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**SENSEMAKING IN SMALL FARMING
STORIES: KNOWLEDGE CREATION
IN CREA GROUPS IN ARGENTINA**

A thesis presented in partial fulfilment of the requirements
for the degree of

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ABSTRACT

Within the paradigm of practice-based knowledge, this thesis presents an in-depth study of a farming community in Argentina, the CREA (Regional Consortium of Agricultural Experimentation) Movement. CREA is a farming network consisting of 190 groups, with an average membership of 13 farmers per group. These farmers get together on a monthly basis, and with the guidance of an *asesor*, they exchange information and share experiences.

I use the notion of knowledge as something flexible and changing, which is created in the actual practice of doing things, enmeshed in the everyday life of (in this case) farmers. By approaching knowledge from this perspective I used small, ordinary events to look at the organization. The methodology followed uses stories told by interviewees as central moments of sensemaking (Weick, 1995). I analyse stories as entry points to study how members belong to these CREA groups and how these groups work. I rely on sense making in a two-fold way throughout this thesis: firstly as the theoretical framework to understand how CREA members look for meaning in their practice; and secondly by reflecting on my approach as a researcher studying such processes.

The primary data for this study was 27 in-depth interviews and ethnographically oriented observation of 26 CREA meetings. These data were complemented by archival data, which was also analysed. I observe that when the process of sensemaking is started, it is done within knowledge of the world that already exists, which sets particular boundaries to that exercise of sensemaking. Knowledge, in turn, is influenced and recreated by sensemaking. I conceptualise organizational change as the normal condition of organizing. In these circumstances, sensegiving and sensemaking stories were found to be important in handling and creating instances of stability. The analysis of dualities shows how tension can be functional and productive for the growth and development of an organization. Further, in my analysis of stories I discovered that old stories can be told in new ways and be adapted to the changing needs of its members. In this retelling, stories become effective tools for reassurance and collective identity building.

Considering the (knowing) actors in their farming setting was found crucial in that it is their context that very much shapes the characteristics of their knowledge-related experiences. This study may serve as an exemplar in developing a favourable context to surround knowledge creation practices. AACREA has shown a remarkable resilience in surviving in a country with frequent economic and political turmoil. My results show that this organization's survival throughout the years can be partly explained by the relational characteristics of the knowledge farmer members create and recreate.

To my dad, Juan

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“Theses are not finished, they are abandoned”

The elaboration of this dissertation has been the most challenging and testing experience I can account for. It took me long years of effort to accomplish. Overall, I got to value every minute I had for thinking about the topic I chose to study. I personally learned that when you choose a minuscule part of reality and look at it in depth, you feel like Socrates, when you become aware of so much more that you do not know.

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CHAPTER 1: INTRODUCTION

All men by nature desire knowledge (Aristotle).

1.1 Introduction

The topic of knowledge has fascinated human beings of all times. In the last few decades, there has been a renewed concern regarding knowledge issues, presenting it as a competitive advantage organizations need to be able to survive amidst the so called knowledge-based economy (Starbuck, 2006). Without wanting to engage with those (rational) perspectives that consider knowledge can be accumulated in large repositories and stored during long periods of time (Argote, McEvily, & Reagans, 2003), this study presents an area of study of knowledge as something culturally distributed and socially dispersed, available in the everyday practices of a particular organization. The view of knowledge as something situated, provisional and in permanent construction, and its relationship to organizational learning has fairly recently been developed (Brown & Duguid, 1991; Blackler, 1995; Gherardi & Nicolini, 2000).

The approach to knowing (as something in action, “that people do”), rather than conceptualizing knowledge (as something that people “has” or “owns”) says Blackler (1995, p.1023) “draws attention to the need to research ways in which the systems which mediate knowledge and action are changing and might be managed”. This thesis is focused on providing an empirical study that fills this gap.

Across all the knowledge literature and debates, there is a need to focus on the surrounding context that provides conditions to either favour or disfavour the creation of knowledge process in groups, and explore in more depth how this process of creation works. This thesis sets out to study in depth a particular case, the Regional Consortium of Agricultural Experimentation (CREA), which I argue, can serve as a revealing setting for the study of knowledge creating practices.

The main research question I will address is: How does knowledge-as-practice develop in groups? And more specifically, what are the processes of knowledge creating practice in CREA groups of farmers in Argentina? This latter question specifies the broad scope of knowledge creation to a particular theoretical perspective (in practice), in a particular physical place (Argentina), in a particular setting (farming), within a particular organization (the CREA Movement).

Behind my research question there are two important assumptions. First, that knowledge is created or can get created in practice (a theoretical implication), and secondly that there is an organization in Argentina, the CREA Movement, composed of groups of farmers who actually create knowledge (an empirical implication).

The research question that motivated this study is of relevance for the academic world for three reasons. First, it is acknowledged in the literature that there has been a lack of empirical research on knowledge and its relation to practice. Conceptual papers about knowledge are said to outnumber greatly those that present empirical evidence (Argote et al., 2003; Gherardi, 2000; Schoonhoven, 2002; Tsoukas & Mylonopoulos, 2004). Secondly, the unusual setting of farming, relatively unused in the knowledge research literature, also may provide new elements of analysis into the picture of knowledge analysis. Knowledge in farming has seldom been studied in the organization studies literature before.

Finally, I am embarking into studying knowledge through the analysis of contextual factors and sensemaking processes (Weick, 1995). Although knowledge and sensemaking have been linked via the study of human cognition before (Schwandt, 2005), it is a relationship that needs further understanding. I develop in my study the premise that when the process of sensemaking starts, it does within knowledge of the world that already exist, which sets particular boundaries to that exercise of sensemaking. Subsequently, knowledge is influenced and recreated by sensemaking activity. The way we perceive the world and the previous knowledge we have of it, and who we collectively “face” the world with, may affect the knowledge creating attempts that we make.

The research question I am striving to answer is also important for practitioners and those interested in organizations composed by groups to better understand how contextual factors affect (either favour or disfavour) the flourishing of knowledgeable practices. For example, institutions organised in groups, may find useful the understanding that knowledge is affected by the type of relationships among the groups,

or that there may be a collective sensemaking that affects the knowledge creation practices of their members.

1.2 Why Study the CREA Movement

This research presents an ethnographic, in-depth case study of the CREA Movement, an institution that has very particular characteristics and provides a rich empirical setting in which to explore a network of farming groups at work.

The argument for the validity of a case study is now well established within the qualitative stream of literature (Bitektine, 2008; Darke et al., 1998; Eisenhardt, 1989; Eisenhardt & Graebner, 2007). Although the CREA Movement is not a commonly seen organization, Goffman (1959) argues for the utility of studying unusual social situations as a means of gaining insight into the typical, unnoticed nature of social life. His body of work studying asylums, or remote island communities empirically demonstrates the value of his methodological approach. Starbuck (2006) makes a similar argument with respect to organization studies. He notes that the vast body of statistical research that focuses on the average, testing for mean differences, has yielded little relative to the aggregate researcher effort invested. His case study of an exceptional law firm (Starbuck, 1993) provides an example of an alternative approach.

1.3 Uniqueness of Setting: Knowledge in Farming

I live in a farm, in the rural Argentinean countryside. My reflections on knowledge and my relationship to the academic world come from a rural setting, where I live. I am 'linked' to the community of scholars mainly through the use of Internet and by occasional face-to-face interactions in academic conferences. I describe all this because it explains my initial motivation to study this rural organization. I am married to a farmer, who works in a family business related to agriculture, beef and milk production. In seeing him interact with other peers I was drawn to reflect about knowledge in groups in a rural context.

I acknowledge the unusual nature of this setting within the management literature, as farming may be far from being conceptualized as a knowledge-intensive industry, nor farms defined as “knowledge-intensive” firms (Alvesson, 1993; Starbuck, 1992). Other empirical studies conducted on knowledge talk about those professions in which knowledge is their “trade”. Examples of the so-called “knowledge-workers”, are consultants in large multinationals (Crucini, 2002; Werr, 2002), employees at high-tech firms (Alvesson, 1993), or professional service providers such as lawyers or accountants (Robertson et al., 2003). Within this view, knowledge is perceived as a specialist skill, abstracted into particular competencies that are commercialized and valued by the services market. The business management academic literature has not especially focused on farming and knowledge issues, perhaps associating the industry with productive and manual type of labour. Farming has been mainly considered from an agricultural extensionist’s point of view.

I attempt with this study to show how farming can be competitive and enlightening knowledge-wise. I will aim to reveal to my readers the richness of knowledge in practice that resides in farming, perhaps fed by the nature-related circumstances that farming implies. The organization I present as the setting for my study is an NGO that has been working as an information system and knowledge exchange network since 1959. In the 1960s farming as an activity and as a lifestyle was very different from what farming is today. A series of contextual factors such as long distances to travel, precarious roads, and the use of post mail contributed to a setting of great isolation, in which contact among people needed considerable effort to overcome the environment. In addition, this study is located in an emergent country, Argentina, where political and economic turmoil is frequent, which imposes challenges for organizations’ survival throughout time. The reason for my choice is mainly because in the study of this “one-of-a-kind” organization I believe there are lessons that can be learned regarding how these farmers have developed practices to serve their knowledgeable needs in a collective way, adjusting to the time and context they lived in.

1.4 Sensemaking in Farming

The reflections presented here introduce ideas that will be developed throughout the empirical study. Farmers belonging to the CREA Movement have a basic practice in common; they hold a monthly meeting in one of the members' farms, taking turns. In such meetings the host farmers presents his enterprise to other group members. While hosting their CREA meetings, farmers tell their stories, the stories of their farms to thirteen other farmer peers. In doing so, they are making a conscious effort to make sense of their reality, of what happened during the last year, of how things evolved that come to explain the results and the frozen-in-time picture they are showing on that particular day. Important implications are set in motion such as identity issues, personal perceptions of their past, retrospective understanding of events, and how they portray the future, among others. The knowledge they are presenting as new, the results of these sensemaking processes are conditioned, affected and restrained by their previous knowledge of their perceived worlds. As it will be later fully developed, farming context is at the same time a boundary and a space for creation in the telling of their story.

In the light of the theoretical framework employed, these CREA meetings in the lives of farmers were found to be rich occasions for sensemaking. The everyday productive flow of activities is detained; farmers stop their chores and assist in this conscious exercise of finding meaning to their work. Occasions for sensemaking are actively constructed and constitute interruptions in normal day activities "...interruptions are consequential occasions for sensemaking" (Weick, 1995, p.105). Although these monthly "interruptions" are not spontaneous, as they are planned ahead, they are not deprived of the reflexivity and the search for meaning that characterizes every sensemaking process. Sensemaking theory seems to be the perfect frame to study an organization like the CREA Movement because its essence is about the thirteen-member groups at work. In sensemaking smallness "does not equate with insignificance. Small structures and short moments can have large consequences"(Weick et al., 2005).

1.5 Outline of the Thesis

The thesis comprises the following: *Chapter 2* presents a literature review of the topics that are relevant for this study. Areas of interest include different conceptualizations of

knowledge. Knowledge as being objectified is distinguished from the view of knowledge-as-practice and socially constructed. Other areas of interest are covered such as literature on communities of practice, storytelling, narratives and finally a specific section on farming to provide some setting to the organization in scrutiny. I follow Osterlund and Carlile's (2005, p.105) conceptualization of what practice theory is, and I have learned from their reflection on how important it is to understand people's everyday actions in order to be able to study the relations they produce and reproduce. The corresponding theoretical framework I employ is also elaborated and outlined in *Chapter 2*. I draw on elements of Weick's sensemaking theory, together with a narrative approach to understand reality. The framework used to analyze the knowledge practices of farmers working is presented in this section.

A close portrait of the CREA Movement follows in *Chapter 3*. This chapter contains a description of the case study chosen, which is an unusual and complex institution of farmers. By describing the way this NGO works, and particularly by reflecting on its internal culture and history, I believe I provide my readers with an introductory basis to look at farmers' groups at work.

In *Chapter 4* I dwell on the methodology used, how the data was approached, collected and analyzed. In this section, titled *Methods, Sources and the Research Process* I describe the data collection strategy I chose and outline the different sources I used. Finally, I end the chapter with some reflections on my role as a researcher.

The results and discussion sections are presented together in two different self-contained chapters. *Chapter 5* presents a series of dualities -defined as existing and unresolved tensions- that were found throughout the history of the CREA Movement and come to explain the tensions in its process of growth. The existence of these dualities and the fact that they cannot be resolved one way or the other provides the Movement with a creative force that persists till these days.

In *Chapter 6* I provide a reflection on the specific knowledge creation processes of CREA and its main characteristics. I describe the two essential features of this particular type of knowledge, which are relationally based and practically oriented.

Finally, *Chapter 7* closes this thesis with the main conclusions reached, implications of the research and further issues to explore.

