UNDERSTANDING SOCIAL CAPITAL

AGRICULTURAL EXTENSION IN MALI: TRUST AND SOCIAL COHESION

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The challenge of development agencies such as the World Bank is to operationalize the concept of social capital and to demonstrate how and how much it affects development outcomes. Ways need to be found to create an environment supportive of the emergence of social capital as well as to invest in it directly. These are the objectives of the Social Capital Initiative (SCI). With the help of a generous grant of the Government of Denmark, the Initiative has funded a set of twelve projects which will help define and measure social capital in better ways, and lead to improved monitoring of the stock, evolution and impact of social capital. The SCI seeks to provide empirical evidence from more than a dozen countries, as a basis to design better development interventions which can both safeguard existing social capital and promote the creation of new social capital.

This working paper series reports on the progress of the SCI. It hopes to contribute to the international debate on the role of social capital as an element of sustainable development.
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UNDERSTANDING SOCIAL CAPITAL
AGRICULTURAL EXTENSION IN MALI: TRUST AND SOCIAL COHESION

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I. INTRODUCTION

Social capital may be seen as interpersonal trust expressed through the relationships that exist among a society’s members, its institutions and organizations. The manner in which people relate to each other in and through the institutions that affect their lives helps determine the quality of those lives and the degree to which they will improve them. Given the fundamental quality of trust as it affects an institution’s ability to help people realize their aspirations, development becomes more effective when based on an understanding of the trust placed in those very institutions and their intermediaries. This is particularly true of poverty reduction activities due to the dearth of trust in formal institutions among the poor.

The overall objective of this research project was to gain an operationally useful understanding of trust in relation to the use of contact groups (CGs) for communication in the training and visit (T&V) system of agricultural extension in Mali. The very nature of the object of inquiry - trust - is one about which little valid and useful information will be revealed unless a high degree of trust is present between the interviewer and the person being interviewed. To reveal who one does and does not trust and why -- topics which are heavily laden with social, economic and political implications -- one must first trust that the person to whom one is divulging such information will not use it in ways injurious to oneself. Thus, beneficiary assessment methodology, which capitalizes on the establishment of trust for deriving insights, was judged particularly appropriate.

The approach to social research known as beneficiary assessment can contribute to the understanding of trust between interviewer and interviewee by the utilization of qualitative research techniques that are meant to instill confidence and create rapport. These include, inter alia: the use of an interview guide for conversational interviewing which allows the interviewee to become the subject of a discourse he or she leads; the preference for keeping paper and pencil out of sight as much as possible during the interview so as not to create the ambiance of an interrogation; structuring the interview by beginning with topics which show concern for the interests of the interviewee, such as the health of the children of the household. These and similar techniques used in the beneficiary assessment approach show respect while putting the interviewee at ease.

Three particular aspects of trust as related to institutions were the focus of this inquiry. The first is the trust between technician (agricultural extension agent) and farmer, which may be necessary for the latter to follow the counsel of the former. The second is the trust that binds the members of the contact group into a cohesive whole. The third is the trust that transcends the group and allows it to act for and serve the interest of the larger community of which it is part. The principal hypotheses of this research are that: (a) the nature and degree of trust between the farmers and agricultural extension agent is key to the generation of increases in agricultural production; and (b) the degree and nature of trust between the contact groups and the other members of the community determine the effectiveness of the groups as catalysts of community development.
Since understanding the Training and Visit Extension System at the village level is important to the design of this study, some of the basic steps used by the extension agent will be briefly explained. This will be followed by a discussion of each of the design variables: region, agricultural performance, social cohesion and quality of the extension agent’s work.

i) The extension agent, known as the Agent de Vulgarisation de Base (AVB) in Mali, meets with the village members during a general assembly to explain the T&V approach. He asks those interested to organize themselves into small working groups (contact groups).

ii) During the general assembly, the AVB explains that the role of each contact group is to act as a conduit for passing technical information to the rest of the village (pictured below).

iii) The extension agent visits each contact group (each village has on average 3 or 4 contact groups) every two weeks to work on technical themes and demonstrations of new techniques.

iv) Specific agricultural techniques are taught during hands-on demonstrations in a contact group member’s fields. Demonstrations are theoretically open to anyone interested whether they are a contact group member or not, although the process for inviting non-members is left to the discretion of contact group members and the extension agent.

v) Technical themes address specific agricultural problems that are common in the area or that the village has highlighted during a yearly diagnostic exercise.

vi) The yearly diagnostic exercise brings together the community, the extension agent, his direct and regional supervisors and various technical specialists (for agriculture, environment and animal husbandry). Information from the diagnostic is then centralized and the upcoming year’s themes are chosen at the regional level.

vii) Extension agents attend monthly training sessions to give them information about the technical subjects and themes chosen for the year.
A. Regional Focus as a Variable

Two regions in Mali, Kayes and Ségou, were chosen for participation in this assessment. The results from these two regions, during a nationwide beneficiary assessment of the National Agricultural Extension Program (PNVA) carried out in 1996, were very different from each other. The region of Kayes appeared to be adopting technical themes less often and contact group members were less willing to diffuse information to others, while Ségou farmers were adopting and contact group farmers served very effectively as intermediaries. Non-contact group members reported receiving most of their agricultural information from contact group members living in their communities only 25% of the time in Kayes contrasted with 76% in Ségou. Differing levels of social capital might explain the differences in information transfer, thus making Kayes and Ségou interesting choices for this study.

Kayes and Ségou also have environmental and socio-cultural differences, including the following:

Kayes: inaccessible, rocky, mountainous terrain difficult for agriculture and travel, significant proportion of the male working population emigrates permanently.

