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## **Relational work and the knowledge transfer process: Rituals in rural Ghana**

**Mira Slavova**  
**Warwick Business School**  
Gibbet Hill Road,  
Coventry, CV4 7AL  
[mira.slavova@wbs.ac.uk](mailto:mira.slavova@wbs.ac.uk)

and

**Gordon Institute of Business Science**  
26 Melville Rd, Illovo  
Johannesburg, 2196, South Africa

**Anca Metiu**  
**ESSEC Business School**  
3, Avenue B. Hirsch  
95021 Cergy-Pontoise Cedex, France  
[metiu@essec.edu](mailto:metiu@essec.edu)

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**Keywords:** knowledge transfer, worldviews, informational work, relational work, rituals

## **Abstract**

We advance understandings of knowledge transfer by showing the central role of symbolic action, taking the form of ritual, in contexts characterized by worldview differences. Using qualitative data from interactions between farming communities in rural Ghana and agriculture development specialists, we examine how rituals do relational work that enables informational work. We find that rituals (i.e., visits, value affirmations, gift-giving, prayer, performance, storytelling) do so by means of their functions -- bracketing worldview differences, modeling collaboration between farmers and agriculture development specialists, and packaging new knowledge in displays of compatibility. Our work also expands scholarship on the role of rituals in organizations and on management practices in Africa. Overall, our contribution consists of offering a complex, comprehensive view of knowledge transfer as involving both relational and informational work; and relying on both symbolic action and tangible elements.

## INTRODUCTION

The process of knowledge transfer is complex, involving informational work that bridges knowledge gaps by conveying concrete information, as well as relational work that creates connections among participants. When it is successful, knowledge transfer generates a range of beneficial organizational outcomes (Levine and Prietula, 2012). Such benefits include increased organizational proficiency (Reagans et al. 2005), reliable product innovation (Hargadon and Sutton 1997; Obstfeld 2005), improved capability to meet organizational objectives and perform (Hansen 1999; Lee and Choi, 2003), as well as long-term competitive advantage (Tallman et al., 2004; Winter 1987). However, even well-planned knowledge transfer initiatives can fail to produce benefits when they occur between groups separated by different worldviews, understood as dissimilar sets of presuppositions and foundational commitments that frame how people understand reality (Koltko-Rivera 2004, Sire 2015, Douglas and Wildavsky 1983, Naugle 2002). Divergences in worldviews pose significant challenges to knowledge transfer (Dougherty 1992) and shape the relational and informational work that takes place during this process.

Worldview differences characterize a multitude of knowledge transfer contexts. For example, within multinational enterprises, worldview differences can thwart the spread of best practices among units (Szulanski 1996). Similarly, during mergers and acquisitions, worldview differences can stifle processes of acculturation meant to bring the two organizations together (Chatterjee et al., 1992), as well as the integration of knowledge post-acquisition (Bresman, Birkinshaw and Nobel, 1999). Worldview differences pose a significant challenge to knowledge transfer in the context of agricultural development in Africa; where sizeable differences exist between the worldviews of representatives of development organizations and the worldviews of communities of agricultural smallholders (Dessein 1999, 2000). Over the years knowledge transfer in African agriculture has remained ineffective, and smallholder farmers have been plagued by low productivity and poverty (Collier and Dercon 2014). As such, knowledge transfer in the African agriculture development setting can be counted among the “grand challenges” in the world today (Colquitt & George, 2011). Thus, understanding how worldview

differences can be addressed during knowledge transfer is an important concern for management scholarship, with relevance across a multitude of contexts.

Symbolic actions, and rituals in particular, can be an effective approach to dealing with worldview differences. As anthropologists have shown, rituals – defined as “actions intentionally conducted by a group of people employing one or more symbols in a repetitive, formal, precise, highly stylized fashion” (Meyerhoff, 1977: 199) – have the reunification of fractured communities among their core functions (Bell 1987, Islam and Zyphur 2009). Even secular, everyday rituals do relational work by constructing shared claims about something notable that has taken place; “announcing our agreement on what has occurred – we have met, been amiably disposed to one another, parted with regrets, and so forth” (Meyerhoff, 1977: 200). Such shared claims present a stepping stone to further informational work between communities divided by worldview differences. Studies of organizational change have shown that symbolic action has a role in the interplay between relational and informational work (Kellog, 2009; Bucher and Langley 2016), especially within contexts of worldview differences. For example, the seating arrangement on a bus trip has been found to accomplish relational work and to herald informational exchanges (Feldman and Khademian, 2007). These findings from the organizational change literature suggest that our understanding of knowledge transfer remains incomplete, failing to account for the role of symbolic actions in relational and informational work.

Indeed, studies of knowledge transfer have drawn attention to worldview differences as presenting barriers to informational work (Szulanski, 1996), or as triggers to a relational process of finding common ground (Bechky 2003b). Tangible factors such as boundary objects (Bechky 2003b, Carlile 2004) and actors with boundary spanning roles (Levina and Vaast 2006) have been found to support both, relational and informational work between communities separated by worldview differences. Yet, intangible, symbolic factors have remained understudied. Or, in many knowledge transfer contexts – such as multinational enterprises, mergers and acquisitions, agriculture development – worldview differences may be so deep that they need to be addressed by intangible means, before tangible tools can be brought to bear. In such contexts, the use of boundary objects needs to be supplemented by

symbolic actions. Improved understandings of the role of rituals as symbolic actions during relational work and linked to informational work, will benefit conceptualizations of knowledge transfer in conditions of worldview differences. Therefore, we suggest that a focus on rituals can advance understandings of relational and informational work during knowledge transfer. In this paper, we ask the question: How do rituals do relational work that enables informational work during knowledge transfer?

To answer this question, we draw on an ethnographic study in a setting marked by profound worldview differences: the transfer of new agricultural knowledge from development agencies to rural communities in Africa. While development agencies advocate scientific approaches to agriculture and market-based relationships, smallholder communities favor long-held indigenous knowledge and interpersonal bonds (Dessein 1999, 2000). Worldview differences encountered during knowledge transfer are deepened by the ingrained legacy of colonialism, economic dependencies, cultural misunderstandings, and persistent inequalities between “developers” and “those to-be-developed” (Bhabha 1994; Hobart 2002; McFarlane 2006a,2006b; Spivak 1988; Andolina, Laurie, and Radcliffe 2009). In this context, we found that symbolic, ritual-infused relational work makes the participants’ worldview differences peripheral and thus enables informational work that is instrumental to knowledge transfer via its three functions. First, the performance of rituals bracketed, or set aside, the worldview differences between participants. Both farmers and agriculture agents attended gatherings, affirmed their own values and refrained from contradicting the others’, often opposing values. In doing so, conflict was avoided, values were reassuringly upheld and recognized, and the path was cleared to redirect attention to the transfer of agricultural knowledge. Second, through gestures such as gift-giving, acceptance of gifts and shared prayer rituals, participants provided a template for their future collaboration. Third, rituals allowed participants to package new knowledge about agronomic techniques and alternative worldviews in forms compatible with the farmers’ ways of understanding (e.g. using oral formats and public gatherings). By showing the compatibility of farmers’ indigenous knowledge with agents’ scientific knowledge, rituals rendered farmers’ participation in forthcoming informational exchanges legitimate.

## LITERATURE REVIEW

Knowledge transfer encompasses not only the simple transmission of information and the emergence of common taxonomies, but also knowledge translation and transformation—i.e., negotiating common meanings and interests, and creating common ground (Carlile 2004; Bechky 2003b). Among the reasons for the intricacies of the process is the nature of knowledge itself. Knowledge has been described as a “dynamic and ongoing social accomplishment” (Orlikowski 2006: 460) that is emergent (arising in activities), embodied (carried out and enacted by human actors), embedded (situated within socio-historic contexts), and material (constrained in material matters) (Orlikowski 2002, Orlikowski 2006). Such characteristics mean that knowledge is constructed as a situated resource that only becomes consequential when people adapt it to their context (Orlikowski 1992; D’Adderio 2003, 2001). Given the constructed nature of knowledge, knowledge transfer is particularly challenging when participants are embedded in profoundly incompatible worldviews. As sets of interrelated assumptions, belief systems, and social values (Koltko-Rivera 2004) that frame how people interpret reality (Douglas and Wildavsky 1983), worldviews are collective achievements. They encompass local cultural characteristics such as backgrounds (Tsoukas 2009), thought worlds (Dougherty 1992), ways of knowing (Feldman et al. 2006), and attachments to community. The literature on knowledge transfer has found that in settings of worldview differences, the informational work of transferring concrete information and bridging knowledge gaps has to be accompanied by relational work that creates connections and common ground (Bechky 2003b).

Among the factors facilitating relational and informational work, the literature has tended to emphasize tangible ones, as opposed to symbolic ones. Thus, studies of knowledge transfer have identified tangible factors such as the presence of agents with boundary spanning roles who are able to partially transform their practices in order to accommodate the interests of their counterparts (Levina and Vaast 2005); as well as, the use of boundary objects during knowledge transfer (Bechky 2003a, 2003b; Carlile 2002). Boundary objects are valuable during knowledge transfer because they simultaneously carry out informational work, as well as relational work (Ancona and Caldwell 1992; Bechky 2003a,

2003b; Carlile 2002; Star and Griesemer, 1989). Boundary objects accomplish relational work by enabling diverse social actors to “negotiate collective meaning through and around those objects” (Barrett and Oborn 2010: 1204). For instance, engineering drawings can be used to transfer knowledge about semiconductor manufacturing among the occupational communities of engineers, technicians, and assemblers (Bechky 2003b). In a widely cited example, a newly hired draftsman was able to produce drawings for the manufacturing engineer, Mick, that not only captured Mick’s ideas but also enabled him to make those ideas understandable to a panel of design engineers (Carlile 2002). As objects recognizable across different settings, the drawings were malleable enough to allow engineers with different backgrounds to gain awareness of their differences and find common ground; they were also stable enough in order to facilitate informational exchanges. Thus, through the use of boundary objects participants from different occupational communities were able to engage in relational work, as well as in informational work (Bechky 2003a, Carlile 2002).

