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Community Aspirations and Cooperation: Prescriptive vs. Descriptive Role Models[*]

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Abstract

This paper examines the hypothesis that cooperation depends on the aspirations that individuals hold for their community welfare and tests whether videos that depict either a successful example of collective action or living conditions in rural areas can shape community aspirations and increase cooperation among rural communities in Zambia. The results of a lab in the field experiment indicate that compared with the no video condition, unconditional contributions are higher in the video that presents village life while the collective action video does not affect cooperation. When both contributors watch the village life video, conditional contributions are also higher compared to the control treatment. This points to the importance of social norms in the evolution of collective action. We find that individual aspirations are significantly negatively related to the unconditional contribution decision, while community aspirations do not correlate with contribution levels.

Keywords: aspiration, cooperation, role model, public good, social norms, development
JEL Codes: C92, D70, D91, O12

1 Introduction

Cooperation among individuals in groups is essential for rural economic development, especially in countries where the state has limited capacity to provide local public goods (Cardenas & Carpenter, 2008). Collective organization at the village level then provides an important substitute (Fafchamps, 2006). Villages characterized with high participation in village organization have been found to have higher incomes per capita compared to villages with low levels of participation (Narayan & Pritchett, 2019). Yet, despite the potential benefits of collective action, there is considerable heterogeneity in the degree of self-organization (Ostrom, 2000). Understanding the factors that facilitate and constrain the evolution of collective action is thus of great importance.

In this paper we propose that collective action depends on the long term goals that individuals set for the community. The long term goals on what the society can become is what we call community aspirations. As discussed in Martini et al. (2020), we consider that community aspirations are multi-dimensional and depend on five main dimensions: political freedom, economic facilities, social opportunities, transparency guarantees, and protective security.

Our hypothesis is that there is an aspiration failure in that individuals lack reference to successful cases of collective action that inspire them to set higher communal goals. Based on this hypothesis, we test whether showing videos that depict living conditions in other communities can foster community aspirations and hence promote cooperation compared with a no video condition. We compare two types of videos. The first video depicts villages in which people have been successful in organizing themselves into village clubs. The characters talk about the positive outcomes of collective action, while the narrator presents information on the advantages of social organization. The second video does not include any messages that highlight the virtue of cooperation. It shows the same villages, but the characters instead talk about their living conditions and therefore, implicitly inform on why cooperation is advantageous. Our aim is to test which type of video is more effective at eliciting cooperation in a public goods game: the one which contains a descriptive and a prescriptive message promoting collective action (collective action video) or the descriptive one (village life video).

Ample empirical evidence demonstrates that individuals are conditional cooperators and contribute more to the public good when they expect others to contribute more (Keser & Winden, 2000; Fischbacher et al., 2001; Kocher et al., 2008). Based on this premise, our hypothesis is that communal aspirations increase cooperation only when there are shared higher community aspirations. To test this hypothesis, we form groups with two participants and allow either one or both members of the group to watch the videos. This allows us to capture whether the videos are only successful in changing contributions if there is common knowledge on having seen the video. We further test the effect of the video on norms of conditional cooperation.

To test our hypotheses, we implemented a lab in the field experiment in which we randomly assigned 358 individuals in eight villages in Zambia into one of four treatment conditions or into

2

a control group and subsequently measured cooperative behavior with a two-person one-shot linear public goods game. Similar to Fischbacher et al. (2001) we used the strategy method to obtain unconditional as well as conditional contribution decisions to the public good. After the experiment we obtained socio-economic information and measures for aspirations and beliefs using the method developed in Martini et al. (2020).

We find that the village life video is effective at facilitating cooperation. Compared to the no video group, unconditional contributions are higher in this treatment. If both players were exposed to the village life video, we find that unconditional contributions are even higher in magnitude and we also find a positive effect on conditional contributions. This points to the importance of social norms in the evolution of collective action. Further, there is a higher proportion of positive conditional cooperators and a higher proportion of positive unconditional contributions in this treatment. While the collective action video was not effective in increasing cooperative behavior, both videos have a positive effect on perceived norms of cooperation. Controlling for beliefs and aspirations, we find that our measure of individual aspirations, but not the measure of community aspirations, is significantly correlated with contribution decisions.

Our paper contributes to the literature on aspirations and poverty (Appadurai, 2004; Ray, 2006; Dalton et al., 2016). While there is extensive research on the role of individual aspirations on educational choices and investment decisions (Pasquier-Doumer & Risso Brandon, 2015; Janzen et al., 2017; Goux et al., 2017; Lybbert & Wydick, 2018; Serneels & Dercon, 2020), there is no evidence on the role of aspirations in collective action. We extend the concept of aspirations to consider that individuals hold long term goals for the community. We propose that community aspirations affect cooperation. Martini et al. (2020) conceptualize community aspirations and propose an empirical measure. In this paper, we investigate the mechanism by which successful examples of collective action, in the form of videos, affect community aspirations and increase cooperation.

Our study experimentally analyzes whether the videos increase conditional cooperation or result in increased levels of unconditional contributions. In order to test the role of common knowledge in the decision to cooperate, we vary the number of participants in the group exposed to the videos. Other studies analyze the role of common knowledge in edutainment interventions with respect to attitudes and behavior related to AIDS/HIV and violence against women (Arias, 2016; Banerjee et al., 2019). We extend that notion given that in the setting of collective action, beliefs on the behavior of other people play a crucial role in cooperation (Fischbacher et al., 2001; La Ferrara, 2016).

This paper also adds to the emerging experimental literature that aims at increasing aspirations through role models in the form of short videos or documentaries. For example, Bernard et al. (2014) randomly invited individuals in Ethiopia to either watch a placebo video or a treatment video that shows individuals who climbed out of poverty by setting up a business or being successful at farming. They find that six months after the screening treated individuals had higher

aspirations, savings, use of credit and investment into education compared to the control group. In another study by Riley (2018) students were randomly shown either a placebo movie or a movie about a Ugandan girl from a poor neighborhood who aimed at becoming a chess master. Treated students in upper secondary school performed better and treated students from lower secondary school had higher math scores compared to untreated, which is driven by students failing math less often. Batista & Seither (2019) combined random screenings of an aspirational video with training on business skills and goal setting among vendors in Mozambique. One year after the intervention they find that treated subjects had higher profits compared to the control group. Participants who additionally received training increased their profits even more. The study by Lubega et al. (2018) finds that HIV-positive women that were exposed to four four-minute role model videos throughout one year were more likely to start a business and increased their income compared to non-treated women. Lastly, Narciso et al. (2018) do not find evidence that role models in videos change behavior among ethnic minorities in Vietnam. Unlike those papers, we consider community role models, and screen examples of successful communities that help to inspire individuals on what the community can achieve by engaging in collective action. Further, we assess how a different framing of the video affects cooperation.

We chose to compare a video that is narrative and explains the advantages of village life to one that is salient on the value of cooperation. The empirical evidence shows that educational entertainment (*edutainment*) – entertainment media that entails educational messages with the intention to bring about desirable outcomes (Singhal & Rogers, 2003) – can increase pro-social behavior (Paluck, 2009; La Ferrara, 2016; Blair et al., 2019). Edutainment has been argued to be successful in changing individual behavior since the viewers show less resistance to narrative content compared to more explicit persuasive formats of communication (Moyer-Gusé, 2008). We test whether explicit appeals for collective action reduce cooperation. Other studies suggest that messages that use prescriptive and descriptive norms together are more successful Cialdini (2003). We test which type of message is more effective in the context of collective action.

2   Experimental Design

The experiment has three stages. In the first stage we randomly select participants to one of two conditions that vary whether the participants are exposed or not to one of two videos as explained in more detail below. Participants in the control treatment started directly in the second stage, where they participated in a two person public goods game (PGG). In the last stage participants completed an individual interview where we collected information on community aspirations and socioeconomic characteristics. Our primary outcomes of interest are contributions to PGG and community aspirations.

2.1 Treatments

Our experiment uses a between subject design to compare behavior in a control condition without video with four treatments that vary (1) the kind of video that the participants see and (2) whether or not the group member watched the same video. Table 1 presents the treatment design with the number of participants per-treatment arm. The rows indicate which type of video was screened in the groups: No video (Control), collective action video (CA) or village life video (V) while the columns indicate whether the partner watched the video.

Table 1: Number of Participants Per Treatment

		The other person saw the video	
		No	Yes
No Video	Control	·	·
	130	·	·
Collective Action Video	·	CA1	CA2
	·	63	48
Village Life Video	·	V1	V2
	·	69	48

Note: The numbers present the experimental observations.

The two videos have the same footage that is taken from a video series produced by the Dimitra Project, a participatory information and communication project from the Food and Agriculture Organization of the United Nations (FAO). The video series show the success of this participatory communication approach that consists of the creation of village clubs, named Dimitra Clubs. We used footage of two videos (*Community Mobilization, Food Security and Nutrition*) that show village clubs in the Democratic Republic of the Congo (DRC). The original videos can be accessed on YouTube.[1] We edited the videos, created a new script and translated the content into the local Zambian language (Tonga).[2] In addition, videos included English subtitles. The videos were synchronized to have a total length of 11 minutes. The footage of both videos is exactly the same. The only difference between the two treatment videos is the spoken content, which we will elaborate in the following.

The collective action video shows four villages in the North-East of the DRC which successfully established village clubs.[3]. These village clubs are people who formed groups with the aim of improving their lives and actively bringing about positive changes in their village. Together they meet regularly to discuss challenges they face, talk about solutions and take measures to implement them. The video demonstrates the positive outcomes that the village club generated. For example, the video shows how the villagers jointly built and maintain a road, till a community field and share goods that they have collectively acquired. The video also illustrates how through the discussion of villagers in the clubs, people introduced new crops, abolished

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[1] https://www.youtube.com/playlist?list=PLzp5NgJ2-dK6OBbZpPuTMn₇wSrclUE0I

[2] The video scripts can be found in the Appendix.

[3] Instead of *Dimitra Club* we used *Village Clubs*, since we wanted to focus on the outcomes of the clubs and not talk about how and under which project they were formed.

food taboos and resolved gender division in tasks. The characters of the video talk about their motivation to engage in the clubs and how they feel that the clubs positively affected their lives; whether it is a higher dietary diversity or increases in households' income. Next to the village club members, the video also portrays a traditional chief and an agricultural inspector who report on increased trust and initiative they have observed since the establishment of the clubs. A narrator guides the viewer through the video, explains what village clubs are and that they increased collective action and thereby social cohesion. However, the narrator does not provide specific information on the steps that are necessary to build a village club and what makes them successful. Thus, as in Bernard et al. (2014), the video provides a *vicarious* experience in which participants were provided a different view on what is possible to achieve in their community by taking actions collectively.

The village life video tells a different story. The narrator and characters talk about life in four villages in the DRC: the villages' location and climate, villagers' source of income, diet and their social activities. The video contains general information about smallholders' livelihoods that was mainly shown in the video (without reference to collective action). The story of the video does not include reference to negative events and thus can be considered to describe an ideal village life.[4] This can be explained by the fact that we used the same video footage of the collective action video that shows successful examples of villages that took part in the FAO Dimitra Project. It can thus be argued that the video also include role model villages without making the reason for their improved living conditions (successful collective action) salient. However, there are some parts that mention collective action activities that could not be rephrased since the pictures tell the story quite clearly.[5] Any effects that we could observe between the collective action and village life video are thus on how explicitly the advantages of collective action are communicated.

2.2 Public Goods Game

In order to measure contribution to a public good we employ a two person one-shot linear public goods game. We form anonymous groups of two persons and give each an endowment of 40 Kwacha (3.1 Euro at the time of the experiment[6]). Individuals make two type of decisions. First, they make an unconditional contribution decision and decide simultaneously how much money they would like to contribute to a group account. The amount deposited in the group account is multiplied by 1.6 and equally shared among group members. Participants could contribute any number multiple of 10 between zero and 40 Kwacha.