Ségou: rice basket of Mali, agriculture can be economically rewarding, multitude of development projects, seasonal emigration.
B. Agricultural Performance *vis-à-vis* the Extension System

With region as the first variable, the second variable, performance, was defined as the overall impression of a village's ease in creating contact groups, attendance at bi-weekly meetings and receptivity to and acceptance of new agricultural themes. The existing documentation about village benchmarks at a regional level covers largely more technical aspects of extension (hectares planted, number of demonstration plots, etc.). The regional direction and supervisory staff were therefore asked to list ten villages that they would consider "high performers" and ten that they would consider "low performers" using the criteria for performance given above. Villages were then randomly selected from these lists. The research team had decided previously to have one high performer and two low performers in Kayes and the opposite in Ségou, in keeping with the results of the earlier beneficiary assessment. In retrospect, it would have been helpful to have the regional direction more precisely define the indicators of performance and any follow-up study should certainly include a clearer definition. It should be noted, however, that the qualitative judgment of the directors proved to be accurate during the fieldwork. The following table (1) shows the six villages included in this study:

<table>
<thead>
<tr>
<th>Region / Performance</th>
<th>KAYES</th>
<th>SEGOU</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Performers</td>
<td>Tantoudji</td>
<td>Kolodougou Coro</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soké</td>
</tr>
<tr>
<td>Low Performers</td>
<td>Kassama</td>
<td>Tingoni Bamanan</td>
</tr>
<tr>
<td></td>
<td>Sambaga</td>
<td></td>
</tr>
</tbody>
</table>

C. Social Cohesion and how it Relates to Performance

While conducting the interviews, another important variable, not previously defined, became apparent. Village cohesion or unity was not specifically addressed in the definition of performance and yet there appears to be a very strong correlation between these two factors. All three villages rated as high performers possessed numerous indicators demonstrating the presence of social cohesion while the three villages rated as low performers showed evidence of the lack of cohesion. The interviewers recognized the relationship between agricultural performance and a pre-existing fabric of relationships through an inductive process of observation and open-ended interviews. For example, the difference in ability to meet community needs between cohesive and fractured villages was striking. In each village with low cohesion there were stories of failed attempts to construct or maintain public goods. Further discussion revealed that each failure was rooted in the lack of unity within the community. Open conflict or subtle dissension between different ethnic groups, clan or family grouping was often centered on the placement of public goods.

In Tingoni, a local NGO offered to collaborate in providing a water pump for the
village. The village elders could not agree whether the pump should be placed in the older part of the village or in the new, more populated sector which had recently been settled near a national road. The lack of agreement resulted in the cancellation of the project by the NGO, although two neighboring villages received pumps. There were similar examples in each of the socially fractured villages. Each failure seemed to create more distrust and dissatisfaction, which in turn made the possibility of future success slight. Continuing the example of Tingoni, the undercurrent of recrimination and hopelessness that followed the failure of the water pump project were exacerbated by witnessing the neighboring villages with pumps. This contrasts to each of the cohesive villages, where visible proof of their ability to work together was the infrastructure, water pumps, health clinics and community grain storage, etc. one found when wandering through the village.

The following table (2), contrasting one high performer and one low performer village, highlights some indicators of cohesion observed by the interviewing team:

**Table 2: Indicators of Social Cohesion**

<table>
<thead>
<tr>
<th></th>
<th>Tantoudji (high performer)</th>
<th>Kassama (low performer)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village cleanliness</td>
<td>Village association weeds monthly</td>
<td>Main paths filled with weeds and trash</td>
</tr>
<tr>
<td>Distribution of infrastructure</td>
<td>Most infrastructure in village center, equidistant from the different village sectors, with duplicate structures spread throughout village, i.e. accessible to all</td>
<td>Only two water pumps located at administrative building, 3k away from village, because each half of village did not want to allow the other half access to the water pump</td>
</tr>
<tr>
<td>Ability to organize for maintenance</td>
<td>Two literacy centers built in village; communal grain storage; youth group purchased antenna and television for village; village credit association</td>
<td>Loss of outside funding for road construction due to lack of organization; village bridge washed away because work never completed; school lacking three classrooms</td>
</tr>
<tr>
<td>Number of organizations</td>
<td>Very dynamic women’s group; village association; youth group. Traditional groups transformed to meet development purposes</td>
<td>One informal women’s group; one informal family farming group; village meetings rarely called</td>
</tr>
<tr>
<td>Leadership</td>
<td>Village chief delegated responsibilities to members of different clans and ethnic groups</td>
<td>Fight between two uncles for Chiefdom.</td>
</tr>
<tr>
<td>Physical condition of the Mosque</td>
<td>Several Mosques in good condition</td>
<td>Mosque roof caving in</td>
</tr>
<tr>
<td>Friday afternoon prayer attendance</td>
<td>Filled to capacity</td>
<td>Very few people present</td>
</tr>
</tbody>
</table>

These indicators are the tangible expressions of social cohesion or the lack thereof in
village life. Taken as a whole, manifestations of cohesion also appear to be accurate predictors of performance on a village level. The presence of social cohesion cannot predict individual interest and ability to adopt technical themes, but it does indicate the ability to mobilize for group activities (such as contact groups), and diffuse information within communities. Therefore, it becomes an extremely important element in the planning and supervision of development projects.

“Community cohesion is like a rope; if it breaks, water can no longer be drawn from the well.”