CHAPTER 2: LITERATURE REVIEW

“We're drowning in information and starving for knowledge” (Rutherford D. Rogers)

2.1 Introduction

This chapter will present the main ideas about knowledge that are currently at the centre of the management academic conversation, and will then explain the theoretical framework that will be used in this study. Definitions of knowledge and debates on its nature have appeared in philosophy since the classical Greek period (Newell et al., 2002). Knowledge is a topic that has fascinated human beings of all times. I realise that to embark into making any novel propositions about knowledge is a considerable challenge, as it is a popular topic for both academic and practitioner literature. I encounter the same problem that Starbuck (2006a, p.74) had: “Merely mentioning ‘knowledge’ raises problems, for anyone with the temerity to write about knowledge has to confront pervasive disagreement about what constitutes knowledge”.

The first section of the chapter refers to knowledge in general, to how others have talked about knowledge before. I present two different perspectives, knowledge as practice and knowledge as an object and the implications of both theoretical stands. The practice approach draws attention to social relations. Trust is important in the social relations that allow knowledge sharing. I reviewed literature that considers the intersection of knowledge production and trust. Then I consider knowledge in organizations (also called organizational learning), knowledge networks and communities of practice, in order to provide an overview of knowledge related to groups and communities. I also briefly present some research done about knowledge in a farming context.

The second and third sections of the chapter present the theoretical orientation of this thesis. I examine Weickian sensemaking theory as the analytic frame that is used in this study. I explain why the sensemaking tradition seems to be a suitable way to look into practice-based knowledge.

Although I present here a certain order following an academic convention for the way dissertations should be presented I would like to point out that this was a rather iterative process. I went back and forth both in my thinking and in the literature available for consultation. I drafted this chapter and redrafted it many, many times. I did not write the literature review *a priori* before I was embedded in my data. It was such a back and forth process it has been a hard exercise to separate my quotes and referencing from my thinking and application of my data. I close this chapter with the sensemaking and narratives section. Reflecting on my role as researcher I try to present in this chapter the “clean” story of the literature that was used to comprehend the knowledge processes and the way to look into stories of everyday life, which served as tools to look at the organizational actors that were my subjects of study.

2.2 Reflections on Academic Conversations About Knowledge

Knowledge is today a frequently used buzzword, that when not properly defined, can be used to mean anything. The problem with knowledge meaning anything, is that then it can also become nothing (Alvesson & Kärreman, 2001). Several journal special issues on knowledge provided a spectrum of the different dimensions that come to affect it and alternative perspectives from which it was studied (Minbaeva, Foss, & Snell 2009; Argote et al., 2003; Nahapiet et al., 2005; Tsoukas & Mylonopoulos, 2004; Un & Cuervo-Cazurra, 2004).

Knowledge has become the key resource for organizations in determining competitive success in global markets. From a resource-based point of view, knowledge and its management is presented as a critical capability of an organization (Nahapiet, Gratton, & Rocha, 2005; Grant, 1996). Scientific debates are characterized by an important shift of attention to knowledge issues (Von Krogh & Grand, 2000). With the development of the internet among other technologies, knowledge has been “democratized”, leaving its paradigm of scarcity and changing into a paradigm of sharing. What before was the exclusive competence of so-called formal “knowledge producers”, such as academics, universities, consultants and research centers, is now available for other social groups including widespread global communities. Among the variety of factors mentioned to describe the shift are: the democratization of higher education, technological

development and the shifting of production of knowledge to a more “social” context (Nowotny et al., 2001). Knorr-Cetina (1999, p.1) introduces her book on “epistemic cultures” by describing how Western societies are becoming “knowledge societies”, as knowledge has become a factor that affects all areas of social life.

The available positions can be grouped into two main areas about what knowledge is: on the one hand, there is a view of knowledge as a competitive resource for companies, as something that organizations should have. Generally speaking, the knowledge management (KM) discourse refers to knowledge as something that can be managed (stored, processed, transformed, and captured). Knowledge Management specialists talk about knowledge as being a valuable resource that organizations and individuals must develop, manage and control in order to seize its advantages. It is said that organizations are amidst the so called “knowledge economy”. I will call this view “objectified knowledge” or “knowledge as an object”.

On the other hand, there is an alternative position that considers knowledge as something that is created in practice, which is socially constructed. This second perspective, based in theories of social practice, “argue that knowledge includes more than what can be captured in cognition” (Kuhn & Jackson, 2008, p.2). Among other contributions this position brings in the notion of context, spatiality, and agency, as it roots knowledge in a knowing subject at a particular time, in a particular place. This distinction between *knowledge* and the act of *knowing* that Kuhn & Jackson (2008) describe was found very useful as a starting point for this study because I could relate more to knowledge as something in motion and in permanent transition rather than something static.

These two outlooks provide alternate notions of what knowledge is, how knowing takes place, and how knowledge creation can be studied by researchers. The idea is to provide the reader with an overview of these ideas. Although I introduce both conceptions of knowledge as alternatives, they are not presented as the extremes of a smooth continuum but rather as belonging to two different paradigms. These two approaches to knowledge are not mutually exclusive either; they are different visions on something. I need to say explicitly that the vision of knowledge as practice-based does not rule out the existence of formal data or information (more akin to the view of knowledge as an object).

2.2.1 Knowledge as an Object

During the last decade, there was a fundamental change in the conception of knowledge as it started to be considered as one of the main factors responsible for the performance of firms. The new trend forecasted that firms that did not handle their knowledge creation processes correctly would lose capabilities in an ever-changing, unforgiving world. The twenty-first century has been defined as the “knowledge era” (Drucker, 1993). Knowledge is now called a strategic resource for firms and individuals, from a resource-based view of the organization.

Knowledge and its mastery are conceptualized as an organizational capability, which has to be looked after like any other important competence of the firm. Knowledge-related activities are related to firm performance: “Knowledge-based theories emphasize the content of those activities (or what the organization comes to know) as an important explanatory variable of performance...”(Argote et al., 2003, p.vi). Knowledge is within this view a strategic production factor (such as capital, labor or land) that exists and has to be apprehended and owned (Cohen, 2006; Gourlay, 2004; Koohang et al., 2006; Schultze & Stabell, 2004).

Within KM theory, knowledge has become a “manageable commodity”. Knowledge is processed information that can be created, managed and disseminated throughout an organization and among individuals. KM has found great acceptance within the practitioner literature, for example, by consultants who advise their clients in setting up large information databases, giving employee access to it and setting up training and research divisions in firms. The notion of knowledge within this view is that of a commodity that has to be managed and renewed. The routines and activities around these knowledge management practices assume an “objectified” stable view of what knowledge is. Knowledge becomes something concrete that can be owned, commercialized, and stored. Organizations can have intellectual property rights on this “thing” and (although it is created by the work of its employees), it can then exist without them, or despite them. Knowledge has to be managed in this context, its control and administration is deliberate, and coupling it with the previous notion of knowledge as a strategic resource, it is usually the top management of an organization who has a say in knowledge-related matters (Scott & Marshall, 2005; Bouthillier & Shearer, 2002).

Polanyi's widely used distinction between tacit and explicit knowledge, and how this translation process is sometimes difficult also belongs within this epistemological perspective (Van Baalen et al., 2005). Nonaka and Takeuchi (1995) have popularized the use of tacit and explicit knowledge categories into the management literature. Tacit knowledge is present in individuals performing everyday practices. It is the knowledge implicitly used by organizational members to perform their work and understand their worlds (Choo, 1998). As this type of knowledge contains mainly personal, action-based skills, and is very hard to register and communicate, its diffusion is difficult. Explicit knowledge, on the contrary, can be expressed easily as it can be more simply coded. Its diffusion and communication are not problematic for the organization; it can be captured in "records of the past, such as libraries, archives and databases and is assessed on a sequential basis"(Nonaka, 1994, p.17). While *tacit* knowledge is subjective, portrays knowledge of experience, *explicit* knowledge is the contrary: objective, knowledge of rationality (mind) through theory. The challenge for these thinkers is to turn tacit knowledge into explicit knowledge. Based on these tacit/explicit categories, Nonaka elaborated a theory of knowledge creation within the organization by analyzing Japanese companies (Nonaka, 1994; Nonaka & Takeuchi, 1995). Major concerns for managers today revolve around issues such as how to secure their knowledge for commercialization. Consulting firms, for instance, see knowledge as the product of their advice providing services. They are widely considered by scholars as "knowledge-intensive firms" (Newell et al., 2002).

Although the categories of tacit and explicit were found useful among the management literature by many authors, I decided I will not use them in the present study as I agree with critics of these tacit/explicit categories in that there is an over simplification of knowledge and its related issues.

2.2.2 Knowledge as Practice

In contrast to the view of knowledge as something static that can be owned, managed and accumulated, there is an alternative conception of knowledge as something that is in a permanent state of creation, as it is created through practice (Gherardi, 2000, 2001, 2006). A marked increase in the interest of scholars to look at practice has facilitated what has been called a "practice turn" in organizational studies. Gherardi (2009, p.1350) affirms that what many studies of practice have in common is "an interest in the

collective, situated and provisional nature of knowledge and a sense of shared materiality” in very diverse fields. Another point of coincidence in an otherwise heterogeneous field is the criticism of a rationalist conception of knowledge and of the conventional distinction between macro and micro levels of explanations.

Among practice-based scholars there is a concern to avoid the use of the word ‘knowledge’ as a label without explaining what is meant by it, using knowledge as a “taken-for-granted”. I share this concern. I also seek to “unpack the notion of organizational knowledge by exploring the processes and practices through which knowledge is created in organizations” (Gherardi, 2000, p.217). Within this tradition of knowledge-as-practice, knowledge is considered as something flexible, constantly being created and recreated by actors who are the enablers of that knowledge. Tell (2000, p.214) criticized that the word “practice” is sometimes used as a substitute for differences between the notion of individuals and the collective. That is not my purpose here; I will focus on the relational aspect of an individual’s belonging to a collective group that creates knowledge.

My notion of “knowledge-as-practice” comes from the conceptualization that Gherardi (2000, p.214) makes: “Thinking of learning through participation in a practice enables us to focus on the fact that, in everyday practices, learning takes place in the flow of experience, with or without our awareness of it”. The author further writes that practice as a concept articulates both spatiality and facticity: “Practice is both our production of the world and the result of this process. It is always the product of specific historical conditions resulting from previous practice and transformed into present practice” (2000, p.214).

Knowledge as being anchored in practice, rather than an intellectual theorization, cannot be completely owned and stored by anyone, for it resides in the actions of people and in their will to share it. Thus, it cannot be completely conquered as it is in a permanent state of creation and recreation (Donaldson et al., 2005; Osterlund & Carlile, 2005; Styhre et al., 2006). Knowledge from this perspective is something in a constant flowing state, as opposed to static.

Practice theory, Osterlund and Carlile (2005, p.92) write, “looks not only at the recursive dynamics of a given relation but places everyday practice as the locus for the production and reproduction of relations”. We are looking at practices from a relational

perspective. In addition, I agree with Nahapiet et al.(2004, p.464) who affirm that social relationships and knowledge are closely related.

In other empirical studies the notion of practice has been found useful for focusing not on the changing content of knowledge but, rather in the changing use of it (Gherardi, 2000, p.212). In my study, the content of the knowledge farmers create, handle and share is not as important as the processes surrounding their practice. This practice-based conception, in which *knowing* is paralleled to *doing* and learning takes place in the actual occurrence of things, seems to be a suitable framework to approach CREA groups, an assembly of farmers which have learned together in a strong practice-oriented tradition. Tsoukas and Mylonopoulos (2004) talked about “knowledge as work”, stating that knowledge in an organization presupposes work. I instead will talk about “knowledge as practice”, but also in a strong relation to a working activity. In a rural setting, knowledge and practice are intertwined in the daily working activities of a farmer.

To further our understanding of this notion of practice at work, I follow Gherardi when she writes that “Within a workspace, a stabilized way of doing things becomes a practice when it is institutionalized and made normatively accountable both for its practitioners and for those who view it from outside” (Gherardi 2010, p. 504).

Knowledge within this view is considered as a semiotic activity that can be studied by researchers when considering the plurality of artefacts and institutions that can mediate it.

Reflecting about the role of context in other empirical studies, whether it is a Help Call Center at a University (Kuhn & Jackson, 2008), a community of Xerox technicians (Orr, 1996), or safety workers in an industrial building (Gherardi & Nicolini, 2000), researchers mention the empirical context with different levels of importance. I looked at Orr’s (2006) reflection of his work conducted ten years before on the narratives of Xerox technicians (Orr, 1996). He reflected that his work was not about Xerox the organization, but about the work of technicians within Xerox. In addition, in revisiting his work, he now provided additional details of how his background as an anthropologist, his training as a military technician, and his own personal history had influenced his outlook of this particular community of workers. In addition, although he focused on the community at work, he also provided a description of context in how he

perceived the whole organization worked. The following quote reflects the relationship that Orr perceived his subject of study to have with its organizational context:

Apart from the intrusions of management through documentation, parts supply, and policy, the technicians were a relatively self-contained community. It is, perhaps, a commentary on the state of Xerox as an organization that telling the story of the technicians at work did not require a greater part for the organization (2006, p.1807).

Gherardi and Nicolini (2000) look at “safety” on a local building industry trying to identify the disembodied body of knowledge that can be elsewhere applied at other institutions. They warn “this body of knowledge, however, does not produce safety by itself, but only when its put to work by situated actors in situated work practices, and in local interpretations of its meanings and constraints” (2000, p.344). There is an explicit effort by the authors to engage in the actual empirical context, then to extract valuable lessons, abstract them from the particular setting and apply them elsewhere.

