
- United Nations World Food Program (2003). *Análisis y Cartografía de la Vulnerabilidad a la Inseguridad Alimentaria y Nutricional*. Tegucigalpa: United Nations.
- Wiggins, S., & Proctor, S. (2001). How special are rural areas? The economic implications of location for rural development. *Development Policy Review*, 19(4), 427–436.
- Williams, G. (2004). Towards a repoliticization of participatory development: Political capabilities and spaces of empowerment. In S. Hickey, & G. Mohan (Eds.), *Participation: From tyranny to transformation?* London and New York: Zed Books.
- Woodhill, J., & Roling, N. G. (1998). The second wing of the eagle: The human dimension in learning our way to more sustainable futures. In N. G. Roling, & M. A. E. Wagemakers (Eds.), *Facilitating sustainable agriculture*. Cambridge: Cambridge University Press.
- Woolcock, M. (2001). The place of social capital in understanding social and economic and outcomes. *Canadian Journal of Policy Research*, 2(1), 11–17.
- World Bank (2004). *Honduras: Drivers of sustainable rural growth and poverty reduction in Central America: Honduras case study*. Vol. 1: Executive summary and main text report # 31192-HN.
- Zakarakis, J., & Flora, J. (2005). Riverside: A case study of social capital and cultural reproduction and their relationship to leadership development. *Adult Education Quarterly*, 55(4), 288–307.

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