Woman, cohesive village

D. Quality of Agricultural Extension Agent's Work

Another relevant variable is the competence of the AVB and the quality of his work. Two components need to be considered when discussing an extension agent's work. The first is the technical component, which includes understanding of agricultural principles and the technical themes being proposed. The PNVA provides monthly training sessions on particular themes conducted by specialists in agro-forestry, animal husbandry and specific crops. The second component concerns rural development in a broader sense, i.e., an understanding of the socio-cultural context, group dynamics and the agent’s ability to motivate others. The judgment regarding the capacity of each of the six AVBs was made by the interview team, which included two agro-economists and two rural development experts, while they were in the field. The opinions of the team were then confirmed by each agent's supervisor. Villagers interviewed also gave an evaluation of the technical and pedagogical abilities of their AVB.

Each extension agent has a different background and training. Of the six AVB that the team encountered, two were not formally trained in agriculture, the first having formerly been a forester and the second trained in animal husbandry. While background did appear to have an impact on the technical themes which the agent spent the most time on, for example, the agent trained in animal husbandry had more themes in that subject area than in agriculture, all the agents appeared to have a firm grasp of the contents and criteria of each theme. The interview team did notice a considerable difference between effective agents and ineffective agents in maintaining and updating their documents (village history, contact group member list, activities per agricultural season) and their regularity in keeping bi-weekly appointments with contact group members. In two villages with ineffective agents, neither the contact group members nor the agent could firmly recall the agent’s appointment schedule.

While the performance of effective and ineffective agents differed at a technical level, the more glaring differences are at a pedagogical level. While the PNVA gives a few general guidelines about development principles to help the agent, even some of its supervisory staff does not appear to be adequately versed in more than the rudiments of the subject matter. Supervisory visits appear to focus exclusively on technical matters. For example, in two of the villages visited, the AVB was undermining trust with key segments of the village by forming contact groups exclusively with certain castes and ethnic groups while neglecting
others, yet in the agent’s supervision notebook all the comments concerned the growth rate of different rice and millet varieties. The ineffective agents encountered have a poor understanding of the yearly diagnostic meeting and an inability to see opportunities for appropriate activities. In short, they appear to care little about the success of the population with whom they work. Good agents feel a responsibility towards their contact group members and this sense of service extends beyond the contact group to include all the villagers. The community responds with trust to this conscientiousness on the part of the agent, even in villages with little internal cohesion.

“Our agent’s door is always open, even at midnight we could wake him to ask a question.”
Non member, socially fractured village

“He never leaves until he’s sure that everyone understands the technical message.”
Contact group member, socially fractured village

As these quotes illustrate, the competence of the AVB was not directly correlated to village cohesiveness, i.e., a high quality agent could be found working in a socially divided village. This will be discussed in more detail in the Results and Analysis section below.

E. Sample Size

Within each village, in-depth interviews (see annex 1 for interview guide) were conducted with contact and non-contact group members, both men and women, totaling 90 individual interviews (see table 3 for breakdown by village). The interviewees were selected randomly from the AVB’s list of contact group members, and census information (either from the AVB’s monograph or the local administration) for non-members. The team also completed a simple mapping exercise with key informants to further understand each village’s dynamics. Informants were asked to draw the different sectors of the village and then define what population (by ethnicity, clan relationships, economic activity and level) lives there, and how that population is different from that of the other sectors. Afterwards, the residences of contact group members were indicated on the map. It quickly became apparent if all contact group members were clustered within one sector or population; this could then be further explored by the interview team. Mapping proved essential to understanding the inclusion and exclusion of different populations in the contact groups and insuring that each sub-set was interviewed.

Two focus groups, one for men and one for women were conducted in each village, with over 240 people participating. In four of the villages visited, 15 people attended each focus group, 5 contact group members and 10 non-contact group members. Bringing together members and non-members created a dynamic tension that fueled a powerful and

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1 Each agent has a notebook to record the supervisor’s (and any other official visitor) observations and comments, providing continuity and communication for PNVA staff and documenting instructions given to the agent. The interview team did not find a single remark in any of these notebooks regarding either diffusion or community concerns and dynamics.
productive dialogue about the principles of diffusion and the reality as seen from each side. In two of the three villages visited in Segou region, we continued conducting men’s focus groups with a mix of CG members and non-members. Because there were no women CGs, the women’s focus group was held with each village’s traditional women’s organization (approximately 50 women attending each). The AVB was interviewed in each village selected about his or her experience working in the area. The following table (3) shows the distribution of individual interviews within each village.

Table 3: Numbers of Interviews

<table>
<thead>
<tr>
<th>Village</th>
<th>Contact Group Men</th>
<th>Contact Group Women</th>
<th>Non-Member Men</th>
<th>Non-Member Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tantoudji</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Kolodougou Coro</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Soké</td>
<td>5</td>
<td>0*</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Kassama</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Sambaga</td>
<td>3</td>
<td>2</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Tingoni</td>
<td>5</td>
<td>0*</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Bamanan</td>
<td>5</td>
<td>0*</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>22</td>
<td>8</td>
<td>32</td>
<td>28</td>
</tr>
</tbody>
</table>

*There were no women contact group members in these villages
III. RESULTS AND ANALYSIS

Two of the four variables introduced in the research design section above (region, performance, cohesion and agent effectiveness) seem to have the greatest impact on the success or failure of agricultural extension and other development efforts: the cohesiveness of the village (i.e., relative internal trust) and the quality of the extension agent. While the caliber of the extension agent is clearly important to bringing about grassroots development, the evidence in this study suggests that community cohesion is the foundation on which sound, lasting development must be built. Development agencies have traditionally placed primary attention on technical matters and the agents who transmitted them. They have, in contrast, devoted little or no time and resources to a) gaining an operationally relevant understanding of the social and institutional fabric in places where they work, and b) training agents to enhance this local context so that villagers would be more receptive to technical themes. The need for this sensitization and capacity building on the part of development institutions and their agents became very apparent during this study. This suggests that an understanding of the pre-existing level of social cohesion in each locale should orient the steps to be taken by the agent.