2.2.3 Knowledge in Groups: Introducing Trust

The notion that knowledge is generated in groups or teams at work implies that knowledge cannot be considered separately from social relations. Especially in those relationships where knowledge sharing occurs. Although the literature on trust is extensive, I looked for authors who reflected on knowledge production issues. Knowledge generation and the development of a firm’s know-how, at least in an organizational context, are rarely done by a single person. It is instead the result of the activities of a team or a group of people (Newell et al., 2002). Scholars have studied closely the micro dynamics that affect teams (Bogenrieder & Nooteboom, 2004; Cohen & Levinthal, 1990; Postrel, 2002).

The view of knowledge being the single most important strategic asset of a firm has raised concerns as to how to enable that knowledge to flourish and develop. The challenge is that it is not available for a single individual but rather for a number of people.

Nahapiet et al. (2005) describe that “cooperation is the norm”, meaning that sharing and networks will be crucial for the correct distribution and utilization of an organization’s knowledge. Challenging the prevailing assumptions about human intentionality, the

authors are critical of the dominant paradigm that self-interest is the motor of all motivation. Employing an Aristotelian framework for explaining human motives to cooperate and develop altruistic relationships, in their paper, the authors provide an alternative standpoint for describing human motive. Their ideas may serve as an explanatory framework to analyze why some people are more comfortable in a cooperative situation and why others are not. “In the context of knowledge processes, trust leads to the openness, dialogue and the shared experimentation that are so important for innovation” (Nahapiet et al., 2005, p.5). The authors describe that the fundamental question researchers are faced with when examining their beliefs about human intentionality and motivation is – “why, and on what basis, will people be willing to give their time, information and expertise to others?” In order to understand cooperation in more horizontal organization designs, where there is a distribution of knowledge processes and a fading of the line of command, there is a need to revisit human motivation and intentionality (Nahapiet et al., 2005, p.5).

Further, Nahapiet et al.(2005, p.8) claim that human beings strive for excellence: “The assumption underlying a striving for excellence is that the individual is motivated by a broad span of possibilities, which will include the creation of a life of meaning(...)”. In a similar fashion, Senge (1990) affirms that real learning gets to the heart of what it means to be human, because there is a deep hunger for learning as a creative process. Through learning human beings re-create themselves. This concurs with Weick’s (1995) theory of sensemaking, which tries to provide meaning to human actions. Within the issues that affect teams and groups of people working together, trust is considered to be of utmost importance. “Trust is seen to be perhaps *the* most critical element for effective team working and knowledge sharing” (Newell et al., 2002, p.48).

In the literature on knowledge sharing, trust is identified as an important construct. Nooteboom (2002), who wrote extensively about trust, explains why he needs a theory of knowledge: “knowledge and learning have implications for the importance, the basis and the functioning of trust”(p.17). Noteboom then talks about cognitive frameworks: “It is a truism to say that information is not the same as knowledge: to become knowledge, information needs to be interpreted in a cognitive framework” (p.23). He uses one he defines as ‘hermeneutic’, constructivist, or interpretative view. These perspectives basically assume that reality is not an impassive object to analyze, but that interpretation, context and subjectivity influence and shape that reality. In trust

processes, continues Nooteboom (2002, p.24), this is especially true: “It is not what happens in relations so much as how that is interpreted, and how people infer and attribute competencies and motives to people that matters, in the formation and destruction of trust”. The author distinguishes between “reliance” and “trust”. He proposes to use the term reliance when trust includes motives of self-interest (p.192), as

‘Real’ trust, or trust in the strong sense, goes beyond self-interest. Most discourses on trust use the term trust in the ‘loose’ sense, without such distinction. Trust in powers that one cannot avoid or influence is called confidence rather than trust. This applies to higher powers such as god or institutions. (Nooteboom,2002, p.192)

The author mentions something which was found very useful for this study, one looks for diversity in others’ insights and in others’ experiences with the intention to correct one’s subjective perceptions. The “tension of disagreement” is something necessary, something that is part of building trust among a group of people. Nooteboom’s (2002, p.197) theory of cognition’s implication for trust is as follows:

If our cognition is indeed based on categories that we construct in interaction with our environment, then our knowledge is not objective, and our only hope for correcting our errors is to reap the benefit of different insights from others, with different categories based on different experience. The tension of disagreement then is an essential part of the process. (2002, p.197)

Fukuyama (1995, p.25) is another author who writes about trust, bringing in the notion of culture into trust: “Since community depends on trust, and trust in turn is culturally determined, it follows that spontaneous community will emerge in differing degrees in different cultures”. Farming context, in a country like Argentina, is likely to feature trusting relationships. In many rural communities, value is still given to the oral word for doing business, where deals are settled with a handshake and promises are made and kept without the mediation of formal contracts.

2.2.3.1 Knowledge Networks and Communities

Knowledge that circulates among groups, and people connecting with each other, exchanging information and socializing among peers, constitute networks. In the era of

the knowledge information technology, networks and their connections have expanded across multiple organizational sections (Tagliaventi & Mattarelli, 2006). The term “network” refers to “individuals (or more rarely collectivities and roles) who are linked together by one or more social relationships, thus forming a social network” (Gherardi, 2000, p.212). Examples of social relationship links include kinship, communication, friendship, authority. Other networking relationships are more related to alternative organization designs, for example remote located workers within an organization. The result of this commitment and relationships causes a community to exist.

Networks are usually the channels through which a community meets. There is an area of available literature that studies the behaviour of these communities. See for example Van Baalen et al. (2004) who talk about online communities and the willingness or not to participate and contribute to them. A “social network” is defined by Brown and Duguid (2000) as social relations that community members have with each other. Community is an ambiguous term that involves many intangibles, but as the authors write, the notion of “‘sense of community’ is the existence of a relatively dense network of social ties over the specified area” (p.1298).

The popular term “community of practice”, is attributed to Lave and Wenger (1991) and has been used by scholars to indicate groups of people who share similar interests and concerns both within and across organizational boundaries. The authors make the claim that knowledge is embedded in the practice shared in common by the community; within this social view on practice, knowledge is created in the exchange of this production of many. For Lave and Wenger, sharing of knowledge and learning are activities which are constructed by relations among people engaged in a common activity.

Throughout this study I will use the term “network” in its loose sense, using the definition that Gherardi makes of the term, that it indicates the social relationship that relates people with each other.

Furthermore, the term community, which has been so frequently related to “community of practice”, will be used in the sense that Brown and Duguid (2000) mean, where the important thing is the “sense of community”, more than the regulated community per se. One foundational empirical study on a group’s practice was the previously mentioned Orr (1996) who conducted an ethnographic account of Xerox service technicians. Orr studied the stories shared by the technicians about how they performed their tasks and

found in them the depositories of knowledge and wisdom that was shared around the organization. Orr described how groups contributed to learning as individuals listened to each other's stories, paying special attention to the knowledge that "moved" through stories within the organizations, and how difficult it would be to try to disembodify and store such knowledge. The author argues that organizations in general do not recognise the existence of these relational communities in which people work and learn together. If Orr (1996) focused on relationships within a community of practice, Brown and Duguid (1991) looked more at the knowledge sharing processes across such communities, focusing more on the value of socially distributed knowledge that seems to tie the community members together throughout a period of longer time (Osterlund & Carlile, 2005).

Newell et al.(2002, p.119) write that for management practices this community approach is problematic because communities in general do not recognise a boss: "they are responsible only to themselves. Individuals become involved voluntarily because they have something to learn and to contribute". Other criticisms of the notion of communities of practice are more related to the difficulty of delineating the boundaries of the community. "The boundaries of the community are not given by the definition of the term itself but by the community participants' empirical practices" define Osterlund and Carlile (2005, p.95), and further warn that "a 'practice' can be anything anyone can do".

Osterlund and Carlile, citing Ortner (1984) then suggest three questions to help establish a definition of a particular empirical practice that can serve as the theoretical construct to be used by scholars. The three questions are presented in the table below:

Table 2.1 - Questions to Establish an Empirical Practice

Question	Possible Answers
What is taken to be the active unit of analysis?	Historical individuals; social types; groups...
What is the temporal organization of action?	Short term actions; long term activities...
What kinds of actions are taken to be analytically central?	It is the everyday activities; specific tasks; something specially done...

Source: Adapted from Osterlund & Carlile (2005, p.95)

Another characteristics of these communities of practice that was found useful for this study is the fact that the knowledge-sharing takes place under norms of reciprocity – ‘you help me and I will help you’ – and under levels of trust generated among the community (Lave & Wenger, 1991; Wenger, 2000).

Table 2.2 - Questions to Establish an Empirical Practice Related to Present Study

Question	Possible Answers related to present study
What is taken to be the active unit of analysis?	CREA groups, individuals in their belonging to a wider group...
What is the temporal organization of action?	Annual encounters, history of the organization AACREA...
What kinds of actions are taken to be analytically central?	Everyday activities, activities done related to belonging in groups...

Source: Adapted from Osterlund & Carlile (2005, p.95)

The above possible answers are by no means the definite ones; on the contrary they were considered guiding posts in the further exploration of the study.

2.2.4 Knowledge in Farming

One of the ways of relating farming and knowledge can be established through the incursion of management practices into agricultural production. Farm management as a discipline is said to be approximately 110 years old today, however the application of formal business management techniques to farm management is much younger, placed by Parker (1994) around the 1980s.

The notion of knowledge in a farming environment has traditionally been related to scientific research. A substantial part of the literature regarding knowledge and farming refer to the extension and adoption of technologies and innovations (Byerlee & Hesse de Polanco, 1986; Massey et al., 2002; Rogers, 1983, Woods, 2010). Knowledge used to be conceptualized as processed technical information that is brought to farmers through extension agents for its application in the farm (Journeaux, 1998). Literature available covers topics from extension funding policies (Ison & Russell, 2000), a particular adoption of a particular innovation (Bultena & Hoiberg, 1983; Culver &

Seecharan, 1986; Ervin & Ervin, 1982), to farmers' decision making process (Willock et al., 1999; Morris & Evans, 1999). Many studies refer to the improvement of the technology transfer from scientist's findings to farmers' application in practice (Feder & Slade, 1984; Jiggins, 2008). Another major area of research related to agriculture is in the design of political economies (Morris & Evans, 1999).

In addition, there is also another area of agricultural research called on-farm or participatory research (Jiggins, 2008; Doughill et al., 2006; Martin & Sherrington, 1997) and on a similar line, participatory rural appraisal (PRA) (Chambers, 1994a, 1994b). This latter perspective is more open to what farmers already know from their daily practice and researchers working together with them in an effort to understand and improve their particular farming reality (Pretty, 1995; Murray, 2000).

Other older studies also register how farmers learned from neighbours and from the practical experience of other peers (Bala & Goyal, 1998; Hagerstrand, 1967; Rogers, 1983; Ryan & Gross, 1943). Following the argument that a practice-based approach is the best one to look at farming, I concur with Bone (2005, p.25) when she writes that farmers perceive that their practice is best learned "on the job".

Recent literature has also started talking about what has been called as "agriculture of knowledge" (Chaparro, 2000) in which the importance of networks that connect researchers, extensionists, intermediaries and farmers is highlighted. Knowledge management (KM) as a business concept has also been brought into the world of agriculture to describe coming tendencies (Engel, 1990; Burgess, Clark, & Harrison, 2000). Ingram (2008) provides an analysis of knowledge exchange in the form of best practice (BMP) in England, in a study where they have specially analyzed the relationship between the agronomist technician and the farmer.

All these studies have in common that agriculture as a practice is strongly related to land. To talk about farms is to talk about geography (Cloke, 2006). Geography and human sociology are also related to the themes that I am addressing in this study (Woods, 2010). Riley and Harvey (2007a), as the editors of a special issue on farming, describe an "oral history turn" in geographical studies and support the arguments of oral historians as they respond to positivist critiques. They write that they have come to reappraise the "subjectivity of memory" and work with other disciplines (like psychology and anthropology) for guidance to provide meaning to such memories. Riley and Harvey's (2007b, p.394) analysis of how farmers make sense and understand

the changes of their rural landscape have strong resemblances to the methodology adopted in this study. The authors explore the oral testimony of farmers as practice-based and place-bound narratives, arguing that their chosen methodology allows for a more socially enriched understanding of landscape change and the practices associated with it. This area of literature poses interesting debates about historians and sociologists that revalued the importance of looking at other larger issues when studying farmers; issues such as culture (Morris & Evans, 2004), personal stories, the past, context, physical landscapes (Setten, 2005) and such. Although related to my subject of study, its strongly geographical interest is outside the scope of this dissertation.

I found Settens' words (2005, p.74) particularly appropriate when referring to farmers' sense of progress when he says it,

...is practice based and it is around the intimate knowledge of the land that their farming evolves. Thus the landscape needs to be understood as lived and practised within situations that are personal and yet social, private and yet public, of the present and yet of the past and the future. A landscape heritage is thus a practised heritage. That is, the value of the past is embedded in the present practices. (p.74)

Although the context and setting are important to this study and its findings -as will be argued later in the dissertation-, it is not only from an agricultural productivity point of view, nor from a historical geographical perspective that my arguments might be considered interesting.