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[4]For instance, the video does not mention armed conflict and the resulting displacement that took place the DRC in the last 25 years (World Food Programme, 2020). The villages depicted in the videos are located in Tshopo Province, Northeast of DRC, and not in worst conflict affected provinces.

[5]The narrator mentions that the women of the village Lilanda meet to share goods that they have bought for their households (matresses, pots) which were acquired from a supplier that came to their village. Also the narrator speaks about a meeting of a village, where the villagers discuss their last week's catches and experiences.

[6]The exchange rate at the time of the experiment was around 12.81 Kwacha equivalent to one Euro. 40 Kwacha is a substantial amount of money for people living in rural Zambia. According to estimations of Central Statistical Office (CSO) (2016) the monthly per capita income in the rural area in 2015 was 810 Kwacha.

Second, participants made a conditional contribution decision. We provided them with a contribution table (see Appendix) in which we asked for their contribution for every possible contribution level of the other group member. To make the decision incentive-compatible, we employed the strategy method (Fischbacher et al., 2001) and for one participant in the group the unconditional decision was payment-relevant and for the other the conditional decision. After the experiment, one of the participants was asked to draw a card from a bag that determined for which of the two players the first decision was selected.

The payoff of each player i is the following:

$$\pi_i = 40 - g_i + 0.8 \sum_{j=1}^{2} g_j \tag{1}$$

where g_i is the amount an individual contributes to the public account g_j. The dominant strategy is to contribute nothing to the group account ($g_i=0$), whereas the Pareto-efficient outcome would be that both players contribute all their endowment ($g_i=40$). We elicited beliefs on the contribution level of the other group member and incentivized correct answers by paying five Kwacha when the stated belief was equal to the actual contribution.

Since we asked respondents for their contributions for each level of possible contribution decisions of the other player, we can use their decisions to categorize them into different types of cooperation behavior. Following Fischbacher et al. (2001), we distinguish between six different types. We classify *Free-riding* behaviour as contributing non-positive amounts for all possible contribution levels of the other player. *Unconditional cooperation* is defined as always contributing the same positive amount. Decisions that display a monotonic function with at least one increase and that have a positive Spearman rank correlation that is significant at the one percent level are classified as *Positive Conditional Cooperation*. On the contrary, *Negative Conditional Cooperation* contains decisions that show a negative Spearman rank correlation that is significant at the one percent level and a monotonic decreasing function. *Hump-shaped* contributions are decisions that have monotonically increasing contributions until a maximum and thereafter monotonically decreasing contributions.[7] All other remaining types of contributions are defined as *Other*.

The instructions for the PGG experiment were given in a group and then each participant was asked to come to a research assistant one by one to make his or her decision. If they had questions, each participant could ask the research assistant in private. To make sure they understood the questions, we asked them three control questions. After making their decisions, participants were asked to answer a survey. Only after the participants finished the survey, we paid the money they have earned in the public goods game and the survey fee of 5 Kwacha.

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[7]Since we have only five decisions, we are not able to calculate the Spearman rank correlation after the maximum contribution and hence cannot use this criterion to define hump-shaped behavior.

2.3 Survey

We randomly selected up to twenty participants to complete a survey after the experimental session. The random sampling (instead of surveying all subjects) was done due to time restrictions. The survey included questions on socio-economic information as well as on aspirations and beliefs.

We measure aspirations using an approach similar to Bernard & Taffesse (2014) and Beaman et al. (2012). First we ask respondents for the aspirations or goals they want to achieve collectively and individually in different dimensions in ten years. As discussed in Martini et al. (2020), we propose that community aspirations are goals that increase community well-being and have a public good nature. Following Sen (2001)'s conceptualization of well-being, we consider that community aspirations depend on five dimensions: 1) Political freedom, 2) Economic facilities, 3) Social opportunities, 4) Transparency warranties, and 5) Protective security.

For each dimension we construct indicators that capture the respective dimension at the community level. Table 2, summarizes the measures used to proxy each dimension. Political freedom entails the liberty to express one's opinion and participate in (political) groups (Bollen, 1986). At the community level this dimension can be measured by the degree to which people aspire to meet and have open discussions with their community. Our indicator is the number of times villagers would like to join for a village meeting to deliberate on community issues.

Economic facilities refer to the opportunities that enable the consumption, production and exchange of resources (Sen, 2001). Improvements in income and in the living standard increase the economic facilities that are available. The Multidimensional Poverty Index (MPI) considers households' standard of living at the community level in terms of access to drinking water, sanitation, electricity and adequate housing (Alkire & Santos, 2014). The indicator we use for the dimension economic facilities is the number of households in the community that have good housing defined as houses made of red or burned brick or asbestos and with iron sheet roofs.

Transparency warranties concern the means by which trust is established and maintained between citizens and between citizens and the government. The Index of Economic Freedom, for example, measures the extent of trust with indicators that capture the protection of property rights and the predominance of corruption (Miller et al., 2016). At the community level, trust is maintained with police guards – security guards in the Zambian case – who enforce the laws. We therefore measure this dimension with the number of security guards that an individual aspires to have.

The last dimension, protective security, refers to the institutional support given to individuals in times of need (Sen, 2001). Informal institutions in form of social support networks that provide mutual insurance play a central role at the community level (Dercon, 2005; Platteau, 1997). The indicators we use to measure this dimension is the aspired number of households an

individual would like to get support in case of need and the aspired amount of contributions to the village.

Table 2: Community Aspiration Dimensions

	Community Aspiration Dimensions	Description
1	Political freedom	The number of times a month he/she would like villagers to join for a village meeting
2	Economic facilities	The proportion of households in the village he/she would like to have very good housing conditions
3	Social opportunities	The number of minutes he/she wants students from their village to walk to a primary school
4	Transparency warranties	Number of security guards relative to the population
5	Protective security	The proportion of households he/she would like to get supported in case of need
		Amount they would like each villager to contribute to village projects on average in a year

To make the answers comparable across dimensions we took the following steps: First, we divided the answers to the aspiration questions that entail an assumption on the number of households in the village (questions of dimension 2, 4 and 5) with the participants' estimate on the number of households living in the village in ten years. For dimension 3 *social opportunities*, we inverted the measure so that higher values present higher aspired levels. Second, as Beaman et al. (2012), we standardize each dimension by using the sample mean and standard deviation of the control group. Afterwards we sum up the standardized answer to form the aspiration index. The community aspiration index is thus formalized in the following way:

$$A_s = \sum_d (\frac{a_i^d - \mu_{dc}}{\sigma_{dc}}) \tag{2}$$

where σ_{dc} is the standard deviation and μ_{dc} the sample mean from the control group c for each aspiration question from dimension d.

Similar to Bernard & Taffesse (2014), before asking for their aspired level, we included questions on their current level of each dimension to facilitate finding answers. We use those answers and estimated an index of current social well-being (current index). This index is used in the regression analysis to control for the achieved level.

Further, we asked participants for their expected level, defined as what they believe the community would actually achieve. We constructed a community expectation index following the same approach as with the aspirations above.[8] Besides community aspirations, we collected information on individual aspirations by asking for (1) the size of the plot and (2) the number of cows and goats as well as the (3) the level of education they would like the youngest child in their family to have.

Since the treatment videos could also have an effect on participants' beliefs, we collected survey information on locus of control and village efficacy beliefs. We measured locus of control by asking the following question taken from Bernard et al. (2014): *Please tell me with which of the*

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[8]Bernard & Taffesse (2014) also ask for the maximum and minimum that can be achieved in their neighborhood to make sure that they do not report general wishes. Our pilot revealed that respondents had difficulties in answering these questions. Since our expectation index is significantly correlated with the aspiration index (correlation of 51 percent, significant at the one percent level), we believe that this was not detrimental to our measurement strategy.

two statements you agree more. Statement A: "To be successful, above all one needs to work very hard." Statement B: "To be successful, above all one needs to be lucky." This results in a binary variable that is one when the respondent agrees more with A (internal locus of control) and 0 if he/she agrees more with B (external locus of control). To obtain a measure of village efficacy beliefs, we asked the respondents whether they think people like themselves have influence in making the village a better place to live. We coded the variable with 0 if they answer "no", 1 if they state "yes".

Finally, we also use survey measures to capture participants' level of trust and perceived participation in the village to be able to analyze whether there is a shift in the answers influenced by the provision of other reference points. We measure trust with the question: *Do you think that most people in this village are basically honest and can be trusted?* and coded the variable with 1 if participants strongly disagree, 2 if they slightly disagree, 3 if they slightly agree and 4 if they strongly agree. The variable *Perceived Participation* was coded with 1 if the respondent rates the spirit of participation in the village low, 2 if average and 3 if high.

2.4   Experimental Procedures

Our sample consists of eight villages in Southern Province that were selected from a village list which we obtained from the Zambian Central Statistical Office (CSO) in Lusaka. We randomly selected villages that have more than 100 and less than 300 inhabitants and that are located more than 2.5 km from each other. Several days before we conducted the experiment, we visited the headman to inform him about our study and ask for permission to collect data within his village. With his consent, we asked the village headman to assist us in inviting at least 30 persons per session. We expressed the need to have as many women as men participating in the sessions. Further, participants had to be at least sixteen years old and members of that particular village. In total we have experimental data for 358 and survey data for 242 individuals.

In each of the villages we conducted two sessions: one that started in the morning and one at midday. The procedure was the same for every session. When arriving in the village we introduced ourselves and the project. We read out the general instructions (see Appendix) which informed them about the confidentiality and anonymity of their decisions and answers as well as the possibility to always drop out of the activity. Then our research team asked the participants to draw a card from a bag that would determine their individual ID number and assigned treatment condition.

The pairs in the PGG were anonymous and participants did not receive feedback on the decision of the partner. There was no possibility for the partners to interact. Participants in the control treatment started with the PGG, while participants in the treatment groups first watched the video (village life/collective action). We did not tell the participants that the treatment group will watch a video. However, participants in the control group could infer as the other group stayed at the screening site, while they had to go to another place to start the PGG. When

both participants watched the video, we did two screenings of the video We screened the video on two laptops at a common meeting place of a village.

2.5 Hypotheses

We would like to test the following. First, we are interested in the effect of the videos on cooperation in the PGG. We hypothesize that the two videos change the reference point on what is possible for their community to achieve, resulting in higher aspirations and thus higher contributions to the public good (Bernard et al., 2014).

Our hypothesis is that seeing people cooperating (village life video) or talking positively about cooperation (collective action video), changes the expected level of cooperativeness of their peers by generalizing from the behavior of people in the video to the behavior in their village (Blair et al., 2019).[9] Therefore, we expect that the collective action and village life video increase conditional cooperation. Our first hypothesis is thus the following:

Hypothesis 1: The collective action and village life video lead to higher unconditional and conditional cooperation in the public goods game compared to the control group.

We expect that an individual will increase its contribution to the public good even more, if the other player has also watched the same video, since there is common knowledge. Knowing that the other person has also watched the same video, and also knowing that the other person knows that I know, can facilitate coordination (Arias, 2016). We thus compare decisions V2 and CA2 where two persons in the group are exposed to the treatment videos with the condition in which only one watched the video, V1 and CA1.

Hypothesis 2: Individuals who watched the collective action or village life video and their partner did as well, have higher (positive) unconditional and conditional contributions in the public goods game compared to individuals who saw the video and the partner did not.

Lastly, we believe that the content of the videos – the type of information provided – matters. We thus compare the village life and the collective action videos. Studies reported in Cialdini (2003) have found that communication campaigns that use prescriptive and descriptive norms together are successful in facilitating pro-social behavior. We thus hypothesize that the collective action video, which could be argued to include prescriptive as well as descriptive norms[10], leads to higher contributions to the public good compared to the village life video, which only contains descriptive norms.

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[9]Tankard & Paluck (2016) analyze how a change in perception of behavior of other people (norms) can lead to social change. They argue that perceptions of norms are easier to change with role model interventions than attitudes.