Nonetheless, the scope of relational and informational work achievable by means of boundary objects, is limited. Boundary objects are viable vehicles for relational and informational work in unified contexts such as Western technical settings, where participants are able to connect across different functional backgrounds. In contrast, geographical factors and dispersed organizational structures can undermine the capacity of boundary objects to promote intercommunal negotiation and knowledge sharing (Sapsed and Salter 2004). It has even been argued that boundary objects reify cultural differences and inhibit knowledge sharing (Barrett and Oborn 2010). Therefore, in addition to tangible factors, we need to explore the role of intangible factors such as symbolic actions, in contexts where knowledge transfer participants are separated by deep and extreme rifts. Furthermore, the use of boundary objects for knowledge transfer has been documented primarily in dyadic interactions focused on technical concerns (Bechky 2003, Carlile 2002; Levina and Vaast 2005). Yet, it remains unclear how group contextual meanings are generated through small interactions among individuals, and how relational work is accomplished between groups. As symbolic actions are rooted in group worldviews, examining them is bound to provide insights into the complementary role of group settings during knowledge transfer.



Indeed, rituals are manifestations of symbolic action whose central social function is to integrate fragmented communities. There are several reasons why rituals, as symbolic actions “intentionally conducted by a group of people in a repetitive, formal, precise, highly stylized fashion” (Meyerhoff, 1977: 199); should be considered when examining knowledge transfer in settings of worldview differences. Firstly, participants foster cohesion and do relational work by means of rituals. As studies drawing on Durkheim’s (1912/1995) structural-functional perspective point out, the ultimate function of rituals is the reunification of fractured cultural elements (Bell 1987, Islam and Zyphur 2009). Rituals – especially secular ones – frame the social reality of participants, and by doing so allow shared claims to be constructed by people who often hold incongruous values and worldviews (Meyerhoff, 1977: 200). Rituals blend opposing elements, “creating the belief that things are as they have been portrayed” (Myerhoff 1977: 199). As such, rituals can cast worldview differences as sites of junctures, rather than as sites of barriers to knowledge transfer (Quick and Feldman, 2014).

Secondly, ritual performances can invoke and reshape subconscious elements because they are suffused with the values, beliefs, and emotions of communities (Islam and Zyphur 2009). This is important because engaging with worldviews cannot happen explicitly, as they are rooted beyond the conscious mind and “we think with our worldview and because of our worldview” (Sire 2015: 143). By involving participants cognitively, affectively, and bodily, rituals provide a tacit yet effective way of connecting participants with different worldviews. Thirdly, secular rituals do not do only relational work, but they can also accommodate informational work within a frame that brings foremost attention to the relationality among the participants. As anthropologists have shown, ritual encounters provide participants with different worldviews with a common frame for understanding social reality. This is achieved by alternating two types of elements: sacred, closed form elements, and secular elements without predefined form that address the specific purposes of the encounter. For example, a graduation ceremony can include closed form elements “such as poems, salutes, dances, songs, pledges, and oaths” (Meyerhoff 1977; 202); and secular elements, such as remarks about the significance of the occasion and messages from formal partner organizations (Meyerhoff 1977). This suggests that knowledge transfer

occasions can include both fixed elements with symbolic value, such as rituals; as well as exchanges of concrete information suited to participants' immediate purposes.

For all these reasons, and in contrast with organizational scholarship that has often viewed rituals as mechanisms for the maintenance of existing institutional arrangements (Dacin, Munir, and Tracey 2010; Meyer and Rowan 1977), we surmise that rituals can enable change and learning (Islam and Zyphur 2009). As the structural-functional tradition of ritual studies suggests, ritual functions enable divided communities to move beyond conflict and difference, and to engage in the exchange of pragmatic information. For example, rituals have been shown to bring coherence to social life (Bell 1992: 108), especially in times of transition (Turner, 1969) and in settings of conflict. Scholars have also identified a number of relational functions of rituals, including enhancing group solidarity, signaling commitment, communicating important values, and signifying group inclusion or exclusion (Islam and Zyphur 2009; Smith and Stewart, 2011; Trice and Beyer 1984). Similarly, studies in sociology and political science show that the symbolic content of rituals does the relational work of forging social connections; and of promoting less polarized interactions and productive information exchanges. For instance, “the restraint, regularity, gravity, measured pace, and tedium” of courtroom proceedings have been shown to facilitate the transition from initial trial controversy and contest, to constructive engagement in court proceedings and to communal acceptance of court outcomes (Ferguson 2008). In another context characterized by almost irreconcilable differences, Kertzer (1988) shows that revolutionaries use political rituals (e.g., processions, the sacralization of the place leaders died, the choice of décor) to move beyond armed conflict and to integrate within the broader political process. Therefore, rituals provide us with an apt lens for the study of knowledge transfer in contexts with worldview differences.

In spite of the relevance of rituals in strengthening connections and enabling informational work in contexts of worldview differences; the role of symbolic action in knowledge transfer has been only marginally examined. For example, deep and close communication has been established as a way to overcome arduous relationships and to transfer best practices (Szulanski 1996); codification and acts of embedding organizational memory have been linked to the proliferation and use of knowledge

(D'Adderio 2003, 2001); and productive dialogue with elements of reflection and self-distancing has been documented as supporting the creation of new knowledge (Tsoukas 2009). Symbolic actions such as storytelling have been linked to the transfer of cultural values and the development of organizational culture (Zwack et al. 2016). Thus, there are intimations, in the knowledge transfer literature, that symbolic actions play a role in the knowledge transfer process. Yet, how they do relational work has not been explored, and neither have been examined the links between symbolic actions and informational work.

Or, the role of symbolic actions in enabling connections among adversaries and in allowing them to engage in informational work has been documented in organizational change processes characterized by conflict and profound differences. Symbolic actions constitutive of relational work and heralding informational work have been documented, among others, in contexts of strategic organizational change (Johnson 1990), in public management contexts where participants' interests diverge (Feldman and Khademian 2007; Quick and Feldman 2014) and in development contexts with entrenched patterns of inequality (Mair et al., 2016). Examples of such symbolic actions include the creation of special occasions where exchanges occur while tensions remain concealed (Mair et al., 2016), or the inauguration of events where groups that see each other as adversaries are able to engage socially without displays of conflict (Feldman and Khademian, 2007). During "field trips, community forums, parties, and even public hearings" (Feldman and Khademian 2007: 317), organizers used seating arrangements, words, and gestures to foster a common space in which "all participants' perspectives are legitimate" (Feldman and Khademian 2007: 313). In a study of organizational change in hospitals, Kellogg (2009) found that "relational spaces" such as afternoon ward rounds brought together supporters of institutional reforms and defenders of the status quo, facilitating change through the active exchange of information. These cross-positional collectives, consisting of medical workers with different roles, can also be considered as laden with the symbolism of the various groups' coming together. The relational spaces have symbolic implications, signaling the willingness of previously separated groups to engage in extensive informational work by sharing role-specific beliefs and practices. Similarly, Bucher and Langley (2016) found that organizational changes are enacted through the interplay of relational work occurring in

reflective spaces where new practices are developed; and informational work, occurring in experimental spaces where new practices are enacted, selected, and retained. While the presence of reflective spaces (e.g. orientation or strategy workshops) captured willingness to rethink and reconfigure routines, experimental spaces (e.g. pilot wards) showed commitment to the direction of change. Thus, like the literature on rituals, the literature on organizational change shows that when communities are divided, symbolic action restores connections and brings about informational work that generates intended concrete changes. In contrast, the literature on knowledge transfer emphasizes tangible elements such as boundary objects, and their role during relational and informational work; failing to capture the contribution of symbolic actions, such as rituals, to informational and relational work.

In sum, management scholarship concerned with knowledge transfer has prioritized interactions mediated by boundary objects, occurring in technical settings and often within unified contexts; paying little attention to the occurrence of symbolic actions during the knowledge transfer process. However, a careful read of existing studies of knowledge transfer reveals that community fractures and symbolic actions aimed at amending them are present even in the most technical of settings and within organizational boundaries (Carlile 2002, Tsoukas 2009). What remains overlooked is that boundary objects by themselves are often insufficient for instigating the transfer of knowledge between communities with different worldviews. This suggests that we can develop a richer, more complete understanding of knowledge transfer by studying symbolic actions, and rituals as their manifestations.

Our inductive study, using field data from shadowing agricultural agents in three districts of rural Ghana, examines how participants separated by worldview differences create connections and transfer knowledge. The study takes place in a setting where relational work is crucial, yet underexplored by current theories of knowledge transfer. In rural Africa, the relational work accomplished by means of rituals (i.e., visiting, affirming values, gift-giving, praying, performing, storytelling) made worldview differences peripheral. The use of rituals allowed differences to be cast as junctures and opportunities to connect, rather than as barriers (Quick and Feldman, 2014). Rituals enabled informational work through their functions of bracketing worldview differences, modeling collaboration among knowledge transfer

participants, and packaging new knowledge in public displays of compatibility. Our central contribution consists of showing the key role of rituals as symbolic actions during the knowledge transfer process. We extend the insights from ritual theory to work settings and organizational processes. In addition, we develop insights into the practice of knowledge transfer and management scholarship in Africa.