The perspective of knowledge as practice described earlier in this chapter comes from an epistemologically different root than the available previous research done on knowledge in agriculture. My analysis is more oriented to organizational and social related issues from a managerial perspective, within a social constructionist paradigm, than to the activity of agricultural production *per se*. Further, this thesis is placed in the organization studies literature, not in the farming or rural literature.

2.3 Introducing Sensemaking: Knowledge as Practice?

Among the great heterogeneity of disciplines from which thinkers interested in knowledge-as-practice come, there is another way in which knowledge and learning

have been related to practice in the work of Karl Weick (1969, 1974, 1989, 1990, 1993, 1995, 1998). Weick's research makes a constant allusion to practice and action as a source of theorizing and richness for researchers' thinking.

I found in the Weickian evolutionary (1969) and sensemaking (1995) tradition, an appropriate theoretical framework for the exploration of knowledge as practice because of the relevance that everyday events acquire. Further, I noticed sensemaking theory can be explored in its linkage with knowledge and learning in more depth. It is my purpose to explore this relationship along the lines of research of existing authors who have indeed walked that path (Patriotta, 2003; Schwandt, 2005; Harmer, 2009). Although Weick (1974) made a previous acknowledgement to learning in a paper on organizations as interpretation systems, I found that the notions of sensemaking and knowledge have not been sufficiently related yet.

In addition, an example of a theoretical strategy to look at small groups at work is provided by Weick (1993; 1998) who particularly looks at the micro-processes of groups composed by 9 to 17 members, in trying to understand the sensemaking its members elaborate in particular situations such as a fire disaster. Weick's sensemaking theory is used as a frame to study knowledge, trying to find relationship between the processes of sensemaking of the members of the group and their concrete knowledgeable practices.

2.3.1 Understanding Sensemaking

Sensemaking is the process of social construction that happens when an individual's ongoing activity is interrupted by discrepant cues, and entails a process of retrospective rationalization trying to find meaning and sense on what people are doing (Weick, 1995).

The concept of sensemaking has been used by several researchers as a useful construct to understand organizational behaviour (Gioia & Chittipeddi, 1991; Maitlis, 2005; Marshall & Rollinson, 2004; Patriotta, 2003; Maitlis & Sonenshein, 2010).

Sensemaking tradition has a particular approach to its object of scrutiny, as it focuses on meaning rather than decision making. It is attributed to Weick that wrote about the importance of looking at everyday events, places and questions to gather better data to improve organizational theory (Gherardi, 2006). In Weick's (1993, p.106) words: "The

basic idea of sensemaking is that reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs”. Gabriel (1991, p.858) warns,

“There is no such thing as a theory of organization that is characteristic of the sensemaking paradigm. Nevertheless there are ways to talk about organizations that allow for sensemaking to be a central activity in the construction of both the organization and the environments it confronts”.

It is this particular point that I found useful to use sensemaking as a way to explore knowledge-as-practice, it can be used as a lens to explore knowledge related activities that take place in daily life, taking into account the environment where they happen. To explain his theory, Weick refers to seven properties of sensemaking (1995, pp.17-62) and clarified that although these characteristics are to be taken roughly, they work as descriptive of a process that stands out as something different from other explanatory processes such as “understanding, interpretation and attribution”.

Maitlis and Sonenshein (2010, p.551) further clarify:

Central to the development of plausible meanings is the bracketing of cues from the environment, and the interpretation of those cues based on salient frames. Sensemaking is thus about connecting cues and frames to create an account of what is going on.

As I progressively got to learn more about the CREA meetings, I began to see that when a farmer presented his farm, on the group’s annual visit, he interrupted his daily activities, and was prepared to present and explain his past management decisions and everything that had been going on for the last year. In such moment, the farmer was making a sensemaking effort. When the farmer was presenting “his story” of what had happened during the last year in his farm, he was making retrospective sense of the past. I proceeded to go back to Weick’s seven properties for sensemaking and analyzed those properties one by one, trying to apply their meaning to what I could observe in the CREA Movement. In the following table I describe Weick’s seven sensemaking properties and my understanding of them as I apply them to this study:

Table 2.2 - Weick's Seven Properties of Sensemaking and my Application to This Study

Property of sensemaking	Illustrative quote (Weick, 1995)	Relation to subject of study
1. Grounded in identity construction	Sensemaking begins with an individual sensemaker (p.18). "How can I know what I think until I see what I say?", and contributes to build the identity of the sensemaker as it iteratively develops in reacting and influencing their environment, and their collective group of belonging (p.20).	When a farmer faces his peers in a meeting at his farm, he stands up with a notion of what it means to be a "CREA-farmer", which influences the way in which he presents himself to his colleagues and understands his reality. He constructs his identity in being a part of a larger collectivity (the CREA group).
2. Retrospective	People can know what they are doing only after they have done it. Consequently they can figure out meaning of their actions, but only of actions in their past. How can I know what we did until I see what we produced? In this reconstruction of past events, newly causal explanations are found and specific meanings arise (p.24, p.30).	AACREA as an organization nourished from its tradition and past and retells the stories of its founder in new language and under new lights. Retrospective sensemaking is actively constructed from the past to face the future. In addition, a farmer in his CREA meeting tries to make sense of his performance during the past year, retrospectively analyzing what happened.
3. Enactive of sensible environments	Action is crucial for sensemaking; it is a precondition of it (p.32). People create their own environments and these environments then constrain their actions (p.31). Activities create that which we then interpret (p.38).	This grounding and enactment in environments relates to the focus in practice CREA groups have. Knowledge and its perpetual creation are embedded in these organization members' actions. They learn by belonging, and they learn by doing their farming work and sharing it.
4. Social	"Sensemaking is never solitary because what a person does internally is contingent on others." (p.40). Even monologues presume an audience. What I say is determined by who socialized me and how I was socialized (p.62).	The focus of this study is on the relationships within this network of groups at work that constitute the CREA Movement. The socialization of members and the feeding of a strong internal culture is one of the strongest features of this organization.
5. Ongoing	"Sensemaking never starts...To understand	A "chopped out moment" of past lived experience may very

Property of sensemaking	Illustrative quote (Weick, 1995)	Relation to subject of study
	sensemaking is to be sensitive to the ways in which people chop moments out of continuous flows and extract cues from those moments” (p.43). “The reality of flows becomes most apparent when that flow is interrupted” (p.45).	will be the setting of an interview in which a CREA member makes an effort of sensemaking from his or her past. Another example may be the day that a CREA meeting is held at the host farm, a day is “chopped” out of their everyday productive calendar to explain what happened during the last year.
6. Focused on and by extracted cues	“Extracted cues are simple, familiar structures that are seeds from which people develop a larger sense of what may be occurring” (p.50). What an extracted cue will become depends on context, hence the importance of “local contingencies” and that moment’s disposition.	Extracted cues can be the milestones occurred in AACREA’s history, throughout its development. Little incidents within the slow growth of the organization then proved to be of the utmost importance. They were then considered to be cues and used to make sense of the institution’s history.
7. Driven by plausibility rather than accuracy	Though accuracy may be nice, it is not always necessary in sensemaking. What is necessary for sensemaking is plausibility, coherence and reasonableness (p.61). “Sensemaking is about accounts that are socially accountable and credible”.	In the organizations’ effort of collective sensemaking, accurate accounts are not a <i>priority</i> , but rather that its members can identify with the reasonableness of the process of belonging to the Movement and contributing to it. The focus is not placed on the accuracy of technical, very precise information shared but rather on looking at a common past and sharing similar objectives for the future.

Sensemaking is not about accuracy and exactness, but rather ambiguity and indeterminacy (Weick, 1974). It relates to certain aspects of organizational life such as those things that are “interpersonal, interactive, and (of) interdependence quality” (p.58). Sensemaking is about questions that may sound basic. Questions such as, “who am I?”, “who are they?”, and “who are we?”, and once a tentative answer is provided, the process of sensemaking has started to roll, “because answers need to be reaccomplished, retuned, and sometimes even rebuilt” (Weick, 1993). Sensemaking is essentially a social process, as organization members interpret and construct accounts of their environments in and through interactions with others in order to provide meaning to their realities.

Sensemaking also has an impact in identity issues. Weick (1995, p.23, citing Chatman et.al., 1986) attributes a two-fold identity to the person: “When we look at individual behavior in organizations, we are actually seeing two entities: the individual as himself and the individual as representative of its collectivity”. The author further develops that individuals try to simultaneously react to and shape the environment they face. “There is a complex mixture of proaction and reaction, and this complexity is commonplace in sensemaking” ... “How can I know who I am until I see what they do?” (Weick, p.23). “I make sense of whatever happens around me by asking, what implications do these events have for who will I be?” (p.24). By being in the same environment as others, people start sharing a common ground in which to make sense and to which they feel they belong; and in turn, their identities are also shaped by this space.

From a social constructionist point of view, sensemaking is understood as the effort that people do to try to make things rationally accountable to themselves and others (Gherardi & Poggio, 2007). In doing so, people construct reality in a particular way. But they do so not in merely subjective, individual process, rather it is an essentially social and relational one. Furthering this argument, context and reality as perceived by individuals are in constant construction and reconstruction in their efforts to understand such reality.

Sensemaking and the term organization are both processes that seem to be specially related: “To organise is to impose order, counteract deviations, simplify, and connect, and the same holds true when people try to make sense. Organizing and sensemaking have much in common” (Boje, 1995, p.1000). In sensemaking one tries to organise one’s existence, one’s own life in a way that has meaning. Boje, by using the verb organizing

rather than the static noun organization, conveys the constant negotiation that goes on in organizational life. In addition, “(b)ecause both learning and sensemaking are human cognitive processes that deal with the establishment and interpretation of meaning (Schutz, 1967), they appear to be cut from the same cloth” (Schwandt, 2005, p.175).

Sensemaking has been related to organizing and to human cognition as well.

Sensemaking questions the essential issues around identity processes. It relates to the questions: Who am I? How did I get here? What is my history? It creates and influences the environment where the process takes place. It takes into account the relational nature of human beings; it takes place as a natural process in the mere choice of words and flow of actions of a person; it is related to context; and finally, refers most to reasonableness rather than accuracy.

Weick’s method calls for a richer look on reality, and then attempts to make theoretical sense from this reality. He suggests researchers to stop looking only at complex, big business organizations and add some bite to theoretical formulations by gathering data somewhere else, in the flow of everyday events.

2.3.2 Sensemaking and Sensegiving

Sensemaking theory has been widely used by academics that have furthered the concept into new lines of thinking. For example, Gioia and Chittipeddi (1991) wrote a much-cited article in which they extended the concept of sensemaking and studied situations in which there was a conscious and explicit effort of giving sense to a particular organizational action. The authors describe how a University’s new president’s sensegiving message was the decisive driver for the organization’s strategic repositioning. Their term “sensegiving” brings in notions of power of those people who can influence others’ sensemaking processes. Sensegiving is usually understood as an exogenous reframing of meaning for organizational participants. Gioia and Chittipeddi are attributed as acknowledging conflictive issues such as power struggles and tensions, many times overlooked when considering organizational processes.

There is an alternative line of thinking that believes sensegiving and sensemaking are better understood as recursive, reciprocal and interactive processes (Boje, 1995; Gherardi & Poggio, 2007). In this notion, sensegiving also requires sensemaking by the sense giver. Sensegiving efforts tell us about sensemaking in the organization; or more exactly, about sense givers’ presumptions about participants’ sense. Thus I will argue

that sensegiving is an endogenous activity enmeshed in the ongoing cognition of both sense givers and receivers. I will use sensegiving from this perspective as well, in its reciprocal relation with sensemaking.

Sensegivers probably have more leverage in directing change via the ways they deal with time, identity issues and knowledge flows because these can provide the story elements from which others can make sense of who they are, or what is happening in their worlds. Some will have more access to sensegiving positions and resources providing the opportunities to develop a hegemonic discourse. The interaction of sensegiving and sensemaking may provide one lens for analysing the micro-processes of power dynamics.