[10]The video shows how people cooperate (descriptive norms) and how they approve the cooperative behavior (prescriptive norm).

Hypothesis 3: The collective action video leads to higher unconditional and conditional contributions in the public goods game compared to the village life video.

2.6 Empirical Strategy

To evaluate the effect of the treatments, we estimate the following model:

$$y_i = \alpha + V_s'\beta + X_i'\gamma + \mu_v + \epsilon_i \tag{3}$$

where y_i is one of the outcome variables: unconditional contribution decision, the community or the individual aspiration index of individual i. V_s' is a vector consisting of four indicators representing the different treatments: *V1* (1) and *V2* (2), *CA1* (3), and *CA2* (4). The base is *Control* (0). X_i' is a vector including the following individual level control variables: gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work per year and knowledge of the FAO. For the outcome *Unconditional contributions* we additionally include the belief in the other player's contribution. ϵ is the random error and μ_v village fixed effects to account for differences in the villages. The coefficient of interest is β.

For the conditional decision we include the possible contribution of the other player, L_i, into our models in equation (2). L_i is the categorical variable *Level* which takes on the values 0, 10, 20, 30 and 40. We run separate regressions for each treatment group (each indicator of the vector V_s) and employ a Wald test to test for differences in the coefficients in each of the treatment equations. The specification is the following:

$$y_{ik} = \beta_0 + X_{ik}'\beta_1 + \beta_2 L_{ik} + \mu_v + \epsilon_i \tag{4}$$

where y_{ik} is the conditional decision of player i in treatment k. X_i' is a vector of individual level controls - the same as in equation (2) above. ϵ is a random error and μ_v village fixed effects. We employ ordinary least squares (OLS) regression for all outcome variables and calculate heteroscedasticity-robust standard errors.

3 Results

3.1 Descriptives

Table 3 reports the mean, standard errors as well as the p-value from a joint orthogonality test of treatment arms (F-test) for the main variables of our experiment. We find that there are only two variables which are significantly different from each other in the five treatment groups: highest grade attained and number of cows owned. We will include these as further controls in our analysis among other controls.

Table 3: Summary Statistics

	(1) Control	(2) V1	(3) V2	(4) CA1	(5) CA2	(6) p-value
Female (1=female, 0=male)	0.505	0.559	0.800	0.533	0.292	0.140
	(0.048)	(0.065)	(0.200)	(0.075)	(0.095)	
Age in years	36.954	36.678	43.200	38.356	40.125	0.740
	(1.381)	(1.679)	(3.367)	(2.508)	(3.539)	
Single	0.119	0.119	0.000	0.156	0.125	0.887
	(0.031)	(0.042)	(0.000)	(0.055)	(0.069)	
Highest grade	7.505	8.407	8.600	6.822	7.792	0.036
	(0.252)	(0.316)	(0.510)	(0.424)	(0.565)	
No. of goats	3.826	3.169	3.000	2.444	4.792	0.493
	(0.655)	(0.454)	(1.265)	(0.679)	(1.273)	
No. of cows	2.358	1.983	4.800	0.756	4.750	0.024
	(0.474)	(0.475)	(2.059)	(0.290)	(2.049)	
Size of plot(s)	2.099	1.900	0.450	1.879	3.527	0.255
	(0.344)	(0.285)	(0.229)	(0.462)	(1.249)	
Children (1=yes, 0=no)	0.807	0.746	1.000	0.778	0.583	0.124
	(0.038)	(0.057)	(0.000)	(0.063)	(0.103)	
Daily use of mobile phone	0.505	0.593	0.800	0.422	0.417	0.238
	(0.048)	(0.065)	(0.200)	(0.074)	(0.103)	
Listen to radio daily	0.688	0.729	0.800	0.600	0.583	0.517
	(0.045)	(0.058)	(0.200)	(0.074)	(0.103)	
Group member (1=yes, 0=no)	0.661	0.729	0.600	0.644	0.625	0.843
	(0.046)	(0.058)	(0.245)	(0.072)	(0.101)	
Participation in village work per year	3.147	2.780	1.400	3.822	1.583	0.233
	(0.489)	(0.375)	(0.748)	(0.600)	(0.288)	
Knows the FAO (1=yes, 0=no)	0.450	0.559	0.600	0.467	0.542	0.660
	(0.048)	(0.065)	(0.245)	(0.075)	(0.104)	
N	109	59	5	45	24	

Note: Mean values are shown. Standard errors in parentheses. Column 6 shows the pvalues from a joint orthogonality test of the treatments.

## 3.2 Treatment Effects on Unconditional Cooperation

First, we are interested in the effect of the two videos on unconditional contribution decisions. Figure 1 shows the fraction of participants in each of the treatment groups who contributed positive amounts to the public good. The highest amount of positive contributors with 89 percent can be found in the V1 treatment. In the control group 75 percent of the subjects have positive contributions. The difference in the proportion of positive contributors between V1 and

control is significant at the five percent level (two-sample test of proportions p-value = 0.029). For treatments V2, CA1 and CA2 the graph bar suggests that the difference in the proportion of positive contributors is not significantly different compared to the control group. Employing a two-sample test of proportions confirms the graphical inspection (p-values $\geq$ 0.168).

Figure 2 shows the mean in unconditional contributions for each treatment group. The bar graph indicates that participants in the V1 treatment make larger contributions to the PGG compared to participants in the other treatments. Whereas participants in the control group on average contributed 14.5 Kwacha, participants in the V1 treatment contributed 20.3 Kwacha. Using a two-sample Wilcoxon rank-sum test we find that the difference is significant at the one percent level (p-value = 0.002). Participants in the CA1 treatment have a mean unconditional contribution of 13.8 Kwacha, which is not significantly different from the contributions in the control group (two-sample Wilcoxon rank-sum test p-value = 0.917). For the treatments V2 and CA2 where the two group members saw the video the bar graph suggest that there are no significant differences in the value contributed compared to the control group. The results of a two-sample Wilcoxon rank-sum test confirm that the difference is insignificant (p-values = 0.198 & 0.263).

Figure 1: Proportion of Positive Contributors in Each Treatment · Figure 2: Mean Unconditional Contributions in Each Treatment
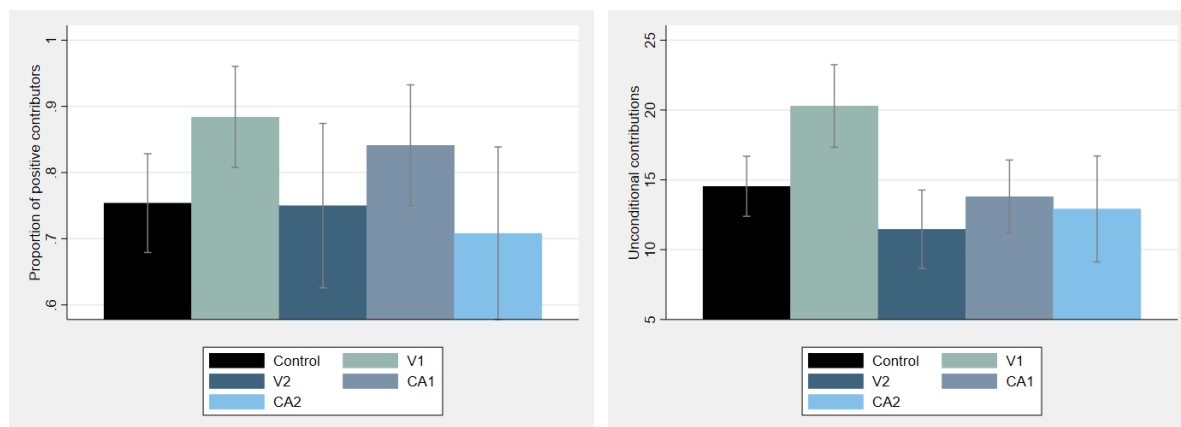
Note: Mean values by treatment and 95% confidence intervals.

We estimate OLS regressions to control for important covariates and increase precision. The results can be found in Table 4. Column 1 reports the results of regressing the treatments on the outcome *Positive unconditional contribution*, which is one if a subject sent a positive amount and zero if not. Column 2 further controls for village fixed effects and additional individual level covariates.[11] In each specification we find that the V1 treatment has a positive effect on the proportion of positive contributors. The likelihood of positive contributors is 16 percentage points higher in the V1 treatment compared to the control. For the other treatment arms, there are no significant differences in the amount of positive contributors compared with the control.

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[11]The number of observations for columns 2 is less than for the previous columns since we do not have survey information for every smallholder who participated in our experiment.

Thus, we find evidence for supporting *Hypothesis 1* for the village life video and participants exposed to the village life video contribute significantly more than participants in the control treatment. For the collective action video, the results do not support *Hypothesis 1*, which suggest that the form of communication plays an important role in promoting cooperation.

Our second hypothesis is that contributions to the public good increase more when both participants watched the video than when only one did so. To test this hypothesis, we compare the estimated coefficients for V1 and V2 treatments using our preferred specification that includes controls. The results of the Wald test indicate that there are no significant differences in the likelihood to contribute to the public good or the value contributed when participants watched the village life video alone compared when they watched it with the partner (p-values = 0.4045 and 0.3383) . Similarly, the comparison of the estimated coefficients for CA1 and CA2 indicate that the estimated coefficient is not significantly different (Wald test p-values = 0.1789 and 0.789). This evidence thus does not support *Hypothesis 2*.

Lastly, the third hypothesis states that the video that combines a prescriptive and a descriptive message (collective action) is more effective at eliciting cooperation than the video that only has a descriptive message (village life). To test this hypothesis, we compare the estimated coefficients for V1 and CA1 and V2 and CA2. The results of the Wald test contradict *Hypothesis 3* in that participants in V2 are significantly more likely to contribute than participants in CA2 (Wald test p-value = 0.0245), and participants in V1 contribute significantly larger amounts (0.0548). This finding suggest that narratives can be more effective at promoting collective action.[12]

Table 4: Treatment Effects on Unconditional Contributions

	(1)	(2)	(3)	(4)
	Positive uncond. contr.	Positive uncond. contr.	Unconditional contribution	Unconditional contribution
V1	0.130**	0.164**	5.751***	5.109**
	(0.054)	(0.070)	(1.860)	(2.113)
V2	-0.004	0.357	-3.080*	12.005*
	(0.074)	(0.223)	(1.796)	(6.834)
CA1	0.087	0.117	-0.729	-0.949
	(0.060)	(0.090)	(1.721)	(2.374)
CA2	-0.046	0.069	-1.622	5.461
	(0.076)	(0.177)	(2.213)	(4.731)
Constant	0.754***	0.779***	14.538***	2.058
	(0.038)	(0.175)	(1.096)	(4.282)
Observations	358	242	358	242
R^2	0.022	0.115	0.053	0.208
Fixed effects	No	Yes	No	Yes
Controls	No	Yes	No	Yes

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include the following control variables: belief of the other player's contribution, gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work (times/year), knows the FAO and village fixed effects.

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[12]Wald test for likelihood to contribute in V1 vs. CA1 p-value = 0.6724 and for value of unconditional contributions between V2 and CA2 p-value = 0.2035.

3.3 Treatment Effects on Conditional Cooperation

Table 5 presents the proportion of participants per types of cooperation behavior for each treatment group. Unlike Fischbacher et al. (2001), we find that a large proportion of participants (48 percent) are classified in the category *Other*. This is similar to Martinsson et al. (2013) who find that in Vietnam 32 percent of the participants showed no standard cooperation types.

We are interested in testing if the treatment videos change the cooperative types. Overall, using a Pearson's χ^2 test we find a statistically significant difference in the proportion of cooperation types across treatments (p-value = 0.034). Comparing the proportion of subjects who show free-riding behavior in each treatment group, we do not find significant differences using Pearson's χ^2 test (p-value = 0.679). For unconditional cooperation and positive conditional cooperation, however, we find that the difference is significant (p-value = 0.019 and 0.008). For the other types, no significant differences are found.