## **METHODS**

### **A setting of worldview differences: Agriculture development in rural Africa**

In rural Africa, knowledge transfer efforts encompass agronomical knowledge related to field activities (e.g., the use of improved seed varieties, inorganic fertilizers and pesticides, chemical weed control, amending field practices by planting in rows and following standardized procedures for harvesting, food preservation and processing) and managerial knowledge related to organizational and business practices (e.g., maintaining structured groups with regular meetings, using bank accounts, making and revising production plans, adding value to agriculture produce, managing risks). While the promotion of agricultural innovations and modernized farming practices has a long history, their partial adoption and slow pace in Africa (Collier and Dercon 2014; Dessein 1999, 2000) testify to the challenges of knowledge transfer in rural communities.

Due to the worldview differences separating rural farming communities and development agencies, learning by smallholders in Africa is marred by considerable amount of “noise” in the information about agriculture technologies and improved practices that reaches rural communities (Collier and Dercon 2014: 94). The agronomical knowledge being transferred to rural Africa is science-based and tends to be shrouded in market ideology, challenging the traditional worldview of farmers and their organizing principles which privilege local connections and community cohesion (Dessein 1999, 2000). Thus, while development agencies promote a focus on productivity and profits, rural community members perceive their primary obligations as ones to the well-being of their fellow sisters and brothers, and to their perceived shared identity (Assimeng 1999; Dessein 2000; Twumasi-Ankrah 1995). Such worldview differences hinder knowledge transfer and any subsequent social change (Klerkx and Leeuwis 2008,

Pretty 2008, Collier and Dercon 2014). This African agriculture development context is fruitful for building improved theoretical understandings of knowledge transfer because it presents an extreme case of worldview differences among participants (Barnard, Cuervo-Cazurra and Manning 2017; Ragin and Becker 1992; Flyvbjerg 2011).

In our study, three types of participants were involved in the knowledge transfer process: farming communities, organizations promoting agriculture development in those communities, and their field agents. The farming communities and development organizations held vastly different understandings of agriculture, with the agents acting as boundary spanners. Table 1 summarizes key aspects of the worldview differences among farmers, agents, and development organizations.

#### INSERT TABLE 1 ABOUT HERE

Development organizations viewed agriculture as a business enterprise and a profitable livelihood. Guided by rationality-based logics, they used business and management vocabularies. Their goals included encouraging farmer groups “to experiment with new crops and methods,” showing farmers how to track profitability, and helping them “to calculate risk so that people are not detrimental to themselves” (EwB, interview). Such organizations recognized that communicating scientific knowledge to farmers may be problematic and that sometimes “the farmer decides to do other things” (ACDEP, interview). For their part, farmers viewed agriculture as an element of their identity and their way of life, steeped in ancestral practices and community relations. Relying on indigenous knowledge, they attributed agricultural challenges to lack of investment capacity rather than lack of competence. Worldview differences presented an obstacle to the knowledge transfer work of development organizations and to farmers’ attainment of improved agronomic practices. For example, farmer based organizations were key units for the delivery of agriculture development programs. Yet, farmers interpreted rural groups as social support mechanisms and instances of local practices, such as mutual labor (i.e., “nnoboa”) or saving clubs (i.e., “susu”). Consequently, they often failed to see the managerial and business benefits of organizing in groups, as an agriculture development officer explained in an interview:

[In] the groups they are forming, you see the way the people understand the group. They just see it as coming together just to collect some inputs, and then go [to the fields together] and work [together], and even repayment they don't even think of it. But I think the people if their mindset can be changed so that they can know why they are even forming the group and not [assume that they are] there just to collect inputs... So that is one problem, one challenge that [agriculture] extension [services] are facing.

The task of connecting with farmers and changing their mindset fell to agricultural field agents. These boundary spanners possessed scientific knowledge, acquired via diploma-level agronomic training, and had a sense of belonging to the Ministry of Food and Agriculture (MoFA), the formal organization they represented. At the same time, they shared farmers' cultural identity and were seamlessly able to conduct themselves in accordance with local customs. Notes from the fieldwork show agents encouraging farmers "to differ in their approach to farming from their forefathers" and "to see farming as a business and not a way of life." Agents' work ranged from operational duties linked to the delivery of specific agriculture development programs (e.g., administering interventions, delivering support services such as seeds, fertilizers, and pesticides), to outreach duties aimed at stimulating conversations about farming and inquiries into improved farming practices (e.g. "encouraging farmers to ask questions", "widening discussions to include the participation of women" [EwB, interview]).

### **Data Collection Strategy**

To form an understanding of agricultural knowledge transfer in Africa, we studied the delivery of agriculture advisory (or extension) services in rural Ghana. These are public services offering smallholders access to a host of agronomic knowledge, including innovative crop management practices and new methods for administering fertilizers and post-harvest processing. The data for this study was collected by the International Food Policy Research Institute (IFPRI) in Ghana, where the first author was employed from 2010-2012. We began by conducting an interview-based preliminary study of the knowledge transfer activities employed by eleven local and international development partner organizations in the Ghanaian agriculture sector. The organizations' focus was on farmer upskilling, food security, and improvement of rural livelihoods. Within these conversations, the extension department of MoFA emerged as the dominant stakeholder (Mitchell, Agle, and Wood 1997) in the field of

organizations concerned with agriculture capacity development and knowledge transfer in Ghana. Consequently, we sought an engagement with MoFA. The subsequent phase of the research consisted of data-collection by means of non-participant observation. Data collection relied on a collaboration between staff from IFPRI-Ghana and staff from Engineers without Borders-Canada (EwB), leveraging the longstanding working relationship between EwB and MoFA district offices.

EwB were able to negotiate access for observation of the delivery of extension services in three districts in Northern Ghana (which we refer to as Districts A, B, and C). Field access was facilitated through one-day workshops in each district for all staff members. During the workshops, the research aims and methods were presented and assurances were made that the goals of the research project were not linked to any staff performance evaluations in any way.

### **Data Sources**

**Non-participant observation.** Our main data comes from non-participant observation fieldwork. The method consisted of shadowing MoFA agriculture field agents with different roles. The observed agents included agriculture extension agents (AEAs) who carried out field advisory activities and community engagement; district agricultural officers (DAOs) who performed monitoring tasks and provided support to AEAs; and veterinary technical officers (VTOs) who provided animal health services. The fieldwork was managed as a collaboration among the first author, two out-posted fellows of EwB, and five Ghanaian field researchers. The recruited field researchers were experienced with fieldwork and survey work. While delegating observation fieldwork is not an established practice in organization studies, reliance on secondary data is not uncommon in development studies (Mikkelsen 2005). In our context, relying on field researchers offered some considerable advantages. By recruiting Ghanaian field researchers, we were able to improve data quality by leveraging their fluency in local languages and understanding of the rural context. Furthermore, the Ghanaian field researchers had a less disruptive presence in the field than foreigners and minimized bias resulting from the observer effect (McDonald 2005).



Because of the scale and intensity of the research design – a team of five field researchers and two supervisors collecting data for a week in each of three consecutive districts – the first author developed a detailed set of data collection instructions. To ensure that the instructions were understood and followed by the data collection team, prior to the start of fieldwork, a three-day training workshop was conducted for the recruited field researchers and the two EwB fellows. Researchers were introduced to the observation framework, informed by theory of practice. They were trained in applied skills such as observation, note-taking, in situ interviewing and data entry; and had the opportunity to practice those skills. To ensure consistency across observations, field researchers were issued a list of elements to note during interactions between farmers and agricultural field agents (e.g., how many people are attending, who is hosting, what is the goal, start and end times, etc.). Field researchers were instructed on how to supplement their structured observations by notetaking and by collecting unstructured data. They were asked to produce reflections and summaries of their observations at the end of each day spent in the field. Researchers were issued with GPS equipment, photo cameras, and voice recorders to document the travel itineraries of agriculture agents and to collect audio-visual evidence.

During data collection, four of the five Ghanaian field researchers conducted five days of concurrent observation of two AEAs, one DAO, and one VTO in each of the three districts. The additional fifth researcher was based at the district MoFA offices and was tasked with collecting secondary documents from the district. MoFA agents were selected for shadowing randomly, using a sample frame developed in the course of the introductory workshops in each district. During observation days, field researchers were responsible for filling out observation forms, notetaking, gathering time and distance measurements, and producing detailed typed notes. At the end of the five-day observation period in each district, one-day debriefing workshops were held under the guidance of EwB staff. At those workshops, field researchers shared stories from their experience shadowing agriculture agents, ensured consistency in their preliminary coding, and supported one another in resolving technical and equipment issues.

The resulting observation dataset consisted of a total of 61 days of observation (including a day of testing), covering over 324 hours of observation and over 1,800 km of travel. Agricultural extension work

tended to take place early in the morning, before farmers went to their fields; or in the late afternoon, after they had returned. On average, agents were observed for approximately 5.5 hours per day, as they went about their workdays (e.g., farm visits, staff meetings, re-payment collections, fertilizer distribution, etc.). During shadowing, field researchers accompanied agents to formal and informal settings, as well as to community events.