The following table illustrates the relationship between village cohesion and agent competence in determining the effectiveness of agricultural extension in each of the villages studied:

**Table 4: Matrix of Outcome Possibilities**

<table>
<thead>
<tr>
<th>VILLAGE</th>
<th>Extension Agent</th>
<th>Competent, Dynamic Extension Agent</th>
<th>Marginal, Unmotivated Extension Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socially Cohesive Village / High Performer</td>
<td>Significant successes in agricultural production; synergy with other projects; informal diffusion. Villagers talk about developing new planning and management capacities, more confident in themselves and their abilities to find solutions. (Example: Tantoudji and Kolodougu Coro)</td>
<td>Significant impact on contact group member's agricultural production. Some damage to social cohesion through unintentional discrimination and lack of inclusion. The PNVA's neglect of social principles and training for their staff hinders deeper and more integral development progress. (Example: Soké)</td>
<td></td>
</tr>
<tr>
<td>Socially Divided Village / Lower Performer</td>
<td>Contact Group becomes internal unifier; nascent cohesiveness but very little diffusion except through informal women's group. Extension agent successfully balanced membership to contact groups between warring factions of village. (Example: Kassama)</td>
<td>Non-functional contact groups, no adoption or diffusion. Technical themes proposed are not adapted to village needs, thereby damaging trust. (Example: Sambaga and Tingoni)</td>
<td></td>
</tr>
</tbody>
</table>
understanding of social capital. Village cohesion is largely embedded in a particular history and culture. It evolves over time as it is affected by forces and changes from inside the village and the world beyond. These changes make movement from one category to another appear possible, i.e., a cohesive village could become less cohesive just as a socially fractured village could become more unified. Agricultural extension is one of the factors that can encourage, reinforce or damage differing levels of cohesiveness through its policies and the actions of its agents. The synergistic effects of a cohesive village and dynamic agent (or any of the other outcome possibilities) illustrate some of the intricacies of the development process. In general the experience of these six villages strongly suggests that social cohesion is not only a factor crucial to the success of extension activities but also a variable significantly influenced by the design and execution of development policies.

For example, Kassama, a highly fractured village, had not held an assembly in two years because each of the factions wanted the meeting to be on their side of the village. The AVB for Kassama, a competent, low-key individual, held a general meeting in front of the administrative offices in which over 300 people attended. While this might appear to be a simple decision, the villagers talked for days about the ‘miraculous’ meeting and vowed to hold all meetings there in the future. The agent, through his careful actions, appeared to be nurturing the early stages of a new beginning for the village. This is an essential task, albeit one that is far from standard development practice.

A very different example demonstrates that cohesiveness can also be damaged by technical messages that don’t respond to the communities’ perceived needs or that exclude women and other populations within the village. The AVB in Soke, a cohesive village, has kept working with the same contact groups for over ten years (six of the ten members were there at the founding of the group). There have been significant increases in the members’ agricultural production, but they are so familiar with the themes that they conduct bi-weekly demonstrations without even waiting for the AVB to show up. The rest of the village has become increasingly hostile to the lack of turnover in the group, especially since two of the three sectors of the village are not represented in any of the three contact groups. In fact, clustering three CG in one sector effectively excluded two ethnic groups since, in Soke, each sector is populated with a different ethnic group. As one non-member commented, “It’s time that the AVB start looking around at all the villagers that haven’t benefited one bit and replace members that have been in the group for ten years”. By disregarding a foundation of development -- community cohesion -- the agent and his supervisors have been able to focus on existing, successful contact groups and not address the impact exclusion is having on the village.

Development projects consistently create programs that deal with all communities uniformly. Yet, villages are clearly not all the same. Nor do they have the same innate promise for advancement. Some villages are like dry, seasoned wood that lights easily at the touch of a match. Others are like green wood, requiring kindling, attention and patience to become a blaze. Both types of wood have the inherent potential to fuel a campfire, but each must be treated differently. In this analogy, the age and quality of the wood correlates to the cohesion of the village, while the lighting techniques correlate to the extension agent (as proxy for the larger development program). Lighting a match to green
wood and walking away would result in a smoldering mess soon to extinguish. Similarly, creating contact groups to distribute technical information without taking into consideration the cohesiveness of the village would result, in many cases, in frustration and failure.

Development projects need to adapt to the different levels of cohesion and what it means for planned activities. This will require a level of understanding and analysis about the pre-existing environment of the communities in which they work; rather than coming in with assumptions, it will require a questioning attitude. The village is not neutral territory, but an organic and changing set of relationships. While it may be argued that it is difficult, if not impossible, to understand these relationships when beginning work in a new village, it should be noted how much this research team discovered in less than a week in each village with a focus on levels of cohesion. Extension agents could spend the first few months gathering such information and working on easy, successful group activities such as poultry vaccinations which do not require a small learning group. This time could also be spent visiting pre-existing groups, *ton*, and associations to see what possibilities for collaboration exist. Villages identified as cohesive (i.e. dry wood) could go on to more technically challenging activities, using traditional groups wherever possible. Villages identified as lacking internal cohesion (i.e. green wood) could begin literacy projects and spend more time on high impact, large group activities. By acknowledging the importance of pre-existing cohesion, the development worker would not be pressured to perform the same in all villages.