Analyzing each treatment separately, we find that compared with the control group there is a significantly higher share of conditional cooperators in V2 (Proportion test p-value = 0.001) and a lower share of hump-shaped cooperators (Proportion test p-value = 0.081). In addition, for CA2 the share of unconditional positive cooperators is significantly higher than in the control group (Proportion test p-value = 0.004), while the share of negative conditional cooperators is significantly lower compared to C1 (Proportion test p-value 0 = 0.007). This suggests that the treatment videos have an effect on conditional cooperation, but only when there is shared knowledge. Indeed, the fraction of conditional cooperators is also significantly larger in V2 than in V1 (Proportion test p-value= 0.025). The results therefore provide some support for *Hypothesis 2* for the village video, but not for the collective action video.

Contrary to *Hypothesis 3*, we find that the village video is more effective at increasing conditional cooperation than the collective action video.

Table 5: Percentage of Participants Per Cooperation Behaviour in Each Treatment

Types of cooperation behaviour	Control %	V1 %	V2 %	CA1 %	CA2 %	Total %	Pearson's χ^2 p-value
Free-riding	6.9	2.9	6.3	3.2	4.2	5.0	0.679
Unconditional cooperation	4.6	8.7	4.2	3.2	18.8	7.0	0.019
Positive conditional cooperation	15.4	18.8	37.5	15.9	20.8	19.8	0.008
Negative conditional cooperation	6.9	4.3	4.2	3.2	2.1	4.7	0.641
Hump-shaped	19.2	17.4	8.3	25.4	12.5	17.6	0.160
Other	46.9	47.8	39.6	49.2	41.7	45.8	0.817
Total	100	100	100	100	100	100	
N	545	295	25	225	120	1210	
Pearson's χ^2 p-value = 0.034							

16

Next, we perform regression analysis on the outcome variable *Conditional Contributions* and include the variable *Level*, which denotes the possible contribution of the other player. The results are presented in Table 6. We find participants in all treatments, except for treatments V2 and CA2, to contribute significantly non-zero amounts. Further, for all treatments we find that conditional contributions increase significantly with increases in the level of possible contributions by the other player.

To test whether the coefficients are significantly different for participants in each treatment, we use a Wald test. The results can be found in Table 6 below the regression results. Out of the four treatments we only find significant differences in the level of the V2 treatment compared to the control and compared to the V1 treatment. V2-treated participants give on average 0.46 Kwacha for every contribution level of the other player, while untreated subjects contribute on average 0.11 Kwacha. We thus conclude that there is evidence in favor of *Hypothesis 1* for the V2 treatment, while the videos have no significant effect on conditional contributions for the other treatment arms compared with the control.

The results also support *Hypothesis 2* for V2 as conditional contributions are significantly higher compared with V1 where subjects contributed on average 0.13 Kwacha for one Kwacha contributed by the partner. Comparing village life and collective action video, the results suggest that there is no significant difference between those treatment arms in the degree of conditional cooperation neither in terms of changes in the intercept or of the slope. We find no support for *Hypothesis 3*.

Table 6: Treatment Effects on Conditional Contributions

	(1) Control	(2) V1	(3) V2	(4) CA1	(5) CA2
Level	0.108**	0.131**	0.460***	0.162**	0.242***
	(0.044)	(0.054)	(0.137)	(0.062)	(0.082)
Constant	17.369***	18.953***	-6.854	18.941***	16.905
	(4.596)	(6.533)	(19.554)	(6.349)	(10.832)
Observations	545	295	25	225	120
R^2	0.050	0.096	0.589	0.172	0.208
Fixed effects	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes
Level Control - Treat		0.763	0.013**	0.498	0.153
Const. Control - Treat		0.825	0.116	0.838	0.969
Level V1 - V2			0.023**		
Constant V1 - V2			0.105		
Level CA1 - CA2					0.444
Constant CA1 - CA2					0.874
Level V1 - CA1				0.713	
Constant V1 - CA1				0.999	
Level V2 - CA2					0.162
Constant V2 - CA2					0.200

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include the following control variables: gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work (times/year), knows the FAO and village fixed effects.

3.4 Treatment Effects on Aspirations, Expectations and Beliefs

We propose that the videos can help to expand participants cognitive window by displaying successful examples of cooperation. We expect that the videos would therefore result in a change in community aspirations.

In this section we analyze the effect of the collective action and village life video on our measure of aspirations, expectations and beliefs. The results of estimating *Equation 1* for those outcome variables can be found in Table 7. The first and second row report the results of regressing the community aspiration index and the community expectation index on the treatment vector, the current index as well as on further covariates. We find that there is no treatment effect on community aspirations and expectations. For individual aspirations we find that the V2 treatment has a negative effect, while the CA1 treatment has a positive effect on individual expectations.

Concerning our belief measures we do not find evidence that the treatment videos increase locus of control beliefs. We do, however, find that treatments V1 and CA1 have a positive effect on village efficacy. The probability of reporting to have village efficacy belief increases by 13.4 (V1) and by 17.5 (CA1) percentage points. Further, treatments CA1 and CA2 have a positive effect on subjects' perceived participation in the village. Compared to untreated subjects, participants are 42 percentage points more likely to perceive the participation high if

they have seen the collective action video alone and 60 percentage points if they have seen the collective action video and their partner watched it as well. Lastly, we find that all treatments, but V2, have a positive effect on the level of trust participants report to have towards their fellow villagers. If they watched the CA1 (V1) video subjects are 41 (31) percentage points more likely to report a higher level of trust. Participants in the CA2 treatment even report 79 percentage points higher levels of trust compared to the control group.

Table 7: Treatment Effects on Aspirations, Expectations, Beliefs and Trust

	(1) Commun. Aspiratiom	(2) Commun. Expectation	(3) Indiv. Aspiration	(4) Indiv. Expectation	(5) Locus of Control	(6) Village Efficacy	(7) Perc. Particip.	(8) Trust
V1	-0.709	-0.878	0.955	0.098	-0.019	0.134**	-0.001	0.306*
	(0.523)	(0.576)	(0.857)	(0.413)	(0.045)	(0.063)	(0.126)	(0.174)
V2	-0.365	-0.091	-1.685*	-1.721	-0.217	0.099	0.638	0.669
	(1.233)	(1.796)	(0.984)	(1.433)	(0.211)	(0.279)	(0.422)	(0.716)
CA1	-0.553	0.464	-0.017	1.712*	0.071	0.175**	0.414***	0.406*
	(0.396)	(0.796)	(0.844)	(0.888)	(0.044)	(0.069)	(0.134)	(0.218)
CA2	-1.155	0.418	-0.745	-0.243	0.017	0.137	0.601***	0.789*
	(0.971)	(1.046)	(0.824)	(0.856)	(0.089)	(0.169)	(0.224)	(0.433)
Constant	1.782**	-0.017	-1.336	-1.693	0.953***	0.499***	1.888***	2.805***
	(0.872)	(1.374)	(1.572)	(1.228)	(0.093)	(0.132)	(0.237)	(0.393)
Observations	242	242	242	242	242	242	242	242
R^2	0.236	0.303	0.161	0.323	0.113	0.181	0.198	0.222
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include the following control variables: gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work (times/year), knows the FAO and village fixed effects. Columns 1 and 2 additionally control for the current community index and columns 3 and 4 for the current individual index.

4 Mechanism

In this section we analyze whether the positive effect of the V1 and V2 treatment on unconditional contribution decisions to the public good can be explained by a shift in aspirations and/or beliefs. Table 8 reports the results for regressing unconditional contributions on aspirations, expectations and beliefs variables. Columns 9 and 10 include all variables in one model. Column 9 includes community and individual aspirations and column 10 community and individual expectations separately, since aspirations and expectations are strongly correlated. Controlling for the above mentioned variables we find that the treatment effects of the village video treatments remain in all specifications. *Individual Aspiration Index* is the only variable that is (negatively) correlated with unconditional contributions. This suggests that community aspirations and community expectations as well as beliefs and trust do not seem to play a role in participants' unconditional contribution decision, but that individual aspirations can partly explain cooperative preferences.

Table 8: Mechanism: Unconditional Contributions

	Unconditional Contribution									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
V1	5.108**	5.113**	5.554***	5.092**	5.101**	5.076**	5.114**	5.148**	5.528***	5.105**
	(2.117)	(2.122)	(2.076)	(2.124)	(2.124)	(2.112)	(2.124)	(2.122)	(2.106)	(2.165)
V2	12.003*	12.024*	11.220*	12.322*	11.921*	11.983*	12.394*	12.093*	11.640*	12.772*
	(6.849)	(6.869)	(6.777)	(6.811)	(6.968)	(6.852)	(6.868)	(6.810)	(6.902)	(6.967)
CA1	-0.951	-0.834	-0.965	-1.255	-0.922	-0.991	-0.688	-0.896	-0.658	-0.838
	(2.387)	(2.357)	(2.386)	(2.449)	(2.420)	(2.445)	(2.425)	(2.428)	(2.591)	(2.639)
CA2	5.458	5.630	5.104	5.507	5.467	5.427	5.858	5.564	5.614	6.239
	(4.741)	(4.738)	(4.604)	(4.756)	(4.739)	(4.760)	(4.759)	(4.756)	(4.690)	(4.840)
Commun. Aspiration	-0.007								0.010	
	(0.277)								(0.302)	
Commun. Expectation		-0.107								-0.167
		(0.202)								(0.215)
Indiv. Aspiration			-0.471***						-0.488***	
			(0.174)						(0.176)	
Indiv. Expectation				0.183						0.217
				(0.209)						(0.225)
Locus of C.					-0.387				-0.345	-0.367
					(4.671)				(4.634)	(4.729)
V. Efficacy						0.244			0.561	0.210
						(2.011)			(2.090)	(2.105)
Perc. Particip.							-0.644		-0.825	-0.618
							(1.167)		(1.185)	(1.193)
Trust								-0.130	-0.106	-0.127
								(0.802)	(0.847)	(0.840)
Constant	2.071	2.127	1.362	2.454	2.430	1.946	3.184	2.427	3.134	4.331
	(4.358)	(4.274)	(4.349)	(4.355)	(5.984)	(4.349)	(4.740)	(5.144)	(6.909)	(6.985)
Observations	242	242	242	242	242	242	242	242	242	242
R^2	0.208	0.209	0.222	0.210	0.208	0.208	0.209	0.208	0.224	0.213
Fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include the following control variables: belief of the other player's contribution, gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work (times/year), knows the FAO and village fixed effects. Columns 1 and 2 additionally control for the current community index and columns 3 and 4 for the current individual index.

5 Robustness

In the following we perform a robustness check by limiting the analysis to observations who correctly state whether the partner has also watched the video. This leads to a reduced sample of 209 survey observations. The results for the outcomes *Unconditional Contribution* and *Positive Unconditional Contribution* are reported in Appendix Table 9. The results are similar to the ones for the whole sample except that the treatment effects increase in magnitude and the significance of the V1 treatment changes from the five percent to the one percent level.

The regression results for conditional decisions with the reduced sample can be found in Appendix Table 10. Column 1 presents the results for the control, column 2 for treatment V1 and column 3 for treatment CA1. In the other treatments there have not been any false answers. Compared to the results for the whole sample we find that in V1 participants do not follow a strong norm of conditional cooperation as the variable *Level* is not significant in the specification. This suggests that shared knowledge is important to trigger cooperation norms.

6   Discussion

Our results show that the village life video is successful in increasing unconditional contributions and promoting conditional cooperation compared to the control group. This seems to be explained by a change in perceived village self-efficacy and not by changes in community aspirations as we expected. This finding suggest that community aspirations are not easily changeable and that a short term intervention as the one that we implemented in the study is not sufficient to expand the cognitive window of what participants think is possible for their community to achieve. Further work should therefore explore whether longer exposition to positive examples of cooperation can affect cooperation (e.g. using soap operas) and whether those interventions have an effect on alternative measures of cooperation. The results suggest that the treatments increase self-reported level of generalized trust. Future work could explore the effect of the videos on incentivized measures of trust and altruism.