**Interviews.** To form a general understanding of the process of knowledge transfer in Ghanaian farming communities, we started the fieldwork by conducting 14 semi-structured interviews with representatives of commercial organizations (e.g., Golden Stork, ITFC, Wienco), NGOs (e.g., EwB, SEND), and international nonprofits (e.g., ACDI/ VOCA, TechnoServe) (see Table 2 for a complete list). The questions revolved around the resources dedicated to knowledge transfer, the teaching methods used, the learning formats that did and did not work. Later, during the observation period, we conducted 10 additional interviews with three MoFA representatives (e.g., district directors, information officers) in each observation district and one additional interview with a MoFA executive in another district. Interviews lasted from 21 minutes to 1 hour and 22 minutes and were conducted in English. We recorded 20 out of 24 interviews. Recordings were complemented by structured notes. When no recordings were possible or permitted, detailed notes were written.

INSERT TABLE 2 ABOUT HERE

**Documents and artefacts.** To fully capture the extension activities carried out in district offices, interviews and observation data were supplemented by the collection of documents and artefacts. Interviewees shared a wide variety of promotional and operational materials, including details about financial resources (e.g., budgets, expenditures), staffing (e.g., staff lists, emoluments, trainings), capital and information resources (e.g., inventories of equipment), and recorded district performance. The observed agents welcomed researchers' requests for copies of field aids and field diaries. During the observation fieldwork, one field researcher was tasked with collecting further information and producing detailed district profiles. The compiled information helped us understand the context of each of the three districts in depth.

## **Data analysis**

Our analysis included four main stages and was guided by the grounded theory method of comparing and contrasting interactions and interpretations (Glaser and Strauss 2009). The first stage occurred during fieldwork and immediately after it, when IFPRI and EwB researchers prepared reports with preliminary findings based on the collected structured data. The reports' findings were validated at workshops in each of the three districts. At this point, the first author was alerted to the fact that knowledge transfer interactions between farmers and agents occurred in two main formats. Interactions were either dyadic, involving an agent and a farmer, or at most a handful of farmers; or they were group gatherings involving numerous farmers and an agent.

During the second stage of the analysis, both authors read all the field notes and interview transcripts, and studied audiovisual documents and secondary data. Open coding generated numerous codes describing the observed activities e.g. "vaccination", "educating farmers", "small talk", "celebrating". Sorting these activities into dyadic and group interactions revealed that dyadic interactions were dominated by informational work, addressing concerns raised by farmers or concrete issues encountered by agents during their field visits. Meanwhile, group interactions involved predominantly behaviors seeking to establish and strengthen the connections between agents and their rural stakeholders. In this sense, group interactions were dominated by relational work. The authors agreed that group interactions deserved closer attention.

Group interactions were permeated by the tacit acknowledgement of the differences in worldviews held by rural communities and the worldviews held in the organizations represented by the agents. In-depth analyses, successive readings of the collected notes, clarification phone calls with field researchers, and numerous discussions led to the coding of a number of elements in the observed group interactions as rituals. For instance, seeking out the village chief "as custom demands" prior to a community meeting, or joining people at a naming ceremony celebration, held at a farmer's house, in "eating and [...] playing cards as a sign of happiness" (Notes, District C), were both coded as "visiting" rituals. Parallel readings of observations from dyadic interactions between agents and individual farmers confirmed the finding that

they were dominated by the exchange of practical information. The ritual elements we identified in dyadic consultations were minor and not very prominent.

In the third main stage of analysis, we looked outside the field of organizations to understand the potential role of rituals in knowledge transfer. We thus turned to anthropology, and especially its structural-functional perspective which provided us with in-depth understandings of rituals and their functions (Bell 1992, Durkheim 1912/ 1995, Islam and Zyphur 2009, Meyerhoff 1977). Armed with an understanding of the reunification of fractured communities as rituals' core social function, in the third stage of analysis we re-considered our data. We used axial coding (Strauss and Corbin, 1998) to understand the connection of rituals to relational and informational work. This stage of analysis culminated with the identification of three functions of rituals in knowledge transfer: bracketing worldview differences, modeling collaboration, and packaging new knowledge in public displays of compatibility. For example, we noted that gifts were offered graciously and they were accepted with gratitude. Such interactions exemplified relational work as both parties were duly invested in them. Occasionally, gifts were offered following successful consultations or involved the exchange of information about follow-up arrangements. Thus, acts of gift-giving served to model a cooperative, polite and constructive relationship. In this sense, gift-giving reaffirmed relational work that had already taken place, and heralded informational work yet to take place.

In the final stage we also noticed that, while analytically distinct, rituals and their functions worked together in shaping relational work. Furthermore, we acknowledged that while analytically separable, the notions of relational work and informational work were entangled in practice, within the process of knowledge transfer. Thus, our findings show how rituals – through their functions -- supported knowledge transfer by casting worldview differences as peripheral and fostering connections, while facilitating informational work.

## **RITUALS CREATE CONNECTIONS AND ENABLE INFORMATIONAL WORK**

Our findings reveal that in our context, relational work consisted of rituals and ritual functions. As symbolic actions, rituals and their three distinct functions detracted attention from worldview differences as barriers between villagers and agriculture agents and drew it towards connections. In doing so rituals enabled subsequent informational work. First, rituals allowed participants to temporarily bracket or set aside their worldview differences. By affirming one another's -- often opposing -- values and engaging in actions such as visiting community events and key individuals, participants avoided conflict and ensured that worldview differences would not impede knowledge transfer. Second, through gift-giving, acceptance of gifts, and shared prayer rituals, participants effectively modeled future collaboration between agriculture agents and farmers. Third, rituals packaged new knowledge about agronomic techniques and alternative worldviews in public displays of compatibility. Thus, knowledge with a high degree of novelty was presented in familiar oral formats, such as fables and storytelling, and was introduced at public gatherings, often held at the core of the rural community. See Figure 1 for a summary of the findings about rituals and their functions.

### **INSERT FIGURE 1 ABOUT HERE**

To illustrate how relational work unfolded in the field and to introduce readers to a context that may be unfamiliar, we present in detail one group interaction encountered during fieldwork at an anonymous community located in District B that we refer to as Agaasi. Strikingly, this interaction included a multitude of rituals, such as visiting a funeral in the community, praying at the beginning and end of a group meeting, and the telling of two fables. These rituals provided a frame for the shared social reality of farmers and agents; that drew attention to the connections between the villagers and the newcomers. Thus, the rituals and their functions constituted relational work during the knowledge transfer process. The interaction involved alternation of closed and 'sacred' relational elements, with numerous open and secular informational elements that consisted of concrete knowledge relevant to agriculture practice (Meyerhoff 1977).

## **Vignette: Knowledge Transfer at the Agaasi Community**

At 9:30 a.m. on an early April morning, near the end of the Harmattan<sup>1</sup> season, two motorbikes and the white pick-up truck of an agriculture research institute entered the community of Agaasi. The small village is situated 4 km off the closest paved road and 13 km away from the nearest town – a district capital in the Sahel Savanna, near the border between Ghana and Burkina Faso. The road had taken the visitors through dusty fields marked by stone outcrops, maize farms, and mud houses. BV, a representative of the Canadian NGO EwB, and extension agent GP had been working with farmers in the Agaasi community to implement the “Agriculture as a Business” (AAB) program – an initiative aimed at strengthening cooperative groups and introducing farmers to a market-based view of agriculture. On this day, BV’s task was to obtain feedback from the farmers to evaluate progress and produce a project assessment for EwB headquarters in Toronto. Therefore, a farmer group meeting had been scheduled. BV and GP were joined on their visit by a female researcher.

The visitors headed to the specified location where the farmer meeting would be held – an open space outside a compound, under a tree, which was the designated location for community events. Upon their arrival, the group chairman informed GP that a family in the village had been bereaved and the whole village was in mourning. Funerals are major events in Ghanaian communities, which conceive of themselves as including the living, the dead, and the unborn (Dogbe 1980). All productive activities are typically suspended during mourning periods. It was suggested that GP and the two guests “would do well” to pay a visit to the bereaved family, though the bereaved did not take part in the AAB program. While the agriculture agents visited the site of the mourning and funeral rites were taking place, the farmers awaited their return.

The visitors travelled on their motorbikes to join the mourners, who had gathered at the bereaved family’s mud hut. GP followed the traditional etiquette by declaring the “mission” of their visit to the

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<sup>1</sup> The Harmattan is a low season for agriculture in West Africa, occurring between the end of November and the middle of March. It is characterized by the dry dust-laden wind of the same name that blows from the Sahara Desert into the Gulf of Guinea.

village. He explained that their goals included “delivering technologies” and engaging farmers in discussions about agriculture improvements. The bereaved family members formed a line through which the visitors passed a number of times, shaking hands “as a sign of compassion and respect,” as GP explained. After expressing their condolences, the visitors spent a short time with the bereaved family. GP asked on behalf of the visitors for “permission to proceed by holding the [farmer] meeting”; the bereaved family granted their permission.

Returning from the funeral visit, we found that eleven adults and two children had gathered at the exposed communal space, with the women having changed into their “good clothes.” Passersby could join or observe. Children and domestic animals roamed around. The group chairman acknowledged the community appreciated the visit to the bereaved family, saying: “It is good to have friends in a moment of hardship. When you are crying, it is comforting to know that your friend is crying with you.” Both the visitors and the attendees recognized the urgency of promptly proceeding with the meeting’s agenda. At that moment, everyone joined in a nondenominational group prayer, wishing for a productive meeting and mutual learning.

The agent began by emphasizing the importance of frankness and read a fable from a printout. It told the narrative of farmers who, out of politeness to their visitors, failed to point out to NGO representatives the negative consequences of the NGO’s work. When asked to identify the moral of the story, the farmers, familiar with the fable format, promptly agreed that they should not be “apprehensive” to “share their opinions openly” when working alongside community outsiders. While such visitors are well-intentioned, they noted, they may be unaware of the undesirable impacts of their actions, and such ignorance may “multiply the negative effects.” In rural Ghana, where politeness is highly regarded, the novelty of such learning cannot be overstated.