2.3.3 Sensemaking and Narratives

Sensemaking is essentially related to narratives and communication because of the need to be shared among more than one person (Brown, 2006). “People who study sensemaking pay a lot of attention to talk, discourse, and conversation because that is how great deal of social contact is mediated”(Rhodes & Brown, 2005a, p.171). Scholars agree on the importance of looking at narratives when talking about sensemaking as sense is generated through words (Sillince & Suddaby, 2008), consequently “people know what they think when they see what they say, then words figure in every step” (Weick, 1995, p.106). However, Weick (1995, p.107) also mentions a space which words don’t completely fill: “words impose discrete labels on subject matter that is continuous. There is always a slippage between words and what they refer to. Words approximate the territory; they never map it perfectly. That is why sensemaking never stops”. This space described by the previous quote is what some scholars may describe as the ‘politics of language’, which enables more complexity and alternate interpretations to individual interpretations of reality. Weick also implies that the use of language connects socially to others; about words: “the words that matter to self, matter first to some larger collectivity” (p.107). And further, people “pull words from vocabularies of predecessors and make sense using tradition”. Through language there is a linkage to a wider community of belonging, to a common past, and to a tradition. In their review, Rhodes and Brown (2005a), name one of the areas of research in organization studies in which narratives have made their contribution, as “Narrative Sensemaking”, describing how sensemaking entails a process of narrativization,

“narratives are structures through which events are made sense of rather than just being representations which convey meaning”.(p.170)

Stories and narratives have been valued by scholars who call for richer imagery in their studies. Stories and their telling belong to the “folk wisdom” world described by Pearce (2004, p.176) in the distinction he makes between folk wisdom and scholarship. Pearce also wishes for a greater intersection between both worlds, and particularly asks for a more thorough examination of this folk wisdom, which is useful in addressing the “real tough organizational problems individuals face”. Presenting a similar argument, Rhodes and Brown (2005, p.167), mention a tension between stories and science. They present stories and science as different forms of knowledge rather than being in separate domains. In their comprehensive review of the extant literature on narratives and storytelling they have grouped research done into five major areas of inquiry: i) sensemaking, ii) communication, iii) politics and power, iv) learning/change, and v) identity and identification.

Narratives were discovered to be a rich source of data in organizations, which contributed to the understanding of things such as internal culture and symbolism. Everybody loves a good story. Humanity has been described as *homo narrans*; a foundational assumption made is that humans are predisposed to think in storied form (Rhodes & Brown, p.171). “Complementing the idea that people in organizations are storytellers and that their stories constituted valid empirical materials for research, a related methodological position soon began to be articulated which recognised that researchers too, are storytellers” (Rhodes & Brown, 2005a, p.169). Storytelling has been recognised in later years as a valid method for exploring reality and as a valuable means for a better understanding of organizations. Among the alternative stories there are:

- stories told in organizations, by organization’s members (Martin et al, 1983)
- stories about organizations and about organization members (Van Maneen, 1988)
- organizations defined as story-telling systems (Boje, 1991a, Currie & Brown, 2003)
- conceptualizing organization studies as a set of storytelling practices (Clegg, 1993; Czarniawska, 1999; Hatch, 1996).

2.3.3.1 Stories help Making Sense

When a person tells how things were, or what happened in their view, their effort to convey meaning to those past events is in a way, exposed. Far from believing that this is

an unequivocal process, I acknowledge the possibilities that the plurality of opinions brings, the impact of a changing memory, the countless variables that cannot be possibly taken all into account, the power or conflicts of competing discourses, and the alternative sides of the story a same episode might have. Like Boje's (1995) metaphor of Tamara land, each individual recounting may have elements in common with other people but it is truly a personal journey. So there are an unlimited number of stories to be constructed from a perceived inter-subjectivity. Each effort to make meaning in this research context will be valuable in painting a richer reality. Sense and meaning are intrinsically linked to narratives, as when people tell their stories they do so in a way that brings coherence and ease to their sense of self and their realities.

Action and experience cannot be transmitted instantaneously, as soon as they occur; they are part of the past. Stories can transmit experience and past learning achievements, although it is conditioned by the particular sensemaking of those who tell the stories. The resulting stories do not duplicate the experience. "Events in a story are resorted and given an order, typically one in which a sequence is created" Zukier (1986, cited in Weick, 1995) provides considerable importance to the narration of stories.

When people tell their stories they try to bring sense and causality in them, that come to affect their perception of the past and who they have become today: "Sequencing is a powerful heuristic for sensemaking. Because the essence of storytelling is sequencing, it is not surprising that stories are powerful standalone contents for sensemaking" (p.129). Among other functions of stories for sensemaking, Weick mentions that they help to add comprehension to reality. Stories enable people to talk about metaphorical things and connect them to their present to provide meaning, and they convey shared values:

It may seem like we are obsessed with stories. In a way that is true, but only because of the kind of data involved. Actions are fleeting; stories about action are not...we must be concerned with what persists when actions keep vanishing. That is the question involving the substance of sensemaking (Weick, 1995, p.127).

The purposeful use of stories as valid points of entry into studying knowledge implies the importance given to oral accounts, to the spoken word. Oral tradition is important and so are "oral histories" (Riley & Harvey, 2007).

2.3.4 Sensemaking: Using Stories to face Change

Weick (1995) writes that sensemaking is a mechanism that individuals resort to when change comes to affect the stability of organizational life. He considered that sensemaking is tested to the extreme in critical situations. Some of his studies revolve around what he termed as “implausible events”, such as aircraft disasters (1990), failures in high reliability systems (1993), or accidents endured by fire fighters (Weick, 1993). Extending the concept of sensemaking I join those authors who claim that change is a constant in organizational life (Gioia & Chittipeddi, 1991; Luscher & Lewis, 2008; Tsoukas & Chia, 2002) that change is ever-present and a part of reality. I will argue that sensemaking, within this view, is used to provide instances of stability amidst such change. The sensemaking process I will be studying is not about unlikely events but rather about an established everyday reality, with moments of sensemaking that come to provide some stability to that ever-changing reality.

Similarly, Leana and Barry (2000, p.753) discuss change and stability as

Simultaneous experiences in organizations, and the forces pushing individuals and organizations to pursue both. We argue that some level of tension between stability and change is an inevitable part of organizational life- a part that poses both opportunities and challenges for participants.

I fully agree with what Riley and Harvey (2007, p.405) write about the function of stories in the management of change done by farmers “oral histories bring forward complex, intricate and unwritten narratives of change, relaying the locally specific, intimate, tacit and experiential knowledge that many farmers have of these changes”. In addition to talking about organizational change, I found the definition of adult learning by Schwandt (2005, p.178) especially useful to relate to how knowledge in practice can affect the person. Schwandt defines learning as a “human process of change that occurs as a result of the interaction of the individual with his or her environment. The change results from the acquiring of knowledge through study, instruction, and experience” (OED, 1991, cited in Schwandt, 2005, p.178).

People change, especially through experience, and from contact with others people learn. Knowledge incorporation causes people to change, to evolve, to acculturate. Knowledge at work, flowing in a particular environment sets an environment of permanent change, the people that are deploying their practice are involved themselves

in that change too. Sensemaking, a personal process that comes to provide instances of stability amidst the changing environment, can trigger moments in which someone reflects on their personal standpoint as to “what do I know now?”, probably with the implicit clarification, “that I did not know before?”.

2.4 Conclusion

Among the current conceptions of knowledge available I present the definition of knowledge that will be guiding this study. This chapter intended to provide a general review of the alternative perspectives on this topic. By adopting the notion of knowledge as something that stems from practice and as something dynamic, I am positioning the present study within a particular theoretical trajectory. The nature of social relationships determines the creation of such knowledge. Furthermore, constructs that were found important in my chosen notion of knowledge -as they shape and influence it- are elements related to trust, tradition, identity issues and context in which that knowledge is found.

One of the contributions I intend to make from a theoretical standpoint is to establish that sensemaking is very much related to knowledge as practice. As Weick (1995) called for researchers to refocus on everyday events, I used his work as the theory to guide my practice-exploration process.

Sensemaking entails a process of narrativization, a relationship over which there is a fairly broad consensus in the narrative related literature. One of the methodological implications derived from this, is that a fairly straightforward way to understand the processes of sensemaking of individuals is by listening to their stories. Stories carry meaning about their storytellers.

Throughout this study I will be trying to understand the sensemaking done by farmers as members of an organization called the CREA Movement , -which is described in *Chapter 3*- an organization that unites several groups of farmers working together. In terms of my theoretical choice, sensemaking allows for interactions at different levels and even within levels, if it may be called so. Essentially relational, sensemaking works in relation with the collective; “Sensibleness derives from relationships, not parts” (Weick, 1995, p.104).

Farmers and their knowledge practices in general are interesting to study because they provide an unusual site for the study of knowledge from an organization studies' perspective. CREA farmers in particular are of interest not only because they belong and work in their own group, but because of the whole system of groups working interconnected. A single group would not be able to generate the massive networking and collective organizational sensemaking AACREA makes of itself and tries to maintain throughout the years.

Although this study is not specifically longitudinal, it does take into account the history and tradition lived by members in the organization and its projection to the future. As argued before, Weick referred to the importance of tradition and the past for present sensemaking processes. Sensemaking reaches out to an essential truth about human beings: namely that they strive to provide meaning to their lives through their relationship with others. Throughout the history of the CREA Movement, farmers showed a proactive initiative to let the isolation in which they were behind, looking for the establishment of relationships that then proved to be very important for their social and productive lives. My focus will be more on stories rather than history. Although strongly related to the past, it is about the present and its meaning that the personal subjective narration is focused.

Finally, I conclude by recognizing that sensemaking is being used in a two-fold way throughout this thesis: firstly as the theoretical frame to understand how CREA members look for meaning in their practice; and secondly in my methodological approach to study such process (I tried to reflect on my role as a researcher using the same process). This second point is developed fully in *Chapter 4, Sources, Methods and The Research Process*.

CHAPTER 3: SETTING THE SCENE,

ABOUT CREA

“It's the law of requisite variety, which says that if you want to make sense of a complex world, you've got to have an internal system that is equally complex”.
(Weick)

3.1 Introduction

In order to understand the organizational context where this research was conducted it is of paramount importance to become immersed in the life of the CREA Movement. In this chapter, I present a detailed description of the salient features of the organization trying to depict as faithfully as possible its active life.

CREA stands for Regional Consortium for Agricultural Experimentation (see glossary in p.155) and its cell structure is composed by groups of 9 to 13 members. These farmers meet on a monthly basis to share experiences and information on each of their farms.

In 1984, Martinez Nogueira, a renowned Argentinean academic, identified four characteristics that defined the peculiarity of the CREA Movement: 1) it is a private institution; 2) it emerged as an NGO, in spite of the official institutions that were developing at the time (for e.g.: INTA, see glossary) ; 3) its doctrinaire content goes well beyond productive matters looking for the integral development of its members; and 4) its working practical methodology has proved to be an efficient mechanism of technology transfer from *asesores* (see glossary) to farmers (Martinez Nogueira, 1984, p.1). With this description, the author acknowledged the uniqueness of the CREA Movement and concluded that the macroeconomic and political circumstances the organization has endured have been critical in its adaptability for its own survival. Many

years of accumulated experience overcoming such challenges have rendered CREA with a remarkable resilience, not commonly seen in Argentinean institutions. This chapter provides a detailed description of this institution that has grown throughout the years to become a complex network.

3.2 About the CREA Movement

The CREA Movement is a private organization, directed and composed by farmers that have been effectively working for over fifty years in the Argentinean countryside. The Movement was initially founded by Pablo Hary, an architect inspired by the French CETA (Centre d'Etudes de Techniques Agricoles) groups, who adapted the concept to the Argentinean reality. The mission of the CREA Movement is “to promote the technological and managerial development of its members, striving, through participative methods, to attain the all-round improvement of producers, rural professionals, and the rural community as a whole” (personal translation from <http://www.crea.org.ar/>). “CREA was born from an essentially practical and winning idea” (F.A.C.R.E.A., 1963, p.7). A CREA group would normally comprise 9 to 13 neighbouring farmers with similar farming and intellectual concerns who share their common productive and managerial experiences. The group would normally work with the guidance of a rural professional, paid by the group members, called an *asesor* (see

glossary). Every month, each farmer takes turns hosting a meeting for the group on his¹ farm and presents information on its production and management. The main objective of the CREA meeting is the sharing of information from the host farm to the rest of the group. The host farmer then asks questions and consults the other members, who work together and provide feedback on what they saw and assist him in solving problems he may have. Farmers work a great deal in preparing their annual CREA presentation. A basic ingredient of work in a CREA group is the open exchange of information, personal experiences and opinions.

The country-wide community of CREA groups is known as AACREA (Argentine Association of CREAs), a private NGO headquartered in Buenos Aires. AACREA was born in 1959 out of the need of CREA groups to communicate and exchange information among them. Today the CREA Movement has around 1950 farmer members organised in 208 groups, advised by 200 *asesores*, organised in 18 geographical Zones of the Argentinean countryside (AACREA, 2010).

The physical territory area farmed by CREA members is 4,709,916 hectares of land (AACREA, 2007) which amounts to 2.7% of the national productive land. Total farming population in Argentina, according to the Censo Nacional Agropecuario (2002) is of 202.423 farmers: therefore CREA members account roughly for a 0.9% of total farmers. Depending on the activities, between 6 and 20% of the national production is provided by farmers involved in the CREA Movement. Overall, CREA members are

¹ Most CREA members have been historically male, a tendency which has started to change during the last decades when more women began studying agriculture related careers and became involved in the management of their farms. I will talk in terms of he/him, to reflect the rather male-dominated environment farming in Argentina.

known to be above average in most of the crops and beef production, a clear indication that they are on the leading edge of Argentine agriculture (AACREA, 2007, SAGPyA). To belong to CREA, one had to historically own land and be accepted by all members of the group (although this is changing, a point which will be developed further in the study). This system of pertaining was considered somewhat closed and elitist by outsiders.