As discussed in Martini et al. (2020), we propose that a larger window of imagination of what the community can achieve could motivate individuals to cooperate. Yet, the window of imagination is only the first step. Thereafter, individuals engage in an evaluation stage where they consider whether their effort would result in higher community welfare. To act pro-socially, individuals need to perceive that others would do the same and that the collective effort would result in improved social welfare. Future work should explore how community aspirations, perceived norms of cooperation and self-efficacy interact in promoting cooperation.

We further find that the collective action video that presented successful examples of cooperation descriptively and prescriptively changed participants' perception of community self-efficacy, participation in their village and increased generalized trust. Yet, this treatment did not promote higher contributions to the public good or increase in conditional cooperation. How can this be explained? In the following we provide some possible reasons.

The village life video includes reference to positive outcomes of collective action, while it does not explicitly stress that the outcomes are attributed to successful cooperation. The village life video is thus descriptive in its content, whereas the collective action video can be considered to be more prescriptive since the collective action benefits are made salient throughout the video. Mentioning this explicitly could have crowded out intrinsic motivation for pro-social behavior. As discussed in Bowles & Polanía-Reyes (2012), participants who are confronted with specific incentives – prescriptive messages in videos in our case – could feel constrained in their autonomy by feeling they have to comply to the cooperative behavior mentioned in the videos. Moyer-Gusé (2008) proposes that persuasive messages can create the feeling of arousal that occurs when individuals perceive that their freedom is being threatened. This can lead to reactance, a motivation to reassert one's freedom in response to attempted influence (J. W. Brehm, 1966; S. S. Brehm & Brehm, 1981). This hypothesis could be tested in future work by including measures of perceived intention to change behavior after the video.

It can also be the case that the information in the video is not new to the participants. Perhaps because they value cooperation already or because other actors have stressed the importance and benefits of cooperation and the participant can recall that information. It has been found that awareness raising of a charity decreases charitable giving among people who already know about the cause (Smith & Schwarz, 2012). The information provided in the videos could also run against their own perception about the success of collective action endeavours (Tankard & Paluck, 2016). We do not have baseline data on how participants value cooperation. Yet, we know that 66 percent of our subjects are members of some type of group (savings group, agricultural cooperative, health group, etc.). This could suggest that there is already awareness on the benefits (and costs) of collective action and thus providing them information about the benefits of social organization does not change behaviour. However, these conjectures cannot explain the success of the village life video.

Another reason why the collective action video did not increase unconditional contributions could lie in the fact that they do not consider the villages part of their reference group (Tankard & Paluck, 2016). Aspirations are determined by the observation of *similar* individuals (Ray, 2006). In this case it could be that the screened villagers did not enter their cognitive window, because their behavior did not seem relevant to them. Participants could consider the level of cooperation in the video too far away compared to the experiences they have made. The answers that are stated most often by participants for why they think the characters are not similar to them is that they are more cooperative and more hard-working, which supports this hypothesis. However, 63 percent of the participants in the collective action video treatment state that the characters in the video are similar to them. Similarity can be defined on various dimensions like language, culture, income-generating activities, as well as village collaboration. This could reflect that for the majority of the dimensions they are perceived similar, for some not - which could be the dimension of social organization. In order to shed light into this question, future research could collect baseline data on participants' knowledge about and perceived benefits of collective action and their rating of characters' success in terms of village level organization.

One potential limitation of our experimental design is that in the conditions where only one participant of the group watched the video (V1 and CA1) the partner took the decision on contributions to the PGG earlier. While we treat those participants as our control group, having to take the decision at a different moment could have affected their contribution decisions. For example, they could have felt anxious about waiting for a more entertaining activity or could have felt unfairly treated. While we cannot be sure if that is the case, we recommend that this group is allocated to watch a placebo video.

The measure of community aspirations that we use in the study is new, therefore more work is required to validate the understanding of the questions and the reliability of the questions to capture aspirations for communal well-being. We suggest that before implementing this measure, the researchers do focus sessions in the villages to identify which are the main dimension of community welfare that participants care for and how they interpret success in those indicators.

7   Conclusion

In this paper we investigate the assumption that for cooperation to be successful, individuals need to have goals for the community – so-called community aspirations. Poor communities might lack examples of successful collective action from which they could draw inspiration to set higher goals. We experimentally test whether two videos can affect the level of aspirations and increase collective action among individuals in rural Zambia. In one video we show villages that experienced positive outcomes through collective action, while in the other video we portray the same villages without the reference that their welfare has improved due to social organization. We randomly assigned individuals to either watch the collective action, the village life or no video and then measured cooperation with a two-person one-shot linear public goods game and assessed their aspirations and beliefs with survey questions.

We find that in the village life video treatment– and not in the collective action video treatment – unconditional contributions are higher compared to the no video condition. Also, there are more positive conditional cooperators and less humpshaped cooperators. Reciprocity is highest and the treatment effect on unconditional contribution increases when both players saw the village life video. This points to the importance of common knowledge in the decision to co-operate. Further, both videos have a positive effect on perceived norms of cooperation. Yet, the village life video has a negative effect on reported individual aspirations. We do not find that community aspirations explain higher contributions, but find that individual aspirations are negatively related to unconditional contributions.

The results are partly unexpected, since we have hypothesized that the collective action video would lead to higher cooperation compared to the village life video. We provide some possible explanations, which are (1) crowding out of intrinsic motivation due to the prescriptive content, (2) role models' level of cooperation is too far away from that of the participants' village, and (3) role model video does not provide new information. To be able to answer these conjectures reliably, future research should incorporate baseline data on perceived benefits of cooperation and on subjects' rating of the characters level of cooperation. Further, it would be interesting to see whether the results replicate using role models from the same context and who have only slightly better (perceived) levels of cooperation.

Since we find that providing role models in terms of better living conditions in videos is success-ful in increasing contributions to the public good, this could lead to the policy recommendation of increasing visibility of success cases of collective action by presenting more information on the impacts that it has on community welfare rather than by explicitly promoting self-organization. Our study provides evidence on the effects of a one-time screening of videos with customized normative and descriptive content and not for television exposure in general.

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8 Appendix

8.1 Robustness Tables

Table 9: Treatment Effects on Unconditional and Positive Unconditional Decisions Reduced Sample

	(1) Unconditional contr.	(2) Unconditional contr.	(3) Positive uncond. contr.	(4) Positive uncond. contr.
V1	6.646***	6.661***	0.154***	0.204***
	(2.032)	(2.387)	(0.057)	(0.075)
V2	-2.839	13.387*	-0.002	0.402*
	(1.821)	(6.948)	(0.074)	(0.232)
CA1	-0.147	0.323	0.097	0.145
	(1.868)	(2.501)	(0.063)	(0.096)
CA2	-1.381	6.997	-0.044	0.105
	(2.233)	(4.748)	(0.077)	(0.182)
Constant	14.298***	2.012	0.752***	0.789***
	(1.135)	(4.912)	(0.040)	(0.194)
Observations	323	209	323	209
R^2	0.057	0.210	0.027	0.132
Fixed effects	No	Yes	No	Yes
Controls	No	Yes	No	Yes

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include the following control variables: belief of the other player's contribution, gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work (times/year), knows the FAO and village fixed effects.

Table 10: Treatment Effects on Conditional Contributions Reduced Sample

	(1) Control Conditional decisions	(2) V1 Conditional decisions	(3) C1 Conditional decisions
Level	0.114**	0.102	0.131*
	(0.046)	(0.063)	(0.070)
Constant	18.872***	20.088**	39.701***
	(3.952)	(9.195)	(12.251)
Observations	500	225	175
R^2	0.056	0.079	0.247
Fixed effects	Yes	Yes	Yes
Controls	Yes	Yes	Yes
P: Level Control - Treatment		0.884	0.843
P: Constant Control - Treatment		0.899	0.089*
P: Level V1 - CA1			0.766
P: Constant V1 - CA1			0.178

Notes: Standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Regressions include the following control variables: gender, age, relationship status, highest grade attained, number of cows owned, size of the plot in hectares, children 6 to 18 in the family, daily mobile phone usage, daily listening to the radio, group membership, participation in village work (times/year), knows the FAO and village fixed effects.

8.2 Instructions

General Instructions

Good morning/afternoon. Thank you for taking the time to come to this study today.

We are a group of researchers from the University of Göttingen and the University of Kiel in Germany and from Zambia. We are conducting a study on socio-economic conditions in Zambia. In this study, we will ask you to make decisions and to complete a survey. You will have the opportunity to earn money. The amount you earn will depend on your decisions. The activities of this study are financed by the German Research Foundation. Before we start, we would like to tell you some important points.

Today's activities may take three hours. Before we begin we would like to make some general comments about what we are doing here today and explain the rules that we must follow.

Participation in this study is completely voluntary. If at any time you feel not comfortable, you are free to leave whether the activities have begun or not. In this case you will not receive the payment, though.

All decisions will be made in private. That means no one of the other participants will know how you have decided and what answers you have given. You will also receive the money in private at the end of the activities. Nobody but the researchers will know how much money you have received. The information we collect will be saved in an anonymized manner. We will treat the information confidentially.

You might have heard about these types of activities before. However, what we will do can be different so please pay attention to what I am going to explain you.

Please do not ask questions or talk while you are here in the group. This is very important. Please be sure that you follow this rule, because it is possible for one person to spoil the activities for everyone. Do not worry if you do not completely understand the rules as we go through them here in the group. Each of you will have a chance to ask questions in private to be sure that you understand how the activities work.

Before we explain the activities, we divide you into two groups, the Circle Group and the Triangle Group. For this purpose, each of you will draw a card from the bag. The symbol of your card will determine your group and the number is your ID number. The people who are in the Triangle Group will leave to another place, where they cannot see or hear the people in the Circle Group. In the meantime the Circle Group will stay at this place.

In two hours we will do a similar activity with another group. Please do not interact with

them, as this can spoil our study.

We will first describe the basic decision situation in this activity. Then we will provide you with examples.

At the beginning of the activity, we will form groups with two people. The group will consist of one person from the Triangle Group and one person from the Circle Group. Neither you, nor the other person will know who is in the group.

Both You and the Other Person will receive 40 Kwacha each [*point to Poster1*]. The task for each person is the same: Both, You and the Other Person have to decide independently how much money you want to put in the group account.

How are your earnings calculated?

Your income in this activity will be the sum of the amount you earn in the private and in the group account.

Your income from the Private Account [*point to private account on Poster1*]

Everything that you leave in the private account will be yours. Nobody else will benefit from the money you leave in the private account. If you have 10 Kwacha in the private account, you receive 10 Kwacha from the private account.

Your income from the Group Account [*point to private account on Poster1*]

The amount of money that You and the Other Person put in the group account will be summed up [*point to arrows "passed"*]. This value will be multiplied by 1.6 [*point to 1.6 in group account*] and then will be equally divided among the two persons in the group [*point to "group account divided by 2*]. Therefore each one will receive 0.8 of the total value in the group account.

Both you and the Other Person will get the same money from the group account, independent of how much each of you has put in this account. Your income from the group account will thus not only consist in what you put yourself into the group account, but you will also earn money from what the Other Person has put into the group account. Also the Other Person will earn money from what you have put into the group account. The income from the group account will correspond to [*group account and income from group account on Poster 1*]:

*Individual income from the group account = [1.6 * (amount You passed + Amount the Other Person passed)] /2*

Your Total Income

In the end, the total income of each person will be the sum of the income of the private account and the income of the group account [*point to the box next to total income*]:

Total individual income = Income from the private account + Income from the group account

We will provide you with some examples to show you how the total income is calculated.

Example 1[Poster 1, example]:

In this example, assume you keep 10 Kwacha in the private account and put 30 Kwacha in the group account. The Other Person puts 10 Kwacha in the group account and keeps 30 Kwacha in the private account. You now have 10 Kwacha in the private account. The Other Person now has 30 Kwacha in the private account. The total amount of money in the group account amounts to 40 Kwacha [*point to "total deposits group account"*].