When BV inquired about the internal workings of the group, the farmers shared detailed information. They explained that money had not been deposited in the group bank account for more than five months due to the long lean season. It had been difficult for them to “put money aside” and pay their monthly dues [GHc 1 per farmer, or about 25 U.S. cents]. Acknowledging the current difficulties, BV

asked, as a matter of principle, what would happen if someone failed to pay his/ her dues. The question appeared to confuse the farmers. After some animated discussion, a woman farmer stepped forward; in a theatrical, exaggerated manner; and explained that in such a case, they would first “try persuasion,” but if the farmer remained “adamant he should not pay,” the farmer would need to leave the group. Everyone burst out in laughter at the ludicrous notion! As the agent explained to the field researcher, excluding someone from non-payment would be incongruous with the local culture.

As the discussion continued, farmers described the group’s past learnings and accomplishments. Prodded by BV, they listed among their achievements mobilizing funds, building two boreholes, and successfully completing a maize demonstration plot. Villagers stated that the group assisted farmers in “giv[ing] each other help when ill or short of labor” or in cases of unexpected expenses, such as funerals. Thus, villagers affirmed their value of community cohesion as a reason to organize the group.

The above exchanges were followed by detailed discussions of technical, agronomical, business, and organizational topics. Asked what they have gained from participating in the group, some farmers reported having learned that “with analysis of [their] activities, [they] can understand how they could improve”; how to “use business principles as individuals”; and how to time production “to meet good markets.” Others said they had built a “spirit of unity” within the group, allowing it to grow so that others could emulate it. Farmers shared concerns about the advantages and disadvantages of various crops and declared their decision to grow maize together in the next season. They asked the visitors for help addressing pest issues and marketing their produce because “their links failed them at the last harvest.” GP and BV took notes and agreed to prioritize these concerns.

Toward the end of the meeting, a farmer demanded assistance “as a public service,” by which he meant for free, without any repayment obligation. Seemingly unruffled, GP used another fable to formulate his answer: He asked the farmer to choose between receiving fish every day or learning how to fish. When the farmer chose learning to fish over being given fish, GP asked what it would mean if, having been taught how to fish, he still demanded free fish. The farmer agreed this meant he needed to make more of an effort. As the interaction drew to a close, more rituals were performed. The chairman



thanked GP, BV, and the female researcher for attending and handling the meeting; most of all, he shared his gratitude for their “expression of sympathy [for the villagers’] mourning.” Before closing the meeting, all said a prayer of gratitude together.

From its beginning until its end, the encounter at Agassi was saturated in ritual: the funeral visit, the use of fables, the performance elements of costumes and staging, and the recurrent value affirmations and group prayers. Nonetheless, the meeting did convey concrete agronomical and managerial facts to farmers. While particularly rich, the ritualized interaction in Agassi was by no means unique: we observed other similarly ritual-infused meetings. In the following section, we show how relational work enabled informational work during ritualized interactions, such as that in Agaasi.

### **Vignette Analysis: The Functions of Rituals in Knowledge Transfer**

#### *Rituals Bracket Worldview Differences*

One striking aspect of the Agaasi meeting was that neither the villagers nor the agriculture agents openly challenged the others’ worldview. Worldview differences were cast as opportunities to connect, rather than as obstacles to connecting. Participants showed mutual respect, they listened attentively to expressions of the others’ values, refrained from expressing disagreement, and proceeded by articulating their own values. By doing so, they were released from their worldview commitments and were able to move on to the pragmatic elements of knowledge transfer. We refer to “bracketing” as the action of setting aside obvious incompatibilities. Notably bracketing did not engage the differences among participants, and was particularly prominent during rituals of visiting and affirming values.

By visiting village dignitaries and attending important community events, agriculture agents became embedded in the rural environment, while villagers took on the roles of hosts and guides. As we see in the Agaasi vignette, as soon as agents arrived in the village, farmers suggested that the visitors “would do well” to follow local custom by prioritizing a visit to a recently bereaved family – who were not even participants in the pre-arranged group meeting – over their immediate deliverables. Even though farmers considered it taboo to work during periods of mourning, they recognized that development

agencies prioritized business practices. Thus, by issuing instructions to the visitors on how to proceed – handing them directions and providing them with a guide to take them to the funeral – the villagers helped the visitors show respect for the local community and its way of life. The visitors promptly set aside their main reason for coming to the community, i.e. to evaluate the AAB program; and diligently followed instructions to visit the bereaved family and to adjust their behavior to local norms. The visitors acknowledged the primacy of spiritual elements within farmers' worldview and prioritized such elements over their own immediate deliverables. The visitors attended the ongoing mourning rituals, after which they were able to carry out their pre-planned activities. The farmers ensured that local norms were followed and that the visitors' got to accomplish their mission. They waited for the visitors to return to the meeting place, and contributed actively to the discussions. In the end, the bracketing function of the ritual visit to the funeral paved the way for the transfer of agronomical knowledge in the ensuing group meeting. Both sides demonstrated awareness of their differences, yet they did not engage them but found ways to circumvent them and to work together in everyone's best interest.

Rituals of affirming core values followed similar dynamics in allowing participants to discharge their obligations to their community and engage with informational exchanges. For example, at one point during the Agaasi meeting, the agent and the NGO representative insisted that farmers articulate accepted sanctions for non-payment of group membership fees. This provoked a heated discussion among the farmers. In the end, it was apparent that the villagers were aware of the rule of exclusion due to non-payment: a woman was able to articulate it very clearly. Yet, the thought of applying this rule led farmers to burst into laughter. The notion of excluding a villager from the group over unpaid monthly dues appeared absurd to a community that conceived of the present reality as inclusive of the spirits of past and future generations (Dogbe 1980). Later, the agriculture agent GP explained that in the course of his long career, he had never witnessed a farmer being excluded from a group due to non-payment. The farmers tacitly acknowledged and upheld their own value of being a community inclusive of the living, the dead, and the unborn. Opposing worldviews were not openly contested; rather both positions were left to stand, uncontested, side by side. Thus, the relational work of acknowledging both approaches as legitimate was

accomplished, and the parties were able to move on to a pragmatic discussion of past learnings and accomplishments. The conversation quickly became much more informational, covering business goals (e.g., timing production in order to meet “good markets”), as well as past achievements such as constructing a bore hole.

Often, the ritual of value affirmations was discursive in nature, involving statements of core values and articulations of agreement. For example, during the Agaasi meeting we saw a discussion of the significance of working in groups. During this discussion, the participants bracketed their incompatibilities. The agent and farmers expressed different views regarding the core motivation to work together as a group, and those views did not align. Agents advanced notions of organizing derived from managerial and business principles, stemming from a worldview that prioritizes the tangible benefits of organizing, such as efficiency of scale. In contrast, farmers expressed values consistent with a worldview that prioritizes community cohesion. They asserted that the group’s main purpose consisted of helping one another in cases of illness or labor shortage. Furthermore, farmers saw as legitimate the governance of group finances according to their traditional worldview (e.g., buying Coca-Cola as a sign of sympathy for the bereaved family in Agaasi), rather than according to profit-oriented principles. Farmers’ understanding of social cohesion as the main focus of community organizing was upheld by the agent, who let it go unchallenged. By doing so, he effectively set aside the differences in worldviews; thereby, the discussion could proceed by clarifying informational details. Thus, the NGO representative was able to ask fact-finding questions regarding recent deposits to the group’s bank account and receive answers to those questions.

While bracketing allowed farmers and agents to avoid defining their identities in opposition, we did encounter evidence of confrontation in several tense, albeit short, exchanges. For example, on one occasion, farmers “complained of the quality of water from their protected well [...] [because] [it] was not as clean as it should have been” (Notes, District A). Another time, they countered agents’ advice by invoking tradition and arguing that their “great-grandfathers used to burn crop residue after farming and they were getting good yield” (Notes, District A). We interpret the evidence of such frictions as

demonstrating the need for symbolic actions in settings with worldview differences. Since such frictions were sporadic and temporary, and did not break down the knowledge-transfer process, their presence also revealed the power of ritual in diffusing the underlying tensions.

### *Rituals Model Collaboration*

Alongside their role in bracketing worldview differences, rituals created connections and enabled informational work during knowledge transfer by providing agents and farmers with a model for relating to one another, both during the current interactions and in future encounters. The rituals of gift-giving and praying were particularly conspicuous in modeling the collaboration.

Gift-giving usually occurred at the end of group or dyadic interactions, and reflected farmers' gratitude for agents' service and their wish for a reciprocal relationship. Although gifts were not exchanged during the Agaasi interaction, the practice was common in our setting. We observed that at the end of many meetings with the agents, villagers offered gifts in the form of money or farming products (e.g., yams, fowl, eggs); and the agents accepted the gifts amiably. By sticking to the roles of gift-givers and gift-receivers, the agents and the farmers modeled together a way of interacting:

Farmer called [the visitors] and gave about 8 eggs [...]. [We] received it in good faith and thank[ed] the farmer for the wonderful gift. We said goodbye to the farmer and took off." (Notes, District C).

In another example, after assisting a group of rice farmers with field measurements and enrollment in the Block Farm program, an agent was asked by two of the participants to go to their house and greet their "old man." He was happy to do so, and when the old farmer took some money and "dashed it out to the agent as a token to buy some water on the way" (Notes, District A), the agent thankfully accepted the gift. In this example, the villagers and the agent performed the gift-giving ritual in order to reinforce the working relationship that they had already established. Farmers' gifts, however modest, expressed their appreciation for agents' "gifts" of knowledge and material aids (e.g., subsidized inputs such as seeds, fertilizers, or small ruminants) and signaled their commitment to the knowledge transfer process.