A. The Formal and Informal Village Institutions which Manifest and Affect Social Capital

A case study of a highly cohesive village with densely intertwined informal and formal institutions and a number of effective agents over the years is included before going on to a discussion of village level institutions in a structured format.

CASE STUDY OF A COHESIVE VILLAGE: HISTORICAL AND INSTITUTIONAL OVERVIEW OF TANTOUDJI

While Tantoudji's history has much in common with other villages in Mali, the continuing observance of its founding principles and traditions stands out, making it a worthwhile case study. Although dramatic changes have taken place, Tantoudji's people have adapted technologies and outside interventions to meet their own priorities and values, reinforced by appropriate training and some very talented development workers. Understanding how Tantoudji’s pre-existing social capital channeled outside forces positively should help identify best practices for use in other villages.
A Short History
The village of Tantoudji was founded in 1898 by two families\(^2\), the Nomoko and the Sissoko. The two patriarchs discovered the site of the future village while hunting and received authorization to build there from the Diakite family, who reigned in the area. The two friends decided that one family would settle to the east and the other to the west and the village chiefdom would be passed through the Sissoko family, where it remains to this day. Over time, they invited four other families to settle with them. Villagers trace their cohesion to actions taken by their ancestors, "even before unpacking, our forefathers made sacrifices to ensure that Tantoudji would be a village of understanding and agreement." Basic principles were also agreed upon at this time, such as respect for one's elders and hospitality. The vision of a grand hospitality extended to everyone is expressed through village sayings such as "the person who comes to visit you is better than you are" and "you should act as a slave to your guest".

Traditional Organizations in Tantoudji
External organizations, including various NGOs and PNVA, either use the traditional organizations they find to help them conduct their activities -- often overwhelming these small local institutions with new rules and priorities -- or create new groups, undermining traditional institutions. The strength of Tantoudji’s traditional organizations is that they participated in new activities without allowing outside forces to change their priorities. For example, PNVA requires that a contact group have no more than 15 members, which effectively precludes most traditional groups. Benkadi, Tantoudji’s traditional women’s group, allowed the extension agent to write down the names of 15 women for reporting purposes but requires all 60 women to be present at meetings and demonstrations under threat of fines.

There are two traditional organizations found in Tantoudji. The first, Benkadi, is an association for all married women in the village. This dynamic group collaborates with PNVA and several NGOs, gaining additional skills for its members. Currently Benkadi’s general activities include a collective field and once a week street cleaning. Training sessions in children’s nutrition and cooking demonstrations, soap making, dyeing cloth, and literacy are provided at regular intervals with the help of NGOs. The pride of the whole group is the two members that were sent to another town to get training as midwives.

Sansene ton is the other association in Tantoudji. Its membership includes the entire village, but active members are the young, both girls and boys. Girls enter at puberty and leave when they marry (often because they move to their husband’s village). This association hires out its services during the agricultural season, with the young men doing fieldwork and the young

\(^2\)The term 'family' is used here in the larger sense of clan or extended family grouping.
women bringing them a noon meal that has been financed by her family. Money earned is used to build needed infrastructures in the village and to match funds for NGO interventions, etc. In addition, Sansene ton pays all taxes owed by the village, something never seen before by any of the researchers. They also use the money to organize festivities for the village, notably organizing an enormous folkloric event on each girl’s wedding day.

Honorary titles are held by the village elders, while the executive president is recommended by the age group/generation that is currently running activities and approved by the elders before being solemnly announced to the village during an assembly. The executive president has authority over all active members and is chosen by his age-mates for moral qualities such as courage, seriousness, industriousness and strength of character. Active members are then organized into work groups and each group is headed by a member who functions as a supervisor. Members who are absent during work activities or who don’t follow codes of conduct are sanctioned. There are levels of sanctions ranging from a fine of 10 cola nuts to a goat, or corporal punishment of up to 20 strokes of a whip. The lowest sanction is decided and administered by the immediate age group, the next highest decided by the next oldest generation going all the way up to the elders for the most serious decision to use the whip.

In 1986, with the help of one of the PNVA’s rare rural organization subject matter specialists, the Sansene ton was formally recognized by the government as a Village Association, allowing it to become a legal cooperative. Being a legal cooperative has many benefits, some of them logistical and some financial. For example, a cooperative is eligible for certain government programs and funding and can also secure a loan from a formal bank. Being a registered Village Association led to the creation of a village bank, with both savings and lending components, and a store, with grain storage facilities, with the help of the Canadian government. The creation of each of these new institutions was preceded by a village-wide workshop to explain procedures and responsibilities. The village level management of each institution received extensive training in accounting, stock control, etc. The entire village is extremely proud that members of their own community have gained these new ‘professional’ skills. A synergy has been created whereby the viability of the village initiatives reinforces the traditional structures and moral code, without which these actions could not have taken place to begin with.

The following sections will list the various groups found within each village and discuss how each group could become more efficient at spreading agricultural information.
Village Organizations and Traditional Groups

Among traditional groups, the “ton” is one of the most important and generalizable across villages and regions. A “ton” is organized by age groups and allows all boys (and girls in the case of Tantoudji) of the same approximate age to join together for work and recreation. Relationships based on age groups tend to be very strong and last a lifetime. In the three villages which were considered “high performers”/cohesive, two were using “ton” for agriculture extension and thus transforming traditional groups into engines for development. These groups were perceived by members and non-members alike to be the most dynamic actors within the village setting. Traditional groups, including ton, are often larger than the contact groups recommended by T&V, which could explain some of the noticeably greater diffusion of technical themes to the larger village population when they are used, but the implicit trust in such organizations (even by non-ton members) seems to play a large role in their success. It is worthwhile noting that functioning “ton” were present even in two of the “low performers/socially fractured” villages, although they had never been contacted by the AVB.