In the next step, the money that is in the group account will be multiplied by 1.6. In our example: 40 Kwacha*1.6 = 64 Kwacha. The total amount in the group account is 64 Kwacha [*point to "value of the group account"*]. Next, independently of what each person has put in the group account, the total amount will be equally divided among the two persons. In the example we have, the total amount was 64 Kwacha. Divided by 2 this makes 32 Kwacha. [*Point to each cell in the row "Individual income from the group account"*] So you and the Other Person will both get 32 Kwacha from the group account.

The total income is the sum of the income from the private account and the group account [*Point to the respective cells of individual income of the private and the group account*]. Your total income is 10 Kwacha from the private account plus 32 Kwacha from the group account, equal to 42 Kwacha. The Income for the Other Person is 30 Kwacha from the private account plus 32 Kwacha from the group account equal to 62 Kwacha [*point to the respective cells*].

On this poster [*Show Poster2*] we have already calculated the total income for you and the Other Person for every possible value put in the group account. Let me show you how to read this: On this poster, you can see "You" and five arrows with different numbers. This symbolizes the possible values you can put in the group account: Either 0 Kwacha, 10 Kwacha, 20 Kwacha, 30 Kwacha or 40 Kwacha [*point to the arrows*]. In the boxes you see the possible values that the Other Person can put, also shown by arrows with numbers. The Other Person can also put either 0 Kwacha, 10 Kwacha, 20 Kwacha, 30 Kwacha or 40 Kwacha in the group account. The numbers display the possible income you and the Other Person get [*point to the payoffs*]. The first numbers indicate your income for every possible value of the Other Person [*show in every box*]. And the second numbers indicate the income of the Other Person, given the value you put[*show in every box*].

In the example above, where "You" put 30 Kwacha and the "Other Person" 10 Kwacha, you can find the payoffs for both You and other Other Person here [*show arrows of 30 Kwacha, 10 Kwacha and then the payoff of each person*]: You put 30 Kwacha and the Other Person puts 10 Kwacha. You will earn a total income of 42 Kwacha and the Other Person will have a total income of 62 Kwacha.

Example 2

Let us look at other examples. Let us assume, you decide to put 0 Kwacha [*point to arrows with the 0*] and the Other Person also decides to put 0 Kwacha in the group account [*point to arrows with the 0*]. How much is your total income? Your total income will be [*point to the payoffs of "You" at 40*] 40 Kwacha and that of the Other Person also 40 Kwacha [*point to the payoff of "Other" at 40*].

Example 3

Assume you instead decide to put 20 Kwacha [*point to arrows with the 20/20*] and the Other Person also decides to put 20 Kwacha, you will both receive 52 Kwacha [*point to the payoffs of "You" and "Other" at 20/20*].

Example 4

Let us assume, you put 40 Kwacha and the Other Person also puts 40 Kwacha, you and the Other Person both will earn 64 Kwacha [*point to the payoffs of "You" and "Other" at 40/40*].

The total income increases for both of you the more You and Other Person put in the group account. Let us look how your total income behaves if one person puts more than the other.

Example 5

Assume you put 0 Kwacha in the group account and the Other Person puts 40 Kwacha [*show the respective arrows*]. Then you will receive 72 Kwacha and the Other Person 32 Kwacha [*point to the payoffs of each participant*].

What this shows is that if the Other Person puts more to the group account than you, he or she will have a lower total income in the end and you will benefit when the Other Person puts all the 40 Kwachas in the group account.

Example 6

This holds for the other direction as well. Assume that you put all your endowment of 40 Kwacha in the group account and that the Other Person puts 0 Kwacha. Then the Poster will tell us that [*point to the arrows and the payoffs*] you will earn 32 Kwacha and the Other Person will have a total income of 72 Kwacha.

We will ask you later to decide for yourself how much of the 40 Kwacha you want to put in the group account. How much you put in the group account can be chosen freely, as long as it is in ten Kwacha units. Every amount that is not put into the group account will remain in the private account.

Elicitation of decisions

After having explained the general set-up of the decision-making situation and the resulting income, we will now explain how you will make your decisions in detail. We will call you one by one to a place far away enough so that you can give your decision in private. Nobody of you will know and get to know the identity of the person you are in a group with and you will also

not know how he or she decided.

Once we call your ID number, we will ask you to come to our colleague. We will then ask you two types of decisions. In each decision, you have to choose how much of the 40 Kwacha you want to put in the group account. We ask you to mark your decision on the decision sheet that our research assistant will give to you. This decision sheet will look like the Poster we have showed you before [*point to Poster2*]. Here you will mark one of the possible value by making a cross at the respective box [*show how to mark it with a non-permanent marker*].

We have already described the first decision above. In the second type of decision, we will ask you to indicate how much money you want to put in the group account for every possible decision of the person in your group. Let us explain this in more detail with the following picture [*show Poster3*]. Here we provide you with a table that shows each possible value of the Other Person to the group account [*point to the first column*].

This time you will base your decision on every possible decision of the Other Person: We would like to know how much you want to put in the group account if the Other Person has put 0 Kwacha in the group account [*point to cell next to 0 Kwacha and pretend to write a number*]. We also want to know how much you will put in the group account if the other person puts in the group account 10 Kwacha [*point to cell next to 10 Kwacha and pretend to write a number*], 20 Kwacha [*point to cell next to 20 Kwacha and mark it with an x*], 30 Kwacha [*point to cell next to 30 Kwacha and pretend to write a number*] or 40 Kwacha [*point to cell next to 40 Kwacha and pretend to write a number*] to the group account. Thus this time we would like to have five answers from you: one for each possible value that the Other Person could put in the group account. You can condition the value you put in the group account on the value the other group member puts. Please fill each cell in this table.

After you have given an answer to each possible decision of the Other Person, we will ask you about your belief in how much the Other Person from your group has put in the group account [*point to the part on the Poster3*]. Please write down how much you think the Other Person has actually put in the account. If your belief is correct, you will receive 5 Kwacha more.

Each one of you made two decisions. First you selected one of the arrows and then you wrote a number in the table. For one participant in the group the first decision will determine earnings and for the other the second decision.

To determine which decision counts for whom, we will select either a Triangle or a Circle by asking one of you to draw a card of a bag. If this person selects a Triangle, the first decision will count for participants in the Group Triangle and in this case, the second decision will count for the Circle Group.

If the person selects a Circle, instead, then it will be the opposite, in this case for those in

the Circle Group the first decision will count and for the Triangle Group the second decision. When you make the decisions both can count for the final payment. Therefore you will have to think carefully about each type of decision.

After you have written down your belief, you will have a break. Afterwards, we will ask you to complete a survey.

Control Questions

Please ask the following questions to each respondent and mark the answer with the respective ID on a piece of paper:

1. How much money can you put in the group account? *0,10,20,30,40 Kwacha*

2. What is your total income if You put 30 Kwacha in the group account and the Other Person puts 20 Kwacha? *50 Kwacha*

3. What is the Other Person's total income? *60 Kwacha*

Figure 3: Poster 1
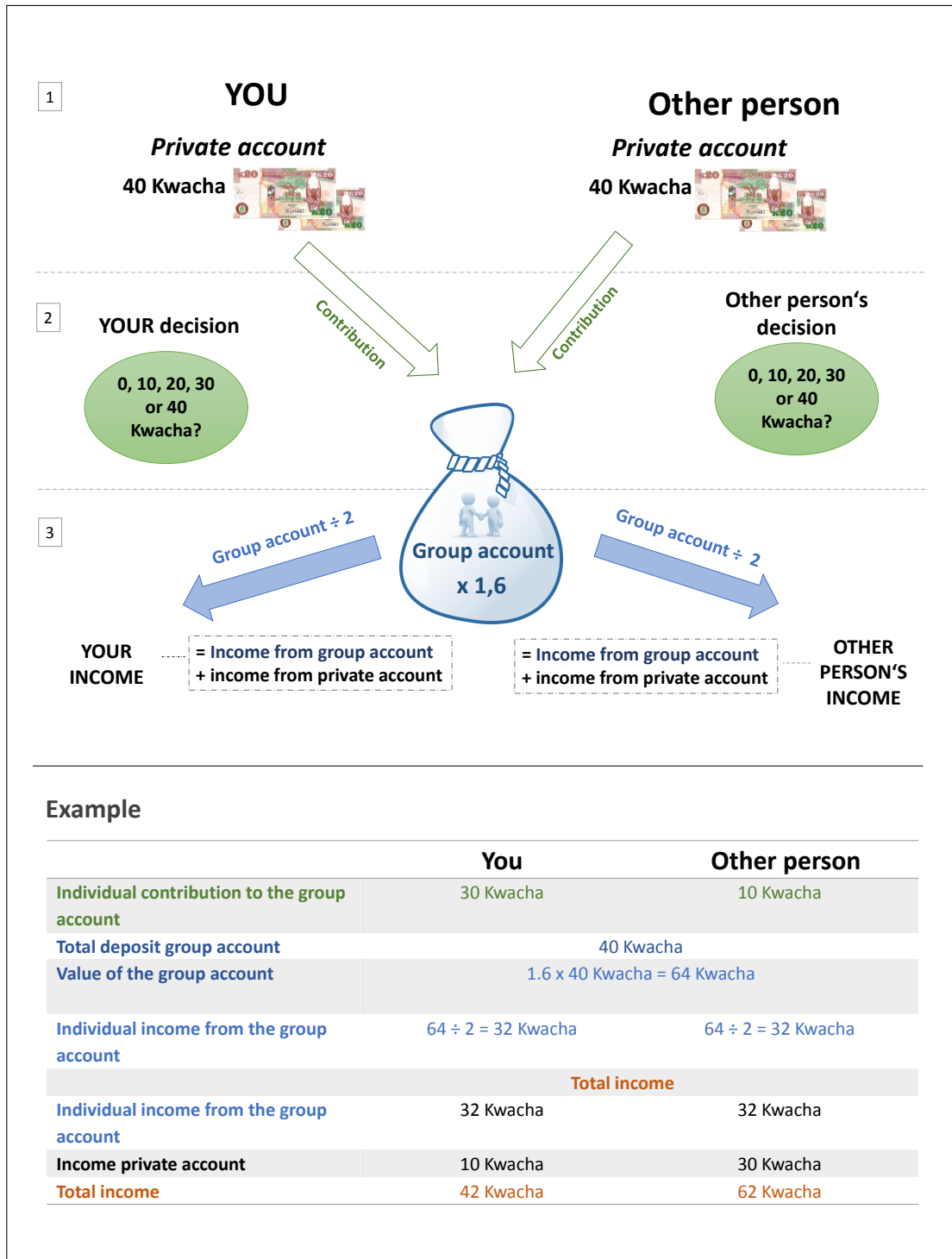
Figure 4: Poster 2
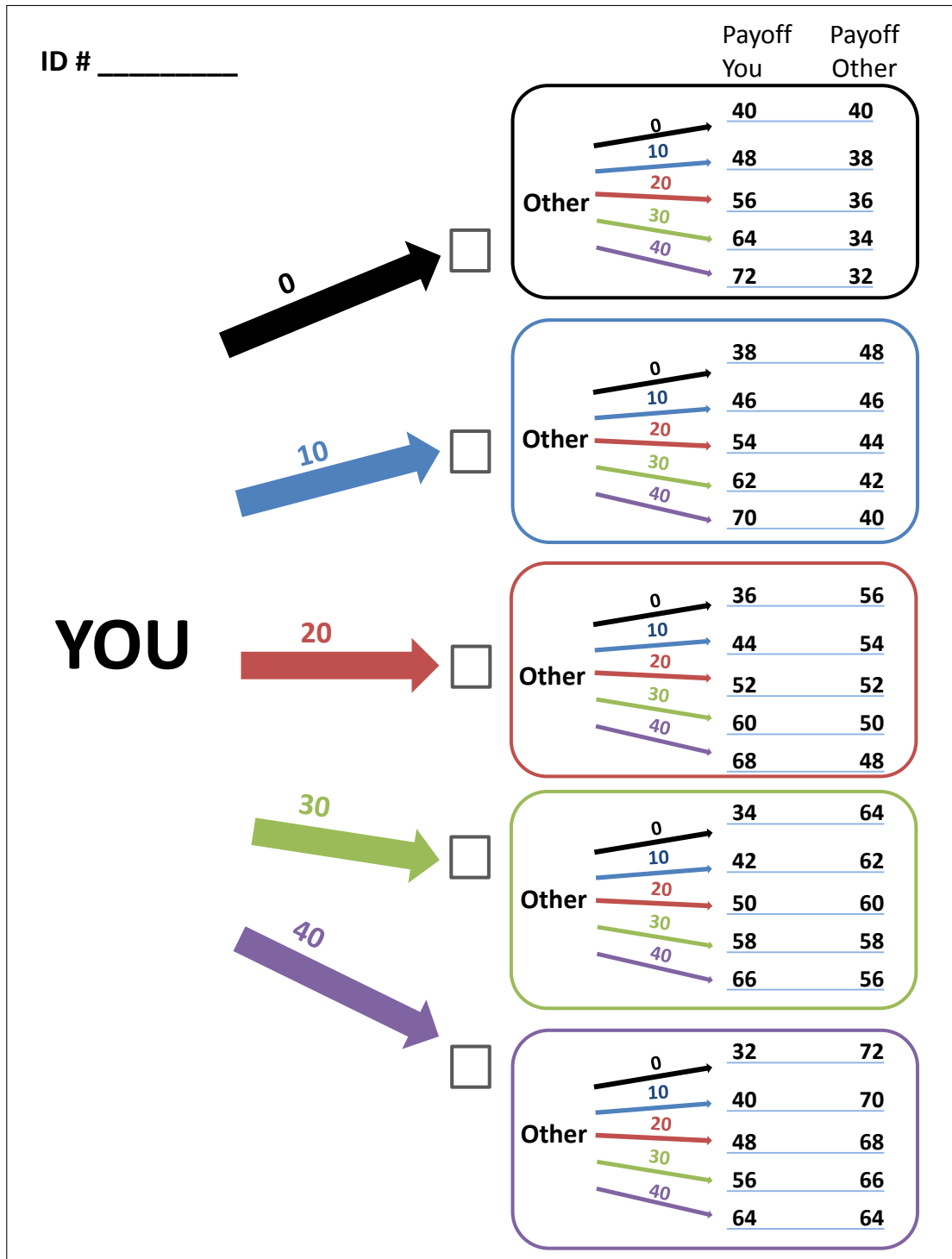
Note: Here a note can be entered