Each CREA group functions in a fairly autonomous way. However, there is a basic format for meetings that is shared across groups. For example, CREA farmers from the north of the country know that if they meet CREA members from another distant province, they will have some basic points of agreement. There is a natural heterogeneity from group to group; however what I present in the following sections are the commonalities found across a range of 11 different groups, collected from selected testimonies in my data. Please refer to *Appendix 3.1* for a description of the sources for the data collected.

3.3 History and Development

The CREA Movement goes back to 1957, when a group of farmers in the West of the province of Buenos Aires, were invited by Don² Pablo Hary to join forces and work together in solving a matter of great concern: the conservation of the soil. The proposal was to regularly meet to exchange their farming experiences, searching for new ways of solving their production problems. This initial group of farmers were the founders of the

² Spanish expression that indicates respect and affection at the same time. I have decided to leave it in Spanish as I could not find the English equivalent for the expression.

first CREA. They named it the CREA Henderson-Daireaux, the geographical region of the location of the farms. The main idea of farmers gathering in groups to work was brought from France by Enrique Capelle, a farmer friend who talked about it to Don Pablo, who in turn adapted the concept to suit the Argentinean reality. Don Pablo saw in the participative group methodology of the French an answer to the isolation in which Argentinean farmers lived. In the foundational covenants of this first CREA, the seeds of the spirit that would be later developed were present. For example, expressions like: “as we are considering actions that are impossible to carry out individually, we propose to come together”; “this should be done in a non-for-profit way”; “we should be providers of orientation in the neighbourhood” (“Acta de Fundación y Estatuto de CREA Henderson Daireaux”, 1957, p.3)” provide an idea of the values upon which the Movement was built. CREA was defined as a “pool of ideas” (F.A.C.R.E.A., 1963), and its members were ‘estancias’³. There was a common saying “that each experience achieved is multiplied by 10 to 12 times its effect and instead divides its costs by 10 or 12” (p.7).

At the time, the Argentinean agriculture was suffering a period of stagnation and farmers were terribly worried about the lack of fertility of the soil and the decreasing production of crops and beef in their farms. A farmer since the 1920’s, Don Pablo was especially worried about the fall of productivity for agriculture and livestock. The first CREA group emerged from a friends’ meeting in March 9th 1957 in *Berseé*, his farm located in the Daireaux district. He would later define that meeting as a real brainstorming exercise, where a simple statement was elaborated, and a “gentlemen’s

³ Spanish word for large farms.

pact” (pacto de caballeros⁴) among its participants was assumed. Martinez Nogueira (1984, p.11) analyzed: “The Movement was born on the basis of previously established relationships which facilitated the starting of the groups, which are socially alike and share common values and perspectives”. The author probably referred to the fact that there were mainly friends with a similar socio-economic condition.

The CREA groups were initially created to collectively address main productive issues. Its meetings soon became a space for personal learning and development through the exchange of experiences. Soil erosion, pasture management, weed and pest control were some of the first productive issues addressed by the first CREA groups. At the time, they were pioneering entrepreneurs in applying technology and sharing production data among them. Soon after, word spread among other acquaintances and new groups started to be formed in nearby areas. In 1960 there were four CREAs formed and they signed together the “Don Roque Act”, which constituted what was first known as FACREA (Federation of CREA groups) and then would become AACREA (Argentine Association of CREA groups). For a timeline following AACREA’s development milestones please refer to *Appendix 1*.

One of the most important achievements of this organization was the incorporation of the managerial notion of economics to the management of the farms. Economic results made possible comparisons among different productions, with notions like gross margin and profitability being applied. A CREA *asesor* at the time, Marcelo Rossi, travelled to France to learn their methods on farm management and brought back to the country this new dimension of the farming enterprise. Many interviewees affirmed that AACREA

⁴ Exact translation from Spanish would be a “horsemen pact” or a “lords’ agreement”, implying that the will and personal commitment were taken for granted as a collective pact based on personal honor.

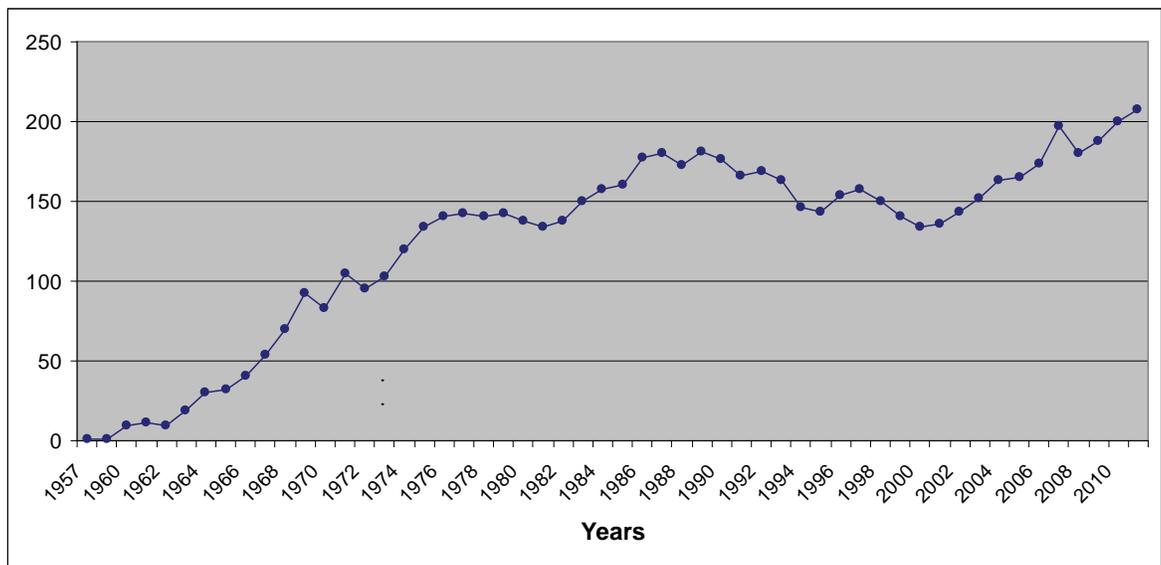
was a pioneer in fostering the use of economic indicators among farmers, to analyze and compare production results.

In 1985, when AACREA formally turned 25 years, the most important newspaper at the time, *La Nación*, wrote: “it is possibly the most efficient and most original institution created to serve the farming sector, the farmer in both its personal dimension and his rural manager dimension, and to serve the whole country”(personal translation from "Los CREA, 25 años después", 1985).

3.3.1 Development of Groups

When more and more farmers started to hear about CREA and word-of-mouth expanded throughout other farming area, there was a significant increase in the formation of new groups. Farmers that wanted to form a group would contact someone from the initial Henderson-Daireaux CREA group. Growth was explosive in these initial times. The following graph presents the evolution in number of CREA groups throughout its history:

Figure 3.1 - Evolution of Number of CREA Groups



Source: Personal elaboration from CREA data.

The most important growth rate (31.5%) is registered from its founding times till 1970. The first groups started effectively spreading the idea around mainly by word-of-mouth. The number of groups has then fluctuated according to different agricultural and

economic crisis that both the sector and the country suffered. The number of groups from 1974 onwards, oscillated around 160 groups. Today (December 2010) with 208 groups and 2029 members, the Movement has the largest number of groups in its history. CREA's massive growth has been difficult, and it has not always been an objective of the institution to spread very fast. In words of some of the interviewees, it was very hard to spread massively something that has been initially very slowly built. There is an internal document known as "Informe Pereda" (AACREA, 1995a), elaborated by *asesores* and AACREA staff during the 1990s, under the presidency of Mr. Pereda, hence the name. The report analyzed the main reasons for the dissolution of groups during a certain critical period, from 1988 to 1995.

Contextual conditions were rough for farmers in those years. The country was suffering macroeconomic problems and those were the years when the hyperinflation index and the fast devaluation of the currency were a historical record. In addition, many farmers from the Buenos Aires province endured large floodings. However, contrary to what the authors of the report expected, the conclusions of the report (which presented members' opinions on the reasons for the dissolution of the groups) were mainly: "lack of commitment, lack of CREA methodology and lack of 'CREA spirit'". There were no references to macroeconomic conditions or national crisis. In second place, another reason was having an "*asesor* without CREA commitment and lacking economic competence, and human relationship problems", and thirdly "poor institutional management, lack of support for the vocal and the groups" (AACREA, 1995a, p. 5). Yet another report on the institutional image of AACREA (Mora & Araujo, Noguera y Asoc., 1996) in a province called La Pampa, showed that 53% of the farmers that had left the CREA Movement was for "failures in the group", "failures with the *asesor*" and "bureaucratic problems with AACREA" (p.15).

From the mentioned conclusions it can be appreciated the importance of an adequate internal culture (what CREA means), of strong relationships of cohesion and trust among members, and of the vital role of the *asesor* for the maintenance of groups during rough macroeconomic times.

3.4 AACREA, the Organization

AACREA was created with the purpose of articulating the existing CREA groups and provide services to them and their members that they could not provide for themselves (i.e. processing the available information, facilitating communication among groups, organizing national congresses). One characteristic of this organization is that all leadership positions in AACREA are voluntary service roles. Its governance structure is based on personal commitment and time dedication from CREA members. This is combined with a team of permanent administrative staff, which is on a salary contract. AACREA is financed by the fees members pay for belonging to their CREA groups, which is a coefficient calculated according to farm extension and production level. Alongside the *ad honorem* structure, there is administrative and technical (in the case of the coordinators of the Zones) personnel that support and provide continuity to the rotation of CREA members through leadership positions.

CREA members can get involved as much or as little as they like in AACREA for as long as they want to, with different levels of commitment and time dedication. This voluntary nature of involvement means that when someone does not agree with the running of the organization they can always very easily leave, and they do. A second consequence is that life stories and experiences leave with them. There is little institutional space for rescuing the folklore, the myths or tradition other than by oral testimonies in the association congresses, the informal storytelling that occurs in the legacy from father to sons, or the traditional word-of-mouth circulating among friends in CREA groups.

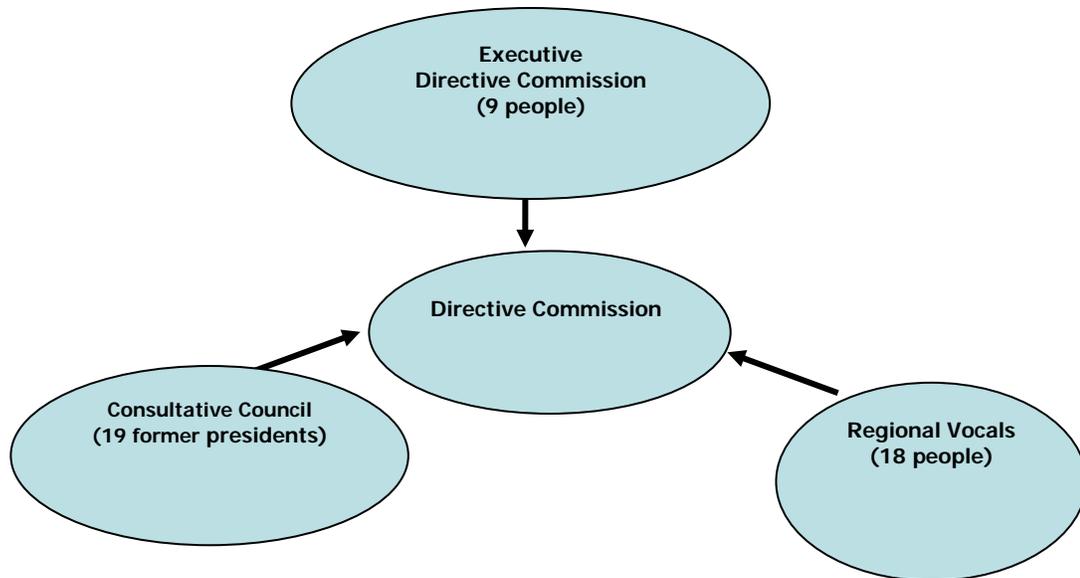
AACREA's governance presents today a structure which was created and modified throughout the years, adapting to its changing needs and organic growth. The directive commission makes all major decisions in the institution and is composed by:

The Executive Directive Commission, (also called Reduced Commission) comprising the president of AACREA, its vice-president, secretary, prosecretary, treasurer, protreasurer, two vocals and two substitute vocals, and two treasurers.

The Vocals (that represent the different Zones)

The Consultative Council, composed by AACREA’s former presidents, meets on average twice a year and is summoned for strategic decisions in the Movement. It works as an Advisory Board for the current Executive Directive Commission. The following Figure shows a diagram of AACREA’s governance structure.

Figure 3.2 - AACREA’s Governance Organization Chart



Source: Personal elaboration from information on CREA’s website

AACREA has grown over the years into a rather complex organization with specific technical commissions such as Farm Management, Beef Production, Milk Production, and Cropping, each with their own coordinator and team members (personal communication with B. Alvarez de Toledo, September, 30th, 2006).

Each area processes the information provided by CREA groups, and in turn gives back to the groups the data in the form of average yields, Zonal and National statistics and so forth. In addition, there is a permanent publication of bulletins with the latest updated technical information which are released periodically.