The Extension Structure: Contact Groups and Diffusion

"How do you expect us to adopt something (i.e. technical message) that we've never even heard about?"

Non-Contact Group Member

In both high and low performance villages, in cohesive and fractured villages alike, the important function of information diffusion from the contact group to the rest of the population was incidental. While the importance of diffusion is discussed, emphasized and quantified at all management levels within government, national PNVA offices and at the World Bank, the reality in the field is very different. The field agents do very little to encourage information transfer, implicitly or explicitly, from contact group members to others in the village. As cited in the standard steps taken by an AVB in the design section above, during an initial village meeting the role of the contact group as an intermediary is discussed. In some of the villages interviewed that assembly had taken place up to ten years earlier and no one remembers what was said in it. The extension agent is not evaluated on diffusion, and supervisors seem to emphasize purely technical aspects of the AVBs work.

There was little apparent difference in the method of creating contact groups between high and low performance villages; 60% of contact group members and 23% of non-contact group members in all villages report that the contact group was created after a large assembly explaining the approach to the village. How few people (especially non-members) remember the formation of the contact groups appears significant because this is often the only occasion that the role of the contact group as an intermediary is explained to the whole community. If little more than half of the contact group members themselves remember this recent history, it

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is not surprising that diffusion is largely incidental. Significantly, it appears that in most villages CG members were designated by the village elders rather than self-selected.

During interviews, some contact group members said that they were hesitant to diffuse new information without permission from the AVB. Most members reported that they didn't know that one role of the CG was to diffuse information. Diffusion among men was only taking place at a noticeable level in the two cohesive villages with ton and competent dynamic AVBs. In the third cohesive/high performer village in this study, there was built-up frustration among many non-CG members because they could see the impact of the new themes but didn't feel invited to participate; this discouraged diffusion and may have hurt village cohesion overall. The CGs encountered during this study have very little turnover, even though T&V is based on the theory that contact group members change as topics interest them, this doesn't appear to translate well within Malian society. Because there are so few opportunities for new knowledge within most villages, the contact group becomes a permanent, and often stagnant, structure.

The need for the AVB’s permission to diffuse, and the need to feel directly solicited for participation and the lack of CG member turnover are aspects of communication and information transfer that are not considered in T&V nor in most development projects, and reflect specific ideas about information exchange within Malian society. This could not be known without paying attention to the issue of information transfer, which appears to be surprisingly lacking in a program based upon extension.

**Literacy and Trust**

In contrast, the presence of literacy programs funded by the PNVA and other development projects seems to promote trust and development. It also represents a notable difference between cohesive/high performance villages, 76% of those interviewed reported the presence of a literacy program, and fractured/low performance villages (22%). The presence of newly literate people within the village is a testimony to the impact of these programs. 22% of those interviewed in high performance villages spoke of being aware of the presence of newly literate in the village, compared to only 7% in low performance villages. Literacy relates to trust in three ways: participants spoke of increased self-confidence or “self-trust” and the role that played in encouraging them to try new ideas and techniques. Secondly, the role of the PNVA in such a popular activity with a visible impact on the populace increased trust in agricultural extension activities. Finally and perhaps most important is the synergy of literacy with other development activities, including agriculture extension. The way literacy reinforces other programs was commented upon in Tantoudji by a male CG member,

“I am a true product of the PNVA literacy program. I have never attended even one day of formal schooling but today I manage the paperwork for our village bank.”

This finding was echoed in Krishna and Uphoff’s study concerning social capital in
Women’s Relationships and Communication as an Unrecognized Institution

Women participated in activities of the agricultural extension system in four out of the six villages visited, but in only two of these villages was there any real attempt to collaborate with women and respond to their needs. Yet women appeared to be the only consistent information and technology diffusers. They also play a key role in tapping into and generating more social capital. Women’s groups emphasized the importance of increased solidarity when asked to name the strong and weak points of contact group functioning. In the most contentious village visited, Kassama, women appeared to be outside of the traditional power struggle. They were able to maintain their working and social relationships with each other in a village literally and socially divided by a road. Even in the midst of warring factions, women still spent time together in common work areas, such as the water source and the marsh that provided gardening sites for the community. Kassama’s pro-active agent built trust with women through his respectful behavior and his willingness to address their specific agricultural concerns. Because their gardening plots are all side by side, diffusion of new information is facilitated although the women are not formally organized. In several other villages, the men gave credit for several development project successes to the unity of the women’s traditional ton. If harnessed, this untapped resource could enhance the effectiveness of the PNVA and strengthen the villages in which it works.

Although the social capital already existent in women’s relationships is well known, documented, and easily channeled into agricultural and other activities, it is severely underutilized and seemingly incidental to the PNVA’s approach. Agents working with women’s groups are doing so with little encouragement or training. But if the return on working with women is so great, why isn’t the PNVA doing more of it? The answer to this question has many layers. While all levels of management at the PNVA and the World Bank assured the research team that they understood the inherent possibilities of working with women’s groups, they consistently advanced cultural constraints as the reason for their lack of initiative. Yet only 6% of those interviewed opposed women participating in agriculture extension. The only prerequisite appears to be the “correct,” “serious” and “respectful” behavior of the AVB. These code words were repeatedly used to express the importance of a non-sexual, non-predatory attitude on the part of the agent. This sensibility and the responsibility of each agent to behave in an appropriate manner should be clearly acknowledged by the PNVA, although it did not appear to be a problem in any of the six villages that we visited.