Figure 5: Contribution Table

ID # _____

Contribution of the Other Person to the group account:	Your contribution to the group account is:
0	
10	
20	
30	
40	

YOUR BELIEF

How much **do you think** did the person in the other group contribute? If you guess right, you will earn 5 Kwacha.

_____ Kwacha

Note: Here a note can be entered

Figure 6: Decision Sheet

Note: Here a note can be entered

8.3 Smallholder Survey

1. Name of the research assistant *(First, Last)*

2. Date of interview *(dd/mm/yr)*

3. Village/Locality

4. Individual ID

5. First Name

6. Last Name

7. Mobile number(s)

8. Sex

9. Age *(years)*

10. Date of Birth *(dd/mm/yr)*

11. Marital Status

12. Relation to household head

13. What tribe are you?

14. How long have you lived in this village? *(years)*

15. What is the highest grade of schooling that you have completed? *(Insert grade, e.g. grade 12=12)*

16. What kind of change would you like to bring about in your village? Please tell me any desire/goal you want to achieve in your village in the future. *[RECORD ANSWER]*

    ___ Education:

    ___ Health:

    ___ Standard of living:

    ___ Safety:

    ___ Mutual support:

    ___ Participation:

    (Please list the order in which the goals were mentioned)

17. How likely do you think you will be successful in bringing about these changes?

    ☐ Very likely

    ☐ Somewhat likely

    ☐ Not likely

☐ Very unlikely

18. Of all of these goals, which one is the most important one for you to change? (*Specify goal*)

19. How many households in your village have very **good housing** conditions, i.e. houses with walls made out of red brick, burnt brick or asbestos and/or with iron sheets on the roof?

20. For how many households in your village **would you like to have** very good housing conditions in the future? (desire/goal)

21. How many households do **you expect to actually have** very good housing conditions in your village in ten years? (expectation)

22. How many minutes do students from your village have to walk to get to a **primary school**?

23. How many minutes **would you like** students to walk to get to a primary school in the future? (desire/goal)

24. How many minutes do you expect students **will actually have** to walk to primary school in ten years? (expectation)

25. How many **policemen/-women** or **voluntary guards** does your village have?

26. How many policemen/-women or voluntary guards **would you like** your village to have in the future? (desire/goal)

27. How many policemen/-women or voluntary guards do you expect your village **will actually have** in ten years? (expectation)

28. How much money do households in this village **contribute to finance village projects** in a year?

29. How much money **would you like** that households in your village contribute annually to finance village projects in the future? (desire/goal)

30. How much money **do you expect** households actually contribute annually to finance village projects in ten years? (expectation)

31. How many **books** does a household have in your village?

32. How many books **would you like** a household to have in the future? (desire/goal)

33. How many books **do you expect** a household will actually have in ten years? (expectation)

34. How many households in your village get **support in case of need**, such as suffering from economic loss due to crop failure?

35. How many households **would you like** to get support in case of need in the future? (desire/goal)

36. How many households **do you expect** to actually get support in case of need in ten years? (expectation)

37. How **many times** do people in your village **meet each other** (for example for celebrations or village discussions) in a month?

38. How many times a month **would you like** people in your village to meet in the future? (desire/goal)

39. How many times a month **do you expect** people to actually meet in ten years? (expectation)

40. Are there children in the age of 6 to 18 in your family?

    ☐ Yes

    ☐ No *(Go to question 44)*

41. What is the education level that the youngest **child** achieved until now?

42. What is the level of education you **would like** this **child** to achieve in his/her life? (goal/desire)

43. What is the level of education **you expect** this **child** will to achieve in his/her life? (what they will probably achieve)

44. Do you own land, cows and goats? How big is the size of your plot and how many cows and goats do you have?

    Size of plot:

    \# of cows:

    \# of goats:

45. What is the size of your plot and number of cows and goats **you would like** to have in your life? (goal/desire)

    Size of plot:

    \# of cows:

    \# of goats:

46. What is the size of your plot and number of cows and goats **you expect** to have in ten years? (expectation)

    Size of plot:

    \# of cows:

    \# of goats:

47. How many households live in this village?

48. Please tell me with which of the two statements you agree more:

    Statement **A**: "To be successful, above all one needs to work very hard."

    Statement **B**: "To be successful, above all one needs to be lucky."

    ☐ I agree more with A

    ☐ I agree more with B

49. Do you think that women and men have equal rights in your village?

    ☐ Yes

       if yes:

         ☐ Strongly agree

         ☐ Moderately agree

    ☐ No

       if no:

         ☐ Slightly disagree

         ☐ Strongly disagree

50. How often in the <u>past year</u> have you joined together with others in the village to address a common issue?

    ___ times

51. Are you a member of any clubs, groups, organizations, committees or associations?

    ☐ Yes

    ☐ No *(if no, go to question 54)*

52. If yes, in which one(s):

    ☐ Cooperative (fishing, agriculture, etc)

    ☐ Savings group/club

    ☐ Savings group/club

    ☐ Neighborhood/village association/committee

    ☐ Water/waste group/club

    ☐ Health group/club

    ☐ Youth group/club

    ☐ Women group/club

    ☐ Sports group/club

    ☐ Other *(specify)*

53. Do you consider yourself to be active in the group(s), such as by attending meetings or volunteering your time in other ways, or are you relatively inactive?

  ☐ Very active

  ☐ Somewhat active

  ☐ Not active

54. How many times a year do you participate in village work (such as road clearing, village clean up, insaka maintenance)?

  ___ days per month

55. How much money do you spent on average for village activities or village problems in a year?

  ___ Kwacha/year

56. How much money do you spend on schooling on average per month?

  ___ Kwacha/month

57. Do you think that most people in this village are basically honest and can be trusted?

  ☐ Yes

    if yes:

    ☐ Strongly agree

    ☐ Moderately agree

  ☐ No

    if no:

    ☐ Slightly disagree

    ☐ Strongly disagree

58. Do you think people like yourself have influence in making this village a better place to live?

  ☐ Yes

    if yes:

    ☐ Yes, a lot

    ☐ Yes, a little bit

  ☐ No

59. Overall, how would you rate the spirit of participation in this village?

  ☐ High

  ☐ Average

☐ Low

60. How often do you use a mobile phone?

   ☐ Every day

   ☐ Once a week

   ☐ Once a month

   ☐ Once a year

   ☐ Never

61. How often do you listen to a radio?

   ☐ Every day

   ☐ Once a week

   ☐ Once a month

   ☐ Once a year

   ☐ Never

62. Did you watch a video today?

   ☐ Yes

   ☐ No

63. Do you like the characters of the video?

   ☐ Yes

   if yes:

   ☐ Strongly agree

   ☐ Moderately agree

   ☐ No

   if no:

   ☐ Slightly disagree

   ☐ Strongly disagree

64. Do you think that the people in the video are similar to you?

   ☐ Yes

   if yes:

   ☐ Strongly agree

   ☐ Moderately agree

   ☐ No

   if no: why do you think that they are not similar?

65. Do you think your village can be as successful as the villages in the video within the next ten years?

☐ Yes

 if yes:

 ☐ Strongly agree

 ☐ Moderately agree

☐ No

 if no:

 ☐ Slightly disagree

 ☐ Strongly disagree

66. Do you know the FAO, the Food and Agriculture Organization of the United Nations?

☐ Yes

☐ No

67. Do you think that the other group (Circle or Triangle) has watched the video?

☐ Yes

☐ No

8.4 Village Survey

1. Name of the research assistant *(First, Last)*

2. Date of interview *(dd/mm/yr)*

3. Name of the interviewee *(First, Last)*

4. Role of the interviewee (e.g. headwoman/-man)

5. Village

6. How many households in your village have access to safe drinking water (i.e. protected wells, boreholes, pumped water)?

7. On average how many minutes does it take a household to get access to safe drinking water?

8. What is the main market where villagers sell their products? *(specify the name of the city where the main market is located)*

9. How many kilometers away is the main market?

10. How many minutes does it take to reach the main market?

11. What is the state of the road leading to the market?

    ☐ Very good

    ☐ Good

    ☐ Average

    ☐ Poor

    ☐ Very poor

12. How many children in the village go to primary school?

13. How many children in the village are in the age to go to primary school?

14. How far is the nearest health facility?
    _____ distance (in walking minutes)

15. Does the facility have medicine?

    ☐ Yes

    if yes:

    ☐ Very good access

    ☐ Average access

    ☐ Poor access

    ☐ No

16. Does the village have police or a neighborhood security committee?

    ☐ Yes we have police

    ☐ Yes we have neighborhood security committee

    ☐ No

17. What type of transportation do people in this village use to go to neighboring villages?

    ☐ Walking

    ☐ Bicycle

    ☐ Motorbike

    ☐ Car

    ☐ Public transport

    ☐ Other

18. Do you have a resource that is used jointly such as a well or a village field/garden?

    ☐ Yes

    ☐ No *(go to question 20)*

19. If yes, which one(s)? *(specify)*

20. How often do the people come together for a village meeting?

    ☐ More than once a month

    ☐ Once a month

    ☐ Twice a year

    ☐ Never happens

21. Which regular activities do the people in the village do together (such as the improvement of insaka, cleaning of roads and paths, maintenance of borehole)? *(specify)*

22. Do you document your village meetings and/or the regular activities (when they take part, what was done/spoken and how many people participate?)