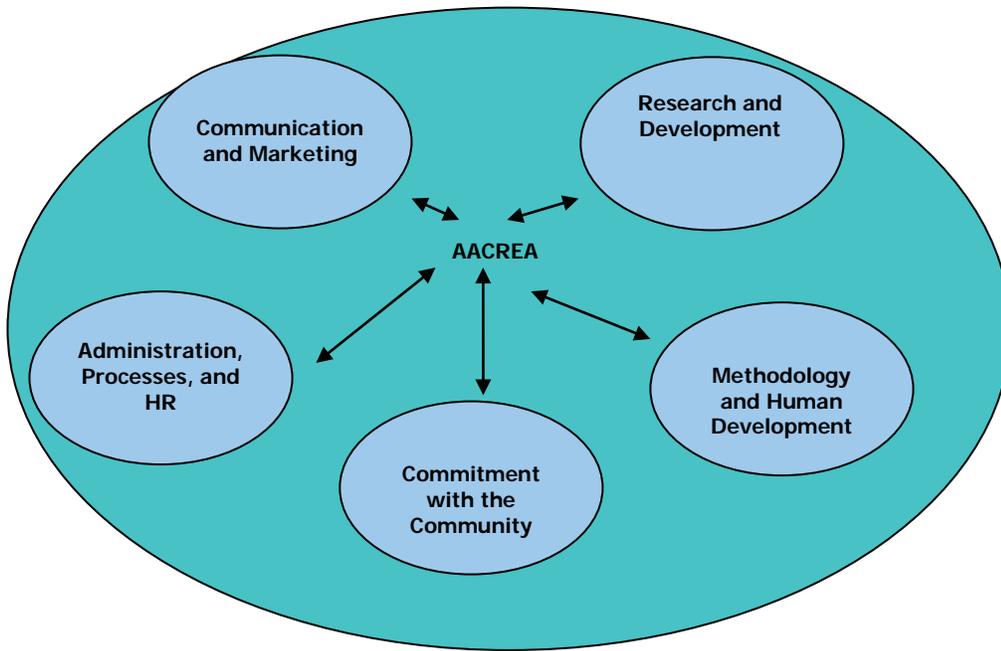
Recently reorganised into a network structure, although keeping the described governance structure, AACREA has organised itself in a project-oriented organizational form. It currently presents five organizational units, each led by a two-member team, a voluntary leader (CREA member) and a staff member on pay (AACREA, 2008, 2010).

The organizational units are:

- *Communication and Marketing*. Provides institutional services to members, manages the internal communication publications, press, marketing relationships, event organization and sponsorship.
- *Research and Development*. Includes the four technical production commissions and in addition all-member projects related to weather outlook, remote sensing information, information services to members, knowledge management, macroeconomic indexes, software management technology, among others.
- *Methodology and Human Development*. This working unit has the responsibility of the institutional aspect of the CREA Movement. It includes the relationship and communication with the Regions, the development of new CREA groups and the consolidation of existent groups. Handling the relationship with CREA members and providing courses for *asesores* are also part of their responsibility.
- *Administration, Processes and Human Resources*. This unit is focused on the internal staff of AACREA and in providing services to all the rest of the projects, such as budgeting, assessment in membership management, and so forth.
- *Commitment with the Community*. This unit is responsible for social projects related to education (EduCrea), training of community leaders (Leader's Programme) and other social responsibilities (Creating Trust Programme).

In addition there is an area called *FundaCREA*, which is a foundation created in 1981 with the purpose of fund-raising for the initiatives of the Movement. From the 1990s onwards, *FundaCREA* centred its efforts in further educating CREA members through the provision of courses. It is an option available for all CREA members and outsiders as well.

Figure 3.3 - AACREA's Organizational Units



Source: Personal elaboration from information on CREA's website ("La asociación", 2010)

3.4.1 CREA Zones or Regions

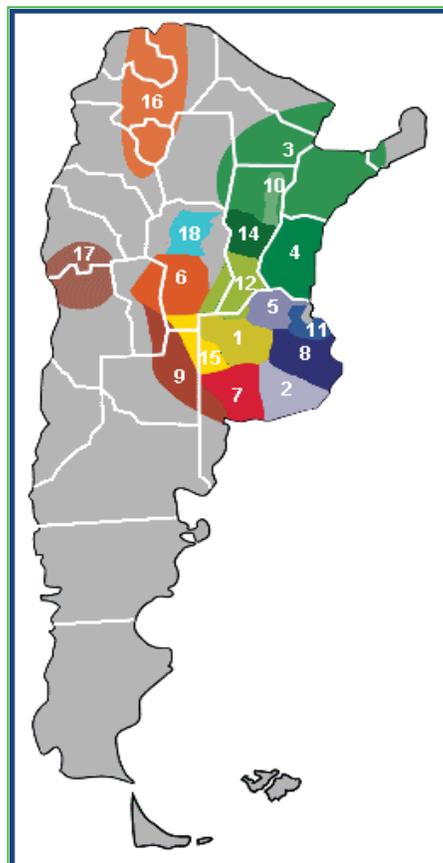
Growth in numbers brought in complexity and the need for organization. Soon productive and geographical differences started creating communication problems among the first CREA groups. AACREA's headquarters based in Buenos Aires, in the capital of the country, were found to be too remote for farmers in the centre of the country (commonly called "the interior"). Members demanded more face-to-face interaction.

The institutional structure of AACREA was pressured by the demands and the growth in the number of groups: soon the idea of dividing the country into Zones (see glossary) or Regions started to emerge. The "zonification" addressed two main problems, one was to concentrate people with similar production and climatic conditions, and the other one was to establish a better communication system between the CREA groups and AACREA. A small cadre of officers followed this development, with a volunteer officer per Zone (called a vocal), later supported by a paid coordinator who mainly works with the *asesors* and is more in charge of the technical themes.

The National Congress held in October, 1970, was the milestone when the staff of AACREA together with the *asesors* introduced the geographical division of CREA groups. During subsequent years the development of such structure took place. The *asesores* had worked in delimiting the Zones according to their information from the various groups. Zones were initially named according to their geographical location *vis a vis*, Buenos Aires: “Buenos Aires North”, “Centre”, “West Zone”, “East”, “Southeast”, “Central Zone”, “Sandy West”, “South West” and so forth. Later on, around the mid-1970s, the distinctive geographical location was the label for the name of the further growth of Zones: “Chaco Santiagueño”, “Cordoba North”, “Valles Cordilleranos”, “Semiárida”, “Litoral North”, “Litoral South”, “Mar y Sierras”, “Santa Fe North”, “Santa Fe Centre”, and “Nor Oeste Argentino (NOA)”. This is an important detail because territory and geographical pertaining has countless cultural implications for farmers, a point which will be developed further in this study.

Figure 3.4 shows the Zones throughout the Argentinean territory indicating as well the amount of CREA groups in each Zone:

Figure 3.4 - Map of CREA Zones in Argentina



Source: AACREA (2009)

Today the CREA groups have grown to 1950 (AACREA, 2010) and are divided into 19 regions. The *asesor* meetings which were held all together in Buenos Aires were divided in Zonal divisions with a coordinator assigned per Zone, to prevent Zonal members from travelling so much. The Zones are expected to do everything that CREA groups cannot do for themselves. There are different levels of autonomy and institutionalization of Zones. Zones were designed to make AACREA more accessible for members, to decentralize what was considered to be a quite centralized organization. According to Alain de Blay, a Frenchman who came to Argentina in 1972 to assess the Movement and help its de-centralization process (Ibarguren, 2006, p.29) AACREA sought three main ideas with the regionalization process:

- a) the Zone as a human scale structure: people would naturally meet with others in the same geographical Zones, because they share production and climatic concerns and they could easily communicate with each other.
- b) the Zone as a participation structure: it is easier for people to participate and get involved locally than do it remotely through AACREA, and
- c) the Zone as a development structure: the Zone as responsible for fostering new groups and promoting the CREA idea in their local communities and providing support to those existent groups.

Further, the objectives of the regionalization were to improve the flow of information, the articulation of technical studies, to help the management of the CREA groups, and finally, to improve the relationship between groups and AACREA (AACREA, 1982). Some regions have developed a certain structure that support their vocal and coordinators' teams. Institutionalization varies from Zone to Zone; for example some publish their own internal magazine, or hold their own Zonal congress every other year. AACREA expanded throughout its de-centralized, horizontally organised groups. This has been a key feature of the organization. The development of the grass-roots of AACREA and the better communication of the groups within their Zone and the Zone with AACREA were issues of great concern that were frequently addressed in subsequent presidencies. AACREA became the institutional base of all this federal development throughout the country.

3.5 The CREA Group

The life of a CREA group revolves around the monthly CREA meeting. Each member receives the group at his place once a year (on average). Once a CREA group is established, approval from all members is needed for a new member to enter. Besides this central monthly encounter, the group also becomes part of a wider range of institutional meetings. Each CREA group normally has a president and a treasurer, elected among its members for a two-year period. He is responsible for representing the group in AACREA and attends a Zonal presidents' meeting once a month, where he shares his own group's news and events. He is also expected to bring back news from AACREA to the group. There is also an annual presidential encounter hosted by AACREA. The president is also expected to coordinate the group meeting in regards to time management or at least choose a moderator who would oversee the discussions and make sure every member has a chance to speak up. The treasurer is also elected for a two-year period and is in charge of collecting the fees for AACREA. The overall fee is made up of three parts: a part is destined to AACREA (paid per member); a part goes to pay for the *asesor*'s work, and a part goes to fund the Zonal structure. Both the president and the treasurer roles are voluntary and rotational, and everybody is expected to fulfil them at one point in the development of the group. Time commitment is significant.

Another important figure in the development of the CREA group is the *asesor*. With his assistance, each CREA group sets out a plan for their working year, identifying particular topics of their interest. From this starting point, according to what is needed, several actions are organised such as technical days, group visits to other firms, trips to informative places, trials in farms, among others. The *asesor* also plays a paramount role in coordinating and facilitating the exchange among members. He normally pays a visit to each farms on a monthly basis (charging a separate fee for it), closely working with each farmer. He fine-tunes the technology to apply, assists the farmer in detecting potential problems, helps him in the planning of the farming business and provides advice in particular issues. The *asesor* and the president of the group would normally work together as a team motivating the rest of the members. The *asesores* also have a monthly meeting with their peers in AACREA where they generally provide a general overview of their activity with their groups. They would temporarily form a 'CREA of

Asesores' in such meetings. As CREA groups are so numerous, presidents' and *asesores'* monthly meetings are held only among CREA groups from the same Zone.

3.5.1 The CREA Meeting

The CREA meeting has been described as the “engine” of the Movement by interviewees. It is from these monthly encounters within farmers that the whole knowledge sharing system begins to function. CREA meetings are usually settled on a fixed day per month (for example the second Tuesday of the month) and last for a working day. Attendance at the meeting is compulsory and in some groups members are very strict on this aspect. Punctuality is also an important issue in the meetings. Members meet for an early breakfast, work through the morning, stop to share lunch and usually end the meeting in the afternoon.

I have attended meetings in which the day's agenda is presented in a large billboard on the wall with a time schedule to follow (see *Appendix 2*). Usually a group member is chosen as a moderator who must keep track of the time spent in each activity.

After the host farmer presents his firm, in some cases, there is a short trip to some selected parts of the farm. Back at the house, the farmer ends his presentation by asking questions to the group that will guide the work done during the rest of the meeting. At that moment, the group is divided into two commissions (usually the asesor and the president are who decide how the groups are formed), and they separate to work on the questions asked by the farmer and on the analysis of the information they have received. At this point, the owner of the farm and his working team are excused, they leave so that the discussion in the commissions can be done freely. After an hour or two of work, the commissions choose a member that will provide the feedback back to the host farmer. This feedback given to the farmer tries to represent the consensus reached by the members in each commission.

After I attended several of the meetings, even across groups (see *Appendix 3*) I was able to elaborate a pattern of the activities held. I provided names to their customs and labelled what was “common use” of their time in the meetings. The structure of a typical CREA meeting is similar to the following description, although there may be variations from group to group:

Table 3.3 - Structure of a CREA Meeting

Moment of the meeting	Description	Example of information exchanged
Round of news	Members in turn, tell any news that may be of general interest for the group.	Price of fertilizers, national context situation, fees paid for sowing and cropping, milk price...
Farm presentation and visit	The host farmer presents in PowerPoint slides his farm, his organization chart, and his production and management system. Sometimes a guided visit to some parts of the farm is made. The presentation finishes with questions that the host farmer asks the group.	Power point presentation previously prepared by the farmer and the <i>asesor</i> . A brief printout is normally given away to members. The questions made by the farmer are the main working points for the day.
Group discussions (work in commissions)	The <i>asesor</i> and the group president jointly divide the group members into two teams. Farm owners are excused from this selection. In these two commissions, farmers discuss the visit and presentation and elaborate their response to the questions the farmer made.	Each group selects a speaker who will speak for each of the groups. Strengths and weaknesses of the production system are described as seen by the CREA members. The elected speakers provide the answers that the group has elaborated to the host farmer.
Institutional round	Information on AACREA and the Zone is shared. The <i>asesor</i> and the CREA president usually jointly coordinate this moment of the meeting.	Dates for a technical meeting; the <i>asesores'</i> fee; a new member who petitioned to enter the group.
Technical information	In some cases, according to the annual plan, the <i>asesor</i> or another rural professional may provide a presentation on a particular topic.	For e.g.: management of soybean pests in autumn.