Prayers were a pervasive ritual, occurring at the beginning and at the end of meetings, with the participation of both villagers and agents. Opening and closing prayers customarily framed group interactions. While Christianity, Islam, and animist beliefs are all common in Northern Ghana, the prayers we observed were secular rituals that expressed hope for the successful completion of joint initiatives, rather than religious sentiments. Thus, opening prayers invoked community values, solidarity, and commitment to the proceedings that followed. Closing prayers were often expressions of gratitude, articulating shared optimism and faith in the common undertaking. Prayers enacted relational work because they were invoked through a succession of reciprocal actions. Typically, agents triggered the ritual by issuing an open invitation to the audience for a volunteer to say a prayer or the agents invited a specific participant – either an older attendee who could lead the prayer with wisdom and experience or a youngster brimming with energy and enthusiasm. Such invitations were dutifully heeded, and the ensuing group prayers joined everyone in attendance in the articulation of shared hopes for the future. Within the interactions, prayers as closed sacred elements were skillfully interwoven with elements that carried informational content. For example, when an agent was providing support to a women’s group who had planted tree crops, she started by calling a prayer in order to summon respect and cooperation across generations before proceeding with the informational focus of the meeting:

(9:35 AM) The farmers had gathered under a tree near the farm and the agent and the field researcher joined them there. The agent asked one of the women to say an opening prayer. The woman prayed in the local language and the meeting commenced. She explained to the group the need to take care of the trees. The agent told them not to be concerned only about the present, but the future as well. The agent told the group to make sure that no one passes through the farm. The agent also encouraged them to make sure that they weed around the trees to keep them growing. (Notes, District A)

Thus, rituals such as gift-giving and praying modeled a way of relating to one another whereby graciously issued invitations were amiably accepted, and when one party initiated an interaction the other party was expected to respond in kind. By modelling cooperation, the rituals established connections between farmers and agents; and enabled future knowledge transfer.

### *Rituals Package New Knowledge in Public Displays of Compatibility*

In addition to bracketing worldview differences and modeling future collaboration, we also found that rituals demonstrated the compatibility of new knowledge with farmers' indigenous approaches and with their local context. Particularly, rituals of performing and storytelling presented new technical and managerial knowledge as accessible, relevant, and compatible with farmers' worldview.

The Agaasi vignette, alongside the rest of our data, reinforced the finding that performance elements (e.g., staging, audience, outfits) were consistently involved in knowledge transfer interactions. Group interactions took place at "meeting places" (locations known locally as patas, roofas, or nayili sampaa) – wooden structures with no walls where community events were typically held. The meetings were open to a wide audience, including group members, non-members, bystanders, children, and old people; thus indicating the potentially wide relevance of the discussed topics. The audiences attracted were attentive and prepared to listen, as suggested by their thoughtful clothing choices. Women tended to wear their "good clothes", while agents wore uniforms and field researchers wore modest attire that showed appreciation for local culture. Thus, the performing rituals such as the staging of the meetings, the wide and attentive audience that was attracted, as well as the pageantry displayed by the participants, endowed encounters with symbolic significance and highlighted the informational conversations that followed.

Rituals of storytelling or fable-telling also functioned to highlight the compatibility between village traditions and agents' knowledge. The oral culture of rural Ghana is strongly marked by storytelling, and many of the interactions we observed included stories told as fables – short stories intended to illustrate a moral lesson. By resorting to the familiar fable format, agents were able to further contextualize the new knowledge and make it understandable to farmers. In the Agaasi vignette, the agent used two fables in order to convey two leading messages: one about the benefits of frankness, and another about the importance of self-reliance and business orientation. Recognizing that using the familiar fable format allowed farmers to promptly decode and understand them, agents often used them as introductions to farmer group meetings, setting a tone of mutual learning and participation. In fact, fables were included

as field aids for the delivery of the AAB curriculum. Teaching materials offered agents a repertoire of fables that could be used to stimulate reflection and discussion. An EwB representative went so far as to state that providing such field aids or “plastic sheets” was one of her NGO’s biggest contributions.

In sum, our analysis of the Agaasi meeting, alongside numerous other group and dyadic interactions in our data set, revealed that rituals and their functions – bracketing worldview differences, modeling collaboration, and packaging new knowledge in public displays of compatibility – created connections and enabled informational work. Additional examples of rituals and their functions can be found in Table 3.

INSERT TABLE 3 ABOUT HERE

## **DISCUSSION**

In this paper we considered rituals that take place during knowledge transfer in an agriculture development setting. We established that rituals did relational work that enabled informational work by means of three specific functions: bracketing worldview differences, modelling collaboration and packaging new knowledge. These findings allow us to advance understandings of the knowledge transfer process, to extend use of ritual theory in organizations, and to enrich management scholarship and practice in Africa.

### **Rituals and the Knowledge Transfer Process**

Our study enriches understandings of knowledge transfer by highlighting the key role of symbolic action, taking the form of rituals, during this process. We establish that symbolic action, exemplified by rituals, connects groups separated by major worldview differences and enables the exchange of detailed technical information. Thus, our study presents a picture of the knowledge transfer process that is different from studies that focus on tangible factors such as boundary objects (Bechky 2003a, Carlile 2002). In identifying the particular functions of rituals that enable the creation of connections among participants separated by worldview differences, we begin to see how these rituals enable the transfer of concrete information. This shift in focus from tangible to intangible means suggests that when worldview

differences are significant, the effectiveness of the process may depend on symbolic means such as rituals.

Our study suggests that the process of knowledge transfer is best captured by a mix of relational and informational work, just like other complex change process (Feldman and Khademian, 2007).

Furthermore, we show that there are at least three ways in which rituals, as relational work, enable informational work. First, we found that rituals temporarily bracketed worldview differences, and thus addressed the main impediment to the knowledge transfer process. Bracketing meant maintaining awareness of differences, while refraining from attempting to hide or reconcile them. In this, bracketing differs from strategies for addressing worldview differences that have been identified by the literature of organizational change: decentering (Quick and Feldman, 2014), concealing (Mair et al., 2016), and downplaying differences (Langley et al. 2019) are all avoidance strategies imposed by the obdurate nature of worldview differences. In contrast, bracketing includes unapologetic affirmations of values which thus provide reassurances that the group and its values are not threatened. It also involves participants' restraining from contesting opposing values, thus providing indications that the knowledge transfer process can proceed. Like decentering, (Quick and Feldman, 2014), bracketing did not activate differences; nonetheless, unlike decentering, bracketing was observed in encounters dominated by relational work, where participants maintained their roles and authorities.

Secondly, we found that rituals modelled collaboration between farmers and agents who thus co-produced a pattern for their future working relationship. In our setting, as farmers and agents took on the roles of ritual participants, their actions became preordained by the sacred and fell in alignment. Alignment created by non-ritual means such as common roles and protocols has been found to be important in change processes (Oborn and Dawson 2010). However, alignment created by means of rituals has the advantage of being established and publicly demonstrated, which facilitated concurrent and subsequent informational exchanges.

Thirdly, rituals facilitated further informational work between farmers and agents by packaging new knowledge in public displays of compatibility. In spite of enduring differences in worldviews, rituals such



as use of fables and performing presented agents' and farmers' knowledge as compatible. Such rituals acknowledged others' perspectives (Oborn and Dawson 2010) and translated meanings in multiple directions (Quick and Feldman 2014). The symbolic demonstration of knowledge compatibility rendered farmers' participation in the process legitimate and thus enabled the subsequent, dyadic meetings when the majority of concrete agronomical and managerial content was to be transferred. The three functions of rituals worked together in enabling the transition from relational work to informational work: at the same time as the worldview differences were upheld, common ground and compatibility were established in front of the entire community.

Our study also sheds new light on the types of interactions needed in knowledge transfer process. Rituals as the core of the relational work we observed took place in large gatherings, including representatives of both worldviews. The finding that group interactions are important sites for relational work contrasts with the focus on dyadic interactions, found to be the locus of knowledge transfer (Bechky 2003a, 2003b; Carlile 2002). While we confirm dyadic interactions as essential sites for informational work, our study also shows that group encounters were the key first step, and served as the foundation of the entire knowledge transfer process. They were not only the predominant site of relational work but also the site of informational work. Previous studies have suggested that group interactions have a role in generating acceptance of others' knowledge (Carlile 2002), that the emergence of cross-positional collectives is essential in relational spaces (Kellogg, 2009); and that numerous actors need to be involved in reflective interactions (Bucher and Langley, 2016). Nonetheless, our work goes further by showing that symbolic action is probably the main reason behind the significance of group settings. Since both worldviews and knowledge are embedded in collectives, collective means are called for in order to develop an orientation to worldview differences as opportunities for connection rather than as obstacles; collective means are also called for in order to discharge obligations and legitimize engagements with novelty.

Our study offers a richer, more complete understanding of the knowledge process than existing studies that have explored Western organizations; and thus portrayed a more transactional picture

involving exchanges of concrete information (Szulanski 1996) and the use of tangible means of achieving common ground in dyadic interactions (Bechky 2003a, 2003b; Carlile 2002, 2004; Orlikowski 1992; Metiu and Rothbard 2013). By contrast, our work offers an alternative, richer understanding of knowledge transfer as an entanglement of both relational and informational work; relying on both tangible factors such as boundary objects and symbolic actions such as rituals; and involving a variety of interactions, small and large. This is not to undermine the significance of informational work and boundary objects. It is paramount. A knowledge transfer process devoid of informational work would rob relational work of its purpose. Informational and relational work carried out with no resort to boundary objects, would make it impossible to arrive at shared meanings. For instance, agriculture agents used sticks to demonstrate to farmers the spacing of 40cm that needed to be observed when planting. In the absence of those objects, agents would have found it difficult to connect to farmers; and farmers would have been at a loss grasping the meaning of the instruction to plant at 40cm. In sum, both concrete and symbolic means need to be mobilized in knowledge transfer efforts in settings of worldwide differences.