Certain of the PNVA policies seem to discourage AVBs from working with women. For example, in Soké, a women’s group with 200 members works on a four-hectare

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growing site with no technical assistance from the extension agent. When asked to explain this neglect, the agent responded that he was told by his supervisor to work with only one women’s contact group (out of 24) in his sector and he is already doing so. Perhaps even more alarming, some of the PNVA techniques are increasing the hardships of women’s work. A very popular technical theme is that of composting. Millet stalks are gathered after the harvest and layered into large compost pits, thus taking away an important source of fire material for women and greatly increasing the time and distance required to gather adequate firewood. No compensating technologies, such as improved cookstoves that require less firewood, have been introduced.

Another problem is the lack of awareness of women’s activities and how they differ in each village context. This leads to an inability to see or look for any alternatives. Gardening is the only activity (technical theme) encouraged for women even when they are involved in other activities or where gardening is environmentally unfeasible. In two of the villages visited, the AVB had created gardening CGs even though there was no available water source. The women interviewed voiced frustration and disappointment that they had organized themselves only to have the AVB suggest inappropriate themes. What was even more striking to the research team in the two aforementioned villages was that women were heavily involved in intensive animal husbandry. Significant opportunities for improvement in this area existed but no encouragement was provided by the extension program.

B. Communication and Relationship between the Field Extension Worker (AVB) and Contact Group Members

Extension agents were judged as serious, available and patient 80% of the time by high performers but only 47% of the time by low performers. As might be expected, the perception of the agent’s capability (i.e., technical trustworthiness) correlates with the technical performance within the village. Another striking difference between high and low performers was how the villages perceived the pertinence of technical themes. In the three high performance villages, 67% of contact group members mentioned the pertinence of the technical messages, compared to only 20% of contact group members in low performance villages. It appears that if the technical themes are not pertinent, i.e. responding to farmer-perceived needs, a loss of trust ensues, making it more difficult for the agent to succeed with later activities.

Unfortunately, the AVB does not always control the pertinence of technical themes being taught to the CG. In each village, the PNVA (the AVB, his supervisor and the regional director) holds a yearly diagnostic meeting, inviting the entire community, although often only the CG members attend. Much time is spent eliciting the agricultural problems confronting farmers and their priorities for the coming year. This information is then centralized at a regional level. Decisions for future technical themes are made by regional authorities based upon how many villages have the same problem and the existence of a technical solution from the research station, i.e. no effort is made to incorporate farmer knowledge or techniques in subject matters not addressed by researchers. The AVB is then informed of his technical package for the coming year. The six AVB that were interviewed all expressed frustration with this system, acknowledging that some proposed technical
themes were of little interest to the communities in which they work. Trust is betrayed at two levels during this process, first, the community feels that the effort to understand their problems was somehow insincere, and second, the AVB feels let down by his organization.

In high performance villages, 87% of contact group members reported that the AVBs respected appointments in the village in contrast to 53% in low performance villages. Keeping one’s word (and, by extension, appointments) is extremely important within Malian society. The serious and conscientious behavior of an agent can be an important factor determining village performance and in divisive villages it can be pivotal. The weight assigned to keeping appointments was revealed in June 1998, just before this study began. The IDA loan financing agricultural extension terminated and while a new loan was being negotiated, the PNVA was operating at a minimum level in the regions. In practical terms, this meant that the AVB were working with a reduced salary and a lower gasoline allowance for their motorcycles. As a result, they were being allowed to make fewer village visits than the recommended bi-monthly visits. The AVBs themselves were also receiving fewer supervision visits. While such a decision makes fiscal and managerial sense, the impact on trust was not considered, i.e., many villagers perceived the extension agent as less trustworthy because of the slowing of the visit cycle and the AVB perceived their employer as less trustworthy because of the lack of information regarding the changes.
IV. CONCLUSIONS AND RECOMMENDATIONS

This study began with hypotheses that centered on the importance of factors imported to a local scene by extension projects, specifically via the contact groups and extension agents. After extensive qualitative inquiry, it became clear that while these factors were significant, the most important single factor determining the success of any external intervention was the degree of social cohesion already existing in a particular community. The predisposition of a community’s residents to attend association meetings, to gather together in places of worship, to build and maintain public infrastructure, is what creates the fertile ground for external inputs, such as agricultural extension agents and contact groups, to take root. The four major findings of this study emphasize the predominant importance of the pre-existing social fabric. Each finding is presented below and followed with specific recommendations:

- Social cohesion, which is internal to the community, is the primary pre-condition for development. External agents, or projects, should understand the existing fabric of the village before beginning to intervene. If the village has both social cohesion and a qualified, dynamic external agent, there is significant success in agriculture and other development endeavors. In that situation, the presence of several development projects can create a synergistic effect, resulting in new planning and management capacities.

  1. Development agencies should carry out work following the lines of the beneficiary assessment approach to reveal the kind and degree of social cohesion upon which any sustainable development effort will be built.

  2. Agents must be observers as well as actors within their communities. Socio-cultural training should be included at all levels, including tools such as mapping, participant observation and conversational interviewing.

  3. Social cohesion, while difficult to engineer, can be enhanced by community organization and local institution building, as well as literacy programs, public health, and other basic development assistance that can increase the capacity for mutually reinforcing social interaction.