23. In the last three years, has the village organized to address a need or a problem?

    ☐ Yes

    ☐ No *(go to question 26)*

24. Around which issue(s) did the village organize?

    a) ----------

    b) ----------

25. Was/were the initiative(s) successful?

a) Initiative #1

☐ Yes

☐ No

☐ Ongoing

b) Initiative #2

☐ Yes

☐ No

☐ Ongoing

26. Are there any specific assistance programs to this community?

☐ Yes

☐ No

27. What are the two main programs and the institutions that support them?

a) Program/institution: _____

b) Program/institution: _____

28. Which of the following organizations, clubs, committees, or groups exist in this village?

☐ Cooperative (fishing, agriculture, etc.)

☐ Saving group/club

☐ Neighborhood/village association/committee

☐ Water/waste group/club

☐ Health group/club

☐ Youth group/club

☐ Women group/club

☐ Sports group/club

☐ Other *(specify)*

29. Do any persons or organizations (such as for example government, religious organizations, and businesses) help or support these village-based organizations?

☐ Yes

☐ No *(go to question XX)*

30. If yes, who/which one(s)? *(specify)*

31. Does this village have a village treasury?

☐ Yes

☐ No *(go to question XX)*

32. Who is in charge of the accounting of the village treasury? *(specify)*

33. Do you have accounting records?

    □ Yes

    □ No

34. How much money is in the village treasury at present?
    _____ Kwacha

35. How much money is in the village treasury on average in a year?
    _____ Kwacha/year

36. How much money do people contribute to the village treasury on average per year?
    _____ Kwacha/year

37. Does the village treasury have other sources of money than financial contribution of people living in this village? *(specify)*

38. For what has the money in the village treasury spent in the last year? *(specify)*

39. How often do village members on average give money to a village member who is in need?

    □ More than once a month

    □ Once a month

    □ Twice a year

    □ Once a year

    □ Never happens

40. What kinds of crimes (such as robberies, violent disputes, etc.) exist in this village? *(specify)*

41. How often do crimes happen in a year?
    _____ times/year

42. Are there members of this village who go to other places to work during certain periods of the year?

    □ Yes

    □ No

8.5 Video Scripts

Collective Action Video

Narrator: "In rural communities local development is everyone's business: men, women, youth and elders alike. Village clubs create quite a community dynamic. Each time a club is created people's participation and social cohesion are reinforced. At the entrance of the village of Iaosongi, in the heart of the Congo forest, the rehabilitation of the road was decided within the villagers in their village club. The clubs are used to facilitate dialogue and stimulate collective action. Village clubs are groups of people that meet regularly to discuss challenges, to find and implement solutions."

Woman: "Together, we decided to rehabilitate the road. Look how it looks now. First the men of the village enlarge the way and then women follow with their machetes."

Narrator: "It was a great challenge, indeed, as this route is the main one that leads to the village. Until recently it could only be used by bicycles and pedestrians. The road is not quite finished. Only a few hundred meters remain. But it is already having an impact.

Woman: "In the village, it is cheaper to buy cassava sticks than before. The price has dropped from 500 to 200, even to 150 Congolese Francs. And we manage to sell our fish for a higher price."

Villagers: "If you are afraid to be on the front-line, let us take your place and we will show you how to develop your environment."

Narrator: "In Lilanda, another village of the Tshopo Province it is harvest day and many people are here together as this is a community field. The traditional chief allocated land to the village clubs. The clubs then decided to use it for producing seeds and called upon the local union of producer organizations. Together they identified and adapted a variety of seeds and experimented with seldom used techniques such as line planting and double cropping. The partnership between producer organizations and the village clubs benefits the entire community. Production has increased and better quality seeds are now available. The whole population of Lilanda joins in and takes advantage of this new impetus. Taking its inspiration from the village clubs, 100 women producers created their own association spontaneously. Today they share the goods they have jointly acquired thanks to their individual contributions."

Woman: "We were inspired by the way the clubs operate and have decided that we too could be involved in the development of our community this is why we have created our association."

Narrator: "The Tshopo Province in the Northeast of the Democratic Republic of Congo is covered by rainforests and watered by the Congo River and its tributaries. On this huge territory fishing is a key economic activity that is traditionally controlled by men. Women bring occasional support. Therefore, in order to increase household incomes, why not allow women to fish? This question was raised during the discussions of the local village club in the fishing village of Isangi. The club was formed by the villagers. They have spaces in which rural men and women get organized, express themselves, and take collective action to improve their living conditions. Henry and Rebecca are husband and wife. They have been members of the village club for three years and have taken part in the discussions about fishing."

Man: "Men-women equality and the gender division of responsibility were discussed in our village club for the first time. We have realized that women can also play a proactive role in fishing activities."

Narrator: "Behaviors have gradually changed. It is now accepted for women to carry out tasks that were previously attributed to men. Rebecca, Henry's wife, fishes with a friend. The redefinition of women's roles has increased the households fish catches and increased their incomes as a result. At the same time the clubs have discussed and brought awareness to the issue of nutrition. The diet of the community is now more varied and balanced. People now eat vegetables, meat and, of course, fish. However, for Rebecca and her friends the benefits of this new gender division of tasks goes far beyond food and nutrition."

Woman: "Today, we pay school for five children. Three others are at home. We have also started to buy metal sheets to change the roof which currently leaks because it is in straw. Thanks to the club, we have increased our incomes and acquired new skills."

Narrator: "A few kilometers from Isangi, in Yalosuna, village clubs have encouraged communities to fight against food taboos and resulting malnutrition. Adama is busy preparing food for her family. On today's menu there is a variety of fish that, until recently, women were not allowed to eat.

Woman: "Traditions forbade us from eating catfish. People said that: "If you eat it, your eyes, belly and arms will swell, your hair will fall out and your body will be ripped in pieces.""

Narrator: "Thanks to discussions and awareness activities in the village clubs, things have changed. Adama and the other women of the village are now allowed to eat forbidden food which represents a new source of protein and an important step towards gender equality. In this village, as well as in many other places, such changes have been possible thanks to the support of traditional chiefs."

Man: "I am so proud of this! It is an encouraging sign of trust with my people.I hope that in the future we will even improve this way of working."

Narrator: "In fact this is the very nature of the village clubs – to collaborate with all development stakeholders. The clubs also work closely with the local authorities."

Man: "I have seen the changes. Before when I visited the villages as an Agriculture Inspector, people used to ask me for machetes, seeds, . . . But now they don't ask for everything. Instead they say 'come and see what we've done!'".

Narrator: "On the other bank of the Congo River, in the village of Bossokulu, the local village club has introduced a new crop, the soya bean, a legume that is highly rich in protein. Zhang is the leader of the local club that has played a key role in this change. After discussions in the club, members realized that the diets in the village in the province were not diversified enough; consisting mainly of cassava and banana. So they decided to introduce new varieties of crops.

Man: All this helps us for a good diet. Here, Fally takes care of his field where he has planted soya as a result of our discussion in our village club."

Narrator: "All of these experiences are worth being shared and it happens through a community radio. Each week the clubs discover what other clubs do, talk about it, and even build on these experiences. Thanks to their work and their networking, village clubs allow communities to redefine their daily life and to shape their future."

Village Life Video

Narrator: "In Sub-Saharan Africa, more than half of the population lives in the rural areas. For example in the Democratic Republic of Congo, almost 60% of the population live in rural areas. The village of Iaosongi is a good example of a traditional village in the Congo. [no speaking]. This village is located in the heart of the Congo forest. The village is very remote and it takes several hours to travel to the capital. The main access to the village is by an unpaved road. Regularly, it is necessary to do maintenance."

Woman: "I am Christine Sombotolea. I come from Iaosongi. This road connects us to other villages in the area. As it is no concrete road, it has to be maintained by machetes."

Narrator: "There are also other roads, which are smaller compared to the main one and that can only be used by bicycles and pedestrians. It is important for the village to be well connected to the other surrounding villages."

Woman: "Farmers from other villages come and sell their cassava sticks here. We get them for about 150 to 200 Congolese Francs. We mainly sell fresh fish."

Villagers: "If you are afraid to be on the front-line, let us take your place and we will show you how to develop your environment."

Narrator: "This is Lilanda, another village in the Democratic Republic of Congo. It is harvesting time. People here rely on farming. They grow a variety of crops. Among them are cassava, manioc, peanuts, corn, beans, rice and also bananas and pineapples. Drought is not a big problem here, as the village lies in an area with regular rainfall. The majority of people in the Democratic Republic of Congo work as subsistence farmers. Typically, farms are about four acres large and maintained by simple tools. Today, the women in Lilanda meet to share the goods that they have bought for their household: mattresses, pots and other household items they need for their living. They next bigger town is far away and people often lack transport possibilities."

Woman: "We do not have a car which we can use to drive to the next city, so we order our needed household items from a supplier who brings them to our village."

Narrator: "The Tshopo Province in the Northeast of the Democratic Republic of Congo is covered by rainforests and watered by the Congo River and its tributaries. On this huge territory fishing is a key economic activity that is traditionally controlled by men. Women bring occasional support in order to increase household incomes. For fishing, people here use traditional methods: Unmotorized canoes, seine nets, gill nets, hand lines and fish baskets.The fishing village of Isangi is meeting today to discuss their last week's catches and experiences. The fish are not easy to catch. Most of them only live in specific areas such as in channels and

creeks with only little current. This is where the fish find their food. Henry and Rebecca are husband and wife. They have been living in Isangi for their whole life. They also depend on fishing for their living."

Man:"During the rainy season from September and October and also the time between April to June the fish are breeding. At these times there are a lot of small animals in the water the fish need for their growth."

Narrator: "In these periods there are not many fish that the fisher find in the Congo river. Catches are then the lowest in the whole year. Overall, however, the Congo river has a great diversity of fish such as the elephant fishes, cichlids and catfishes. Today, Rebecca is fishing with a friend. They hope to have fish for dinner. When they fish more than they can eat they sell their fish on the local market. The diet of the community is very varied and balanced. People eat vegetables, meat and, of course, fish. Rebecca and her friend have been successful. They are returning from fishing and are on their way to prepare dinner."

Woman: "We have five children who go to school. Three others are still at home. As everybody in the village, they will depend on fish. My husband takes them with him in his boat and teaches them how to fish. They learn how to locate the fish and how to throw the net into the river.

Narrator: "A few kilometers from Isangi, there is the village called Yalosuna. The woman, Adama is busy preparing food for her family. On today's menu there is a variety of fish that also come from the Congo river.

Woman: "I like to prepare catfish. It is cooked very fastly and it is very delicious, very nutritious. It is the favorite meal of my husband and my children."

Narrator: "Adama and her family eat the catfish cooked; with some oil and bread. It is a traditional meal in the village of Isangi due to the availability of catfish in the Congo river. The fish presents a source of protein which is an important step towards a good nutrition. The village of Isangi is governed by the grand traditional chief of the Kome Chiefdom Joseph Ngwangwa Onobaiso."

Man: "I have been the grand traditional chief for many years. The fish in my chiefdom are very important for the people. It presents a source of food and livelihood."

Narrator: "In Yalosuna people grow up with fishing. They learn it early on."

Man: "I am also from the village Yalosuna. I am living here over 10 years now. Before I came here, I did not know how to fish. But since I learned it from the other men in the villages I earn my living with it."

Narrator: "On the other bank of the Congo River, in the village of Bossokulu, the inhabitants do not rely so much on fish, but instead on the soya bean, a legume that is highly rich in protein. So soya bean can replace animal products. The crop grows especially well in areas with a hot climate. Next to the soya bean, the diets in the village consists of mainly cassava and banana."

Man: "All this helps us for a good diet. Here, Fally takes care of his field where he has planted soya. He also sells the beans on the market."

Narrator: "After work, the village members meet to hear some radio or to talk about everyday life. Today they are celebrating a birthday of a village member. Celebrations are an important part of their culture."