While mostly due to the extreme setting of our study, this main finding applies to many other contexts, including the technical ones more often encountered in organizational scholarship. We can use it to reinterpret the example mentioned earlier, of the mechanical engineer Mick who used drawings as boundary objects in connecting to the community of design engineers (Carlile 2002, Tsoukas 2009). Analyses of the example tend to overlook the fact that the drawings alone were not sufficient to instigate the transfer of knowledge between Mick and the community of design engineers. To placate the underlying differences between himself as a mechanical engineer and the community of design engineers, Mick resorted to symbolic actions. He attended the periodically re-occurring review meetings and he adhered to the formal nature and proceedings at those meetings. In his presentation to the community Mick foregrounded design engineers' concerns, and he also included into his sub-assembly proposal elements that in the past had generated "great success" stories (Carlile 2002:450). Such symbolic actions – notably performed in a group setting -- established connections between Mick as an assembly engineer and the community of design engineers; and propelled the informational exchanges that followed.

Clearly, knowledge transfer requires not only informational work but also relational work; not only boundary objects but also symbolic actions; not only dyadic encounters but also group meetings.

Our study shows how the rituals that we observed in group interactions and the relational work they accomplished, enabled informational work in subsequent dyadic and small-group interactions where the bulk of agronomical knowledge was transferred. Nonetheless, we do not mean to overstate the role of ritual in enabling informational work. Rituals may lead participants to assume that there is more alignment of interests than there actually is (Bell 1992: 206). In our context, while meaningful practical engagement with new knowledge occurred as a consequence of relational work, underlying incompatibilities and conflicts persisted. Understanding how enduring are the connections created via rituals is a matter for further research. Exploring such themes is particularly relevant when we view knowledge transfer not as an instantaneous and costless event but rather as a “laborious, time-consuming, and difficult” process (Szulanski, 2000: 10).

### **Rituals in Organizations**

Our study shows the active role of symbolic action, exemplified by rituals, during knowledge transfer. This finding enriches understandings of symbolic actions in organizations by standing in contrast with existing management scholarship which, while recognizing organizational life as rife with rituals (Van Maanen, Eastin and Schein 1977; Trice and Beyer 1984), has largely seen rituals as mechanisms for the maintenance of existing institutional arrangements (Meyer and Rowan 1977), as obstacles to change (Dacin et al.2010), and even as meaningless performances by insiders (Boje 1995). Our work shows that when used skillfully, rituals are not only capable of reducing existing tensions, but they can also generate momentum for further change and learning. In our case, the rituals taking place in group encounters were followed by a whole host of smaller interactions during which instrumental changes to farmers’ practices were introduced.

The finding that the symbolic significance of rituals can be leveraged towards practical concerns extends the anthropological literature on rituals (Bell 1997; Gordon-Lennox 2017; Turner 1975), which

has largely focused on the symbolic meanings and the social functions of rituals. Scholars of ritual have shown that ritual encounters can mix closed forms such as salutes and pledges, and open forms in which participants particularize the encounters according to the purpose of the day (Meyerhoff 1977: 202). Our work takes this insight further, and shows that sacred elements of closed form (e.g. prayers, gifts, etc.) could enable secular exchanges without predefined form (e.g. how to open a bank account etc.). This alternating structure is precisely what led to farmers' subsequent engagement with, and acceptance of the new agronomical knowledge. Our findings about the significance of the sacred in unlocking the secular in a very pragmatic, purposeful setting – knowledge transfer in a challenging context – suggests that it is worth examining with a ritual lens other organizational settings and work processes where the secular may be modulated by the sacred. For example, secular decisions about operations, investments and hiring are often enabled by highly ritualized meetings, visits, and statements.

Our findings about the centrality of symbolic action in knowledge transfer were largely based on our agriculture development setting. Nonetheless, we see the further examination of the role of rituals as an important avenue for further research into knowledge transfer and other organizational processes. Contexts where knowledge transfer is obstructed by differences – even if they are not nearly as extreme as in our setting -- can also benefit from closer attention to the use of ritual as relational work. For instance, studies of ritual use could benefit mergers and acquisitions, which can be plagued by divisive perspectives (Chatterjee et al. 1992; Nahavandi and Malekzadeh 1988). In addition, rituals may facilitate cross-cultural collaborations; research shows that even in Western, technical settings, storytelling (Orr 1996) and presentation rituals (Kunda 1986) play substantive roles in organizational processes. Enriching this tradition, our work suggests that secular rituals such as visits to and from top managers, or public affirmations of common values and commitments, have the potential to bridge group boundaries, contain conflict, and stimulate dialogue. Thus, despite our unconventional context, our findings have broad relevance to a range of settings.

## **Management Scholarship and Practice in Africa**

Our study shows how knowledge transfer can be practiced in the extreme setting of African agriculture development, where farmers and agriculture agents are separated not only by deep boundaries in terms of vocabularies, meanings, and interests, but also by the buildup of inequalities and differences between traditional and contemporary, urban and rural, Western and African worldviews (Dessein 2000; Bhabha 1994), and where relationships are often molded by factors such as spirituality, indigenous philosophies, histories of colonialism, or cultural practices (Barnard, et al 2017). Our findings about the importance of rituals in knowledge transfer show that an unusual context can provide rich opportunities for theorizing (Barnard 2020). Our insights were also the result of a humble, respectful, yet rigorous treatment (George 2015; Nkomo 2011; Walsh 2015), whereby we strove to capture the fullness of rural life, including the complexity of its inhabitants, their traditional worldviews, and indigenous knowledge, and to overcome the ignorance of “otherness” (Said 1978; Spivak 1988) that sometimes plagues academic research.

Our findings regarding the primacy of symbolic action, manifested in rituals, should be of practical relevance to agencies committed to propelling African farmers on their journeys towards improved agronomic practices. We would urge educators, businesses and development agencies that strive to transfer knowledge – including scientific, vocational, and managerial – to the African continent, to prioritize symbolic action and relational work as foundations for learning. At the same time, our results about the value of longstanding relational approaches for addressing the challenges of poverty and food security in rural Africa pose a challenge to the premise in the management discipline that tackling “grand challenges” mandates radical ideas and unconventional tactics (Colquitt & George, 2011; Eisenhardt, Graebner, & Sonenshein, 2016; Ferraro, Etzion, & Gehman, 2015). The rituals we observed in Northern Ghana produced results precisely because they were neither bold nor unconventional. As global challenges manifest themselves disproportionately in settings less familiar and less well understood by the management discipline, we encourage scholars to seek out enduring, rather than radical and unconventional, approaches that may be capable of producing beneficial impacts.

## CONCLUSION

Our ethnographic study in a development context alerted us to the importance of rituals as symbolic actions in knowledge transfer. The process we uncovered was complex, including relational and informational work, and involving a diverse set of interactions. While our focus in this paper has been on the group encounters in which most relational work took place, these were followed by more mundane interactions focused predominantly on informational work. The knowledge transfer depicted in this paper calls for the development of a multi-layered approach that could account for the complexity of the knowledge transfer process we encountered. Future work on knowledge transfer needs to account for the role of the multitude of factors that support knowledge transfer, tangible as well as intangible; and it also needs to examine the entire ecology of interactions that shape successful knowledge transfer, group-based as well as dyadic. Such complexity was needed to support the different phases of the knowledge transfer process: its initiation, its maintenance and its progress towards embedding the new knowledge in farmers' practices. As intensity and frequency of knowledge transfer among vastly disparate, geographically and culturally diverse communities increase, building connections across worldview differences is of utmost importance.

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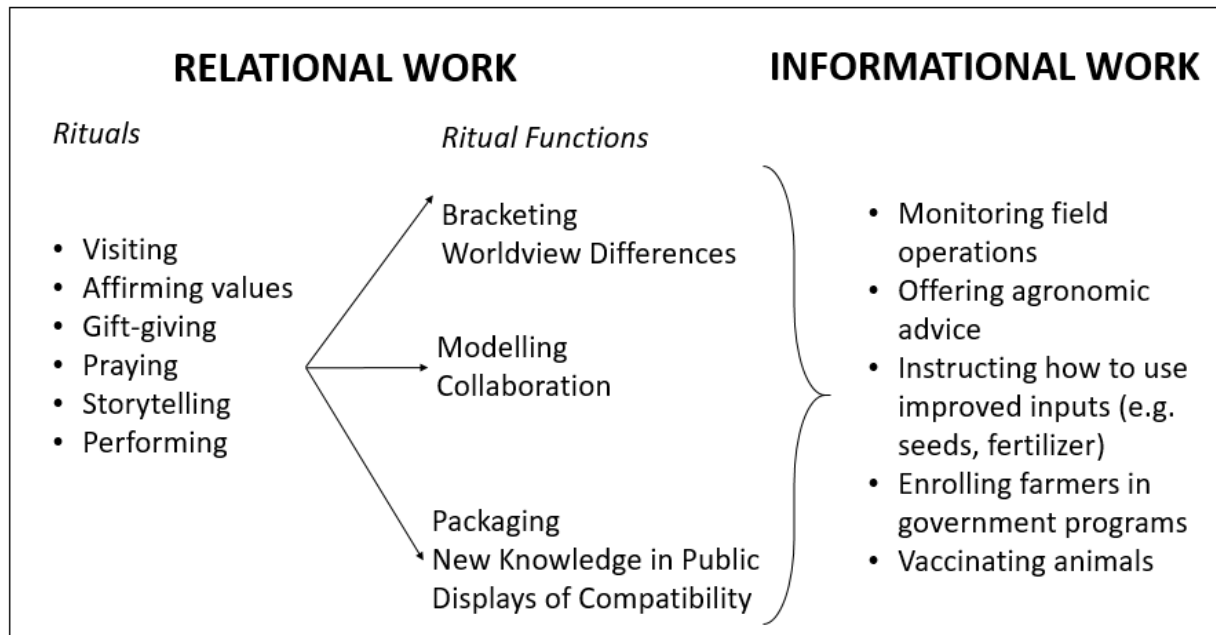
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**Figure 1: Relational and Informational work and Rituals during Knowledge Transfer**