- Women and their associations are a vital and often overlooked source of social cohesion, representing latent social capital with great potential for mobilization and development in most villages. Where this potential of women’s associations (formal or informal) is recognized and built upon, development is more likely to become a reality.

  1. Women’s participation depends greatly on the external agent’s comportment and his willingness to work with women. Development institutions need to encourage and train agents in both these areas.

  2. The amount an agent works with women can be affected positively or negatively by his supervisor's attitude and the quality of the diagnostics conducted.
• Trust between an external agent, such as an agricultural extension worker, and the community is important — as is the internal trust which underlies community cohesion. However, it is also important that trust be established and reinforced between the agent and the central government agency for which he or she works. In the absence of such trust, the agent becomes demoralized and less effective in communicating with the target population. Low trust between the government worker and the national organization can thus reduce trust between this worker and the population that he serves.

1. Direct supervision of external agent work, both the technical and socio-cultural aspects, is crucial and should be emphasized.

2. The internal organizational structure of the PNVA does not appear to reward hard work or results. Many agents felt betrayed by their employer due to the political nature of promotions, cuts in salary, and lack of communication about changes in funding. A clear path for career development needs to be established.

• The qualitative research tool known as Beneficiary Assessment proved to be particularly well adapted to the investigation of social capital, as it is concerned with the density of people’s relationships with one another and important institutions. This inductive approach allowed the team to identify important factors as they presented themselves and adapt the design accordingly.

1. To further our knowledge of this area, continued use of this tool is highly recommended.

This study was not intended or designed to come up with definitive findings regarding social capital. Rather, its aim was to gain a grounded and exploratory understanding of the nature of one key ingredient of social capital, trust, as a determinant of success in one important rural development intervention, agricultural extension. Social cohesion was found by the researchers engaged in this study in rural Mali to create the conditions in which an effective external agent can induce change. Social cohesion can be roughly translated as social capital. This social capital is present in communities for historical and cultural factors that are not subject to the control of external development agencies. Social capital, here expressed as social cohesion, may and should, however, be the topic of serious and in-depth inquiry by development agencies so that it may be enhanced and built upon in the most effective ways possible to allow for people to create their own sustainable development.
Annex 1: Village Interview Guide

Interviewer: 
Date: 
Village: Region:

Interviewee: 
Sex: (M) _____ (F) _____
Working with the extension agent (AVB): yes _____ no _____
If yes, method of extension:
a) Contact Group _____, membership (in numbers): (M) _____ (F) _____
b) Association _____, membership (in numbers) (M) _____ (F) _____, working with a specialist in village organization? yes _____ no _____
c) Individual family _____, membership (in numbers): (M) _____ (F) _____

I. Relationship with the extension agent (AVB)
a) in his work (keeping appointments, knowledge of technical themes, pertinence, availability, technical support, etc….)

b) in village social life (behavior, attitude, reputation, integration)

II. Relationship with village organization specialist (answer only for associations)
a) in his work (availability, technical support, management training, etc….)

b) in village social life

III. Relationship between women and the AVB (extension possibilities, availability, acceptance of husbands, etc….)

IV. Relationship between the contact group members (or association)
a) formation of the contact group (or association)

b) personal ties between members (friendship, neighbors, type of farming, family…)

c) evaluation of group (strong points and weak points)

V. Relationship between the contact group (or association) and the rest of the village
a) diffusion of technical themes between people working with PNVA and those who are not:

b) motivation for diffusion of technical themes

c) reasons for non-diffusion of technical themes

d) suggestions for improving diffusion

VI. Impact of the contact group (or association) on the rest of the population:

a) impact of extension on the village (agricultural production, revenue, health, literacy…)

b) changes in mentality (receptivity, social cohesion)

VII. Technical themes which inspire or reinforce trust:

a) in agriculture (examples: insecticide treatment for seeds, composting, transplanting in line…)

b) in animal husbandry (examples: improved feed, improved pastures, vaccinations…)

c) in environmental themes (if there are environmental themes)

d) in rural organization (management, marketing…)

VIII. Suggestions for improving the level of trust between the AVB and you:

- between you and the village organization specialist

IX. Observations of the interviewer:
ANNEX 2: VILLAGE RECAPITULATION

   Considered low performer by PNVA direction. Extremely troubled village with almost no
   village level social cohesion. Very talented, patient extension agent.
   Three contact groups, one male (non-functional), one female (using traditional women’s
   working group) and one mixed, male and female.

   High performer and very unified village, even though it has many different ethnic groups.
   Dynamic AVB and the only village with a village organization specialist (also very dynamic).
   Two newly literate men and two newly literate women give weekly classes in reading and
   writing for the community.
   Four contact groups (2 male, 2 female). Female contact groups using women’s traditional
   associations.

   Low performer. Some internal cohesion although it is hampered by severe water shortages
   and ineffective, negligent AVB. Strong traditional groups which have not been used for
   agriculture extension. Huge potential in women’s aviculture that is not being exploited.
   Three contact groups, one male, one female, one mixed. Only one is functional.

   High performer, socially cohesive village (being harmed by PNVA exclusion). AVB of
   average competence but no initiative. Three contact groups, all male. All CG members live
   in one sector of village, that of the village chief.

   Low performer, some tension between sectors of village. Below average extension agent
   who was previously forest inspector. Two contact groups, both male, both barely functional.
   Dynamic youth group not being used for extension. Huge potential in women’s small animal
   husbandry not being exploited.

   Considered high performer. Highly cohesive village with a motivated agent who is
   somewhat constrained by his lack of training in agriculture (his background is in animal
   husbandry). Five contact groups, four male, one female. Women’s group frustrated by lack
   of extension themes.