**Table 1: Differences in worldviews**

	<i>Farmers</i>	<i>Agents</i>	<i>Development partners</i>
<i>Worldview orientation</i>	Relational	Both	Transactional
<i>Source of norms</i>	Community, rural culture	Both	Formal organization
<i>Work</i>	Grow crops, agricultural production	Administer support and deliver advisory services in the field	Design and implement government programs and NGO projects
<i>Locus of practice</i>	Physical, material, embodied	Both	Abstract, conceptual
<i>Conceptualization of extension service</i>	Aid paradigm: How to access and use improved inputs in farming?	Operational: How to administer support services and trigger learning?	Market paradigm: How to improve farming practices and business attitudes?
<i>View of agriculture</i>	Way of life	Blended understanding	Business
<i>View of knowledge</i>	Indigenous	Blended (scientific and indigenous)	Scientific

**Table 2: Interview participants**

MoFA	Development partners	
	<i>Local</i>	<i>International</i>
District A (3)	Association of Church-based Development NGOs (ACDEP) (1)	ACDI-VOCA (2)
District B (3)	Presbyterian Agric Services (1)	Engineers without Borders-Canada i.e. EwB (1)
District C (3)	SEND Foundation (2)	International Development Enterprises i.e. iDE (1)
Amansie West DADU (1)	Wienco (1)	
	Golden Stork (2)	
	International Tamale Food Company i.e. ITFC and OMOA (1)	
	TechnoServe (1) and CAA	
	Ghana Agricultural Associations Business and Information Center i.e. GAABIC (1)	
<i>10 interviews</i>	<i>10 interviews</i>	<i>4 interviews</i>

**Table 3: Further examples of rituals and ritual functions**

Ritual	Function	Example
<b>Visiting</b>	<b>Bracketing worldview differences</b>	<p>“While waiting for the women to assemble at the market centre, AEA decided to attend a funeral in the same community. (10:00) We got to the funeral grounds and AEA started greeting and shaking hands with people after which he gave out bottles of Star beer to the bereaved. The bereaved is a farmer and a friend to the AEA, he is the major contact person to the AEA in the community in case of any emergency and he also helps the AEA in organizing farmers in the community. The bereaved invited the AEA to the 40 days mass service to be held in the community and the AEA agreed to attend. AEA said goodbye to the bereaved family and explained to the farmer that he has some work to attend to. The field researcher asked the AEA how frequently he attends funerals in the community and AEA said he attends at least 3 funerals in a year. We then proceeded to the market centre where the distribution was going to take place. Just some few meters away from the funeral grounds. We arrived at the market center and waited for the selected farmers.” (Notes, District B)</p>
<b>Visiting</b>	<b>Bracketing worldview differences</b>	<p>“(2:51 PM) [...] We arrived at the chief’s palace in Natugnia and the agent walked to the linguist<sup>2</sup> to inform him of his mission. After listening to the agent, the linguist informed the chief of the agent’s mission and the chief then invited the agent to come and talk to him. The agent informed the chief they have successfully formed the group in his community and the group will be receiving a package from MOFA very soon. <b>3:15 PM</b> The chief thanked the agent for the assistance he gives the community and the agent asked permission from the chief to leave.” (Notes, District B)</p>
<b>Affirming values</b>	<b>Bracketing worldview differences</b>	<p>“(11:38) AM DAO asked the farmers whether they had local groups such as drumming groups in the community. The farmers said yes. DAO asked them how they selected their members. The farmers said they would look for honest and dedicated people. DAO encouraged the farmers to use the same approach to select their farming groups. He encouraged the farmers to form cohesive groups and contribute to open accounts at the bank to support the activities of the group. DAO told the farmers that he wanted to see changes in their lives so that the whole Ghana would hear about the community. DAO also encouraged them to put whatever technologies transferred to them into practice to get better returns to their investments.” (Notes, District</p>

<sup>2</sup> The “linguist” (okyeame), or “community chairman,” is an important and respected office in the Akan chieftaincy system. In English, the office is better understood as a spokesperson. Since the chief is the embodiment of the ancestors, out of respect, one may not address the chief directly, but rather must make a statement to an okyeame, who will then speak “the language of the dead” to the chief (Canada 2003).

		A)
<b>Affirming values</b>	<b>Bracketing worldview differences</b>	“AEA asked the Farmer about the Block Farm loan and he said he has not forgotten about it. AEA told him this is a farming season and they should pay and the Farmer indicated that they are trying to raise money to pay. The Farmer said he was burning charcoal to be able to raise money to pay 50% of the loan. A female farmer also indicated that she was trying to raise money to pay. Both farmers said they were making efforts to pay so that they can get involved this season.” (Notes, District A)
<b>Praying</b>	<b>Modelling cooperation</b>	“(11:08 AM) DAO took his seat and the meeting was started with a prayer. After the prayer, AEA introduced DAO, the two RAs (SHA and SID) and a woman volunteer at the high table.” (Notes, District A)
<b>Praying</b>	<b>Modelling cooperation</b>	“(11:52 AM) AEA ended the discussion and a closing prayer was said. AEA and SID moved away. AEA said he was going to be visiting farmers in their farms to see what they were doing and also to offer technical advice where necessary.” (Notes, District A)
<b>Prayer</b>	<b>Modelling cooperation</b>	“(12:00 PM) DAO said in absence of any comment, he is actually disappointed that the farmers did not apply all the technologies, especially planting in rows. The meeting ended without any prayer.” (Notes, District A)
<b>Gift giving</b>	<b>Modelling collaboration</b>	“(10:19AM): The district agent, the veterinary agent, the Community Livestock Man, and the field researcher went to say good bye to the chief. The chief prayed for the district and the veterinary agents. The chief also gave the two agents some eggs and GHc10.00 as a sign of appreciation and gratitude for the service rendered. [The agent accepted the gift with thanks and made his way to the veterinary clinic].” (Notes, District C)
<b>Gift giving</b>	<b>Modelling collaboration</b>	“The Vet TO further explained to the field researcher that the farmer normally de-worms his bulls every raining season. Vet TO finished and the farmer entered his room and came out with money and some eggs for the service rendered.” (Notes, District A)
<b>Storytelling</b>	<b>Packaging new knowledge in public displays</b>	“(11:24 AM) Talking about thinning, the DAO also throw more light about it and related it to real life situations by saying that, if you give one Full bowl of food to 5 children to consume and same quantity to only 1 child to consume, in about one week time you will realised the one child who consume the full bawl of food will be growing well and feeling better than the 5 children who took the same quantity. The same, he said, applied to the crops or plants, if you have more than 2 plants in one hole; these plants will be competing and at the end of the day they will not get the right nutrient since all of them will be sharing and that could result in a low yield.” (Notes, District A)
<b>Storytelling</b>	<b>Packaging new knowledge</b>	“When a bird approached the bat and asked for help, he showed his teeth and said that he’s an animal so he won’t help. When an animal approached the bat and asked for help, he showed the animal his wings and said he’s a bird so he won’t help. Later the bat had a death in the family. He went to the animals for help. The animals said no. He went to the birds for help. The birds said no.” (EwB, Agriculture As A Business, Curriculum 2.0)
<b>Performing</b>	<b>Packaging new knowledge in public displays</b>	“(12:00 PM) Some farmers told AEA that an NGO registered and promised them fertilizer and they could not fulfil the promise on time. Eventually they ended up giving them money to buy the fertilizer after the application period has passed. So AEA should endeavour to note the offer on time. AEA asks for permission to leave and attend to another group. Farmers clap for AEA. He thanks them and gets on his motorbike and leaves.” (Notes, District B)



<b>Performing</b>	<b>Packaging new knowledge in public displays</b>	“(11:23 AM) During a group meeting, the DAO explains that the products the farmers got on credit will still have to be paid back. Those who refuse will be handed over to the police for prosecution. DAO relates the issue of recovery to another real life situation by saying that, if you go to a beer bar operator and buy 1 gallon of Akpetashie [Ghanaian alcoholic drink] for credit to give to your labours in your farm to later pay back, if after that you refused to pay back do you think if you go back again you will get it? All the farmers burst in to laughter.” (Notes, District A)
<b>Performing</b>	<b>Packaging new knowledge in public displays</b>	“11:22 AM Group members are all seated, ready for the briefing on the Block Farm system. AEA introduces the field researcher. AEA introduces the Block Farm concept and the benefits [it offers] to farmer groups. Farmers look cheerful. 11:36 AM Farmers ask question about the repayment. AEA bends down to write on the floor to explain to the farmers [how repayment works]. Community leader chips in a joke which generates laughter. AEA continues to explain the legal issues involved if groups are unable to pay back.“ (Notes, District B)