Source: Personal elaboration from meetings' attendances throughout 2006.

There are multiple aspects of the meeting that are related to the personality of the CREA members: the tone of the meeting, the setting, and the way that members are received

and welcomed into the farm. There is generally an ambience of trust and familiarity, especially when members have been in the group for many years. This feeling is very important as the host member is usually anxious about the meeting. Many of the interviewees described the experience as being an annual evaluation of the management of their farm. The validity of the information presented by the host farmer is pretty much based on a “good faith” system.

3.6 Information Sharing in AACREA

AACREA has a publicly available website where most institutional information is displayed (<http://www.crea.org.ar/>). CREA members can log in using a name and password and access to secure areas such as information databases or other members' contact details. In 2009 an effort was made to develop a more user-friendly interface that also incorporates a digital web based search engine. Until then, most documents were paper-based and kept in a physical archive in the headquarters of the organization. In an effort to keep up with current times, archives have started to be digitalized during the years that this thesis was written. Besides this internet based tool for information sharing, members still widely use the more traditional magazine and internal bulletin formats to keep updated with AACREA's activities. Some groups have started developing intranets and blogs for their own use. AACREA has formed a Knowledge Management group which is working to provide a development platform in which every group can upload their own web page under the same format, a very difficult task to achieve. For an informative description of the knowledge management system currently at use in AACREA see De Bary (2009).

The knowledge created within CREA groups, which is then processed by the different Commissions in AACREA, is of a collective nature, as many take part in this process. It is by the comparison and sharing of information of many that this knowledge can exist. In addition, in this process, individuals also use the collective knowledge to make their own decisions in the management of their businesses.

The farms' management decisions are then presented again to the community of peers that constitute the members of the group, for their judgment. Through the analysis of my data (mainly meetings attendances, in-depth interviews and archival material,

described in *Appendix 3*), I discovered that the knowledge a CREA group handles has very precise characteristics which are closely watched over by its members. Groups handle their own information and their own knowledge creation processes. Some of the field trials are made together in synergy with other groups. When a particular topic becomes of general interest, it is taken over by AACREA who assembles a team or a commission to specifically work on it. The groups (sometimes called ‘the bases’ in the AACREA culture) are the main generators of information and also communicate their information needs.

Each cell group, with its *asesor* and its members, decide what is knowledge for them. They also decide on what information will be shared beyond the group or not.

In Argentina, CREA’s performance indicators provide a production standard for firms operating in the agricultural sector. In addition, the comparison with fellow members is many times the reference point for performance: *We are above/below our CREA average in production yields; we pay better/worse salaries than the rest of our CREA fellows*, these were typical comments heard among CREA farmers.

In terms of knowledge, CREA has managed to create a perceived value thanks to the reputation of the institution and its members. The information available through CREA’s technical field days, the CREA magazine, and website (www.crea.org.ar) offers all kinds of brochures and compendiums per crop and per production type. Such information is regarded as valuable and transparent. Mass media cites AACREA’s data when debates about agriculture are being discussed in the public arena, and these are taken seriously. For example, a northern renowned newspaper, *Diario de Cuyo* (2006) said about CREA groups “they have become a true engine of change for the farming national enterprise”. Countless mentions in the most important newspapers in Argentina (*Diario La Nacion* and *Diario Clarin*), would usually refer to AACREA as “the renowned organization informed that...” “the prestigious CREA Movement reported”...”Known by its reputable information, AACREA said....”

On March 3rd, 2007, in the editorial of *Diario La Nacion*, there was a tribute to the CREA Movement in its 50th Anniversary, titled “Half a century of agricultural contribution” (“Medio siglo de contribucion agricola”, *La Nacion*, 2007). The editorial states “CREA constitutes a moving example for the thousands of farmers that are worried about the growth of cooperation and of information exchange that can surely guarantee the growth of farming activity”. Its neutrality from political parties has

worked as a solid foundation for its reputation, analyses the newspaper. And finally it ends saying “the strength of the Movement seems to reside in those 200 productive cell groups born from the seed planted 50 years ago” (personal translation).

3.6.1 The CREA Magazine

In 1965 the first CREA bulletin was written and edited by Don Pablo, and two years later in 1967 was turned into a magazine. It was published on a three monthly basis until 1968, when it became a bi-monthly magazine. From 1995 until these days the *Revista CREA (CREA Magazine)* is published monthly and has become a referential source for the agricultural sector (Pettigrew, 2004). Its contents are mainly technical farming management and farming enterprise related, with production issues and data. It is distributed among the roughly 2000 CREA members, has 1200 fixed subscriptions both in Argentina and some countries in Latin America. It is sold to the public through the traditional kiosks (AACREA 2010b; I. Amaya, personal communication, December, 23rd, 2010). The magazine’s gross circulation is 8000 copies (A. Campos, personal communication, July 5th, 2006). AACREA is currently publishing its issue number 373⁵, after 41 years.

3.6.2 Internal Bulletin

Besides receiving the CREA magazine on a monthly basis, every CREA member also receives an internal bulletin called “Ronda de Novedades”⁶, which is basically a

⁵ November 2010.

⁶ In English it means “Round of news”, it is called the same way that CREA Groups open their meetings. Each member is invited to tell anything new or novel it may be worth sharing with the group.

description of what is going on in AACREA, its commissions and institutional divisions. It also works as a connecting link from the institution to all its members. Each month, there is a whole week called “AACREA week” when everybody involved in the governance structure (either of their particular CREA group, or of their Zone, or of AACREA), travels to Buenos Aires to meet at the institution’s headquarters⁷. The meetings held in the current AACREA week are briefly described and dates for meetings are presented in the monthly schedule. The regional vocal would usually write an editorial and each AACREA commission would write about their last meeting. Other minor things like classified ads, pictures of CREA groups, and social events are also part of this bulletin. This internal bulletin, “the Round⁸” -as it is internally known-, provides a strong sense of belonging to the institution’s members.

3.6.3 Technical Meetings and Congresses

The CREA Movement has organised throughout its history countless technical encounters around topics related to cropping, beef production, husbandry, and dairy activities. The purpose of these currently called “JATs” (Jornada de Actualización Técnica), which means Day of Technical Actualization, is to open technical productive information to other people who may or may not be members of the Movement. These field days are a conscious attempt to spread CREA’s information and are very popular among the local rural communities involved.

⁷ There have been some changes and some roles (for e.g.: presidents) have decided to meet at Buenos Aires every other month, holding every two months meetings in another town in the Zone.

⁸ The choice of word “Ronda” (round) is significant because it resembles a Ronda de mate, a typical beverage of Argentina which is shared among friends in a round, where everybody gets its turn to drink.

Another social activity the CREA Movement is known for is the organization of its congresses. In the beginning, when members were a few hundred, all annual congresses gathered the nationwide members. Later on, growth in numbers and groups made it impossible to do it every year, and National Congresses began to be held every three years. In addition, smaller, regional encounters began to be organised by Zones, where each Zone gathered their CREA groups to discuss general issues. These regional congresses are organised every two years, but in the year that a National Congress is due, no Regional Congresses are allowed.

CREA's National Congresses are considered real turning points for the agricultural sector in Argentina. For example, the National Congress held in September 2010 had 4,000 participants and other 2,500 people followed it online. Topics in the Congress were far from merely technical: philosophers, politicians, teachers, and journalists are among the guest speakers who mostly referred to the national social context and the need for civic commitment. In each Congress, AACREA's vision and mission is presented and communicated as a way of reinforcing the organization's internal culture. Although AACREA's National Congresses have plenty of technical information, it is mostly presented during a couple of days previous to the Conference, and exclusively attended by *asesores* and other farming consultants. Congresses usually are about issues that go well beyond technical and production themes, giving them a more "humanistic" orientation, and these are attended by CREA members and their families.

In *Appendix 1* there is list of the themes of the Congresses held by the CREA Movement. A clear evolution of the topics treated can be appreciated from a more land-oriented, productive concern to a more economic and social interest. There is a progression of the themes from the production issues to more humanistic ones. In *Appendix 3* there is a description of the National and Zonal Congresses I attended.

3.7 CREA, the Site of the Case Study

The CREA Movement as site for a case study presents dozens of non-written rules and traditions maintained and recreated orally by its members. There is a common knowledge that is not articulated, but still everybody shares "non-verbal codes", as a farmer defined it. The sense of belonging to the organization runs throughout this

familiarity of intangible things. Farmers do not sign any papers to join their CREA groups, nor to AACREA. My familiarity with farming life, and being married to a CREA member farmer worked as an advantage in my recognising and identifying these codes.

In section 4.4.2 of the methodology chapter (*Chapter 4*) I provide a description of my chronological involvement in the Movement's activities. I have learned about the spirit of this organization by being a part of it in many institutional encounters.

The organization has been growing organically (as opposed to pre designed) throughout the years and has become a large, complex institution. Simultaneously CREA groups work throughout the country and the institution has multiple meetings and activities. As a researcher, it was physically impossible to cover everything in this study. However, I believe that studying and participating in the organization's activities for over two years provided me with a fair approximation to the reality of what being a CREA member entails.

3.7.1 Literature on CREA

Regarding previous literature specifically on AACREA and CREA groups, academic studies are relatively scarce. Although there are countless studies done on rural sociology by the INTA and local universities, there is not much found on the CREA Movement. I can only attribute this fact to the lack of social research tradition on private farming institutions in Argentina. Manzetti (1992) wrote an exhaustive account of the evolution of agricultural interest groups in Argentina, in which he described the historical evolution of the main union organizations that are currently operating in the sector. The fact that CREA groups are not mentioned at all, explains one of the characteristics of the Movement, which proclaims its political neutrality, and its independence from any ideology or party.

Taking into account my specific subject of study, a few studies were conducted in the 1980's (Martinez Nogueira, 1984, 1985) on the growth of the number of groups and a description of the CREA Movement. In addition, more recently, Pettigrew (2004) studied the managerial concept shared by CREA groups and followed the evolution of interests of CREA members by analyzing their magazine articles. He concluded that farmers' have shifted their attention progressively towards managerial concerns. Chaskielberg (2010) studied in detail three CREA groups from a networking

perspective. He concluded that the role the president and the *asesor* play in the knowledge exchange of its members is of utmost importance.

De Bary (2009) has presented a solid review of the recently “knowledge management model” implemented in AACREA, from a resource-based perspective on the institution. These mentioned studies are postgraduate masters’ thesis. Ibarguren (2006) from an agronomic point of view, analyzed the criterion for the regional division that AACREA implemented in the 1970’s.

Additional material on CREA has been elaborated by private organizational consultants hired by the institution, but they have not been found relevant to this review.

3.7.2 The Meaning of “the CREA Spirit”

Among the non-written rules of what being a CREA member is, there is something that has been called “the CREA spirit”, “the CREA idea” or “the CREA philosophy”. This section aims to collect the different concepts that stand behind this notion, as it is pretty much the core of the identity of a CREA member. It stems from the founding times of what was then to become the CREA Movement. Martinez Nogueira (1984) identified that many of the Movement’s essential features have been generated in these initial times.

CREA has always promoted a certain ethical behaviour, based on firm principles of mutual respect and understanding. These principles have made possible the team work of people, farmers and rural professionals that sometimes come from different backgrounds. In addition, “the CREA groups assume the moral obligation to work

towards the technological and economic growth of the agricultural community as a whole, including the development of cultural and social well-being”⁹.

Its main values and initial objectives spread around the Movement are represented by words of the founder, Don Pablo Hary. Although some metaphors have ceased to be functional for the current times, most of them are kept alive and still repeated among members. For example, for many months, on the home page of the CREA website (www.crea.org.ar), on the right side of the webpage, direct quotes of Don Pablo’s sayings appeared intermittently.

During my data collection process, I heard a handful of metaphors which were considered part of the internal CREA culture. Either interviewees asked me “...Have you heard the story of?”... (personal communication, 2006, July 24th) or I heard them mentioned in CREA meetings, or saw that they were mentioned in some form again in the Congresses.

I realised many of the people I had contact with which belonged to the CREA Movement knew what these meant. If new members did not know about them, they could read about them in Hary’s book (AACREA, 1995b), or in the regional magazines, or within the Round of News bulletin. Some of these metaphors are incorporated to the names of the institution’s everyday activities (for e.g.: open gates field days). These are frequently used by the AACREA president in charge and continuously cited in editorials to CREA members (either in the CREA magazine, the internal bulletin or the regional publications).

⁹ www.crea.org.ar

Table 4.5 - Metaphors and Their Meaning in the CREA Movement

Metaphor	Meaning
“open gates”	Openness outside the CREA Movement. Social responsibility with the rural community to share the most important technical and managerial findings. Diffusion of knowledge and techniques is seen as a social responsibility, not as a proprietary thinking on knowledge. Many CREA groups hold their “open gates” field days in their local rural communities.
“long lights”	The expression long light, from the long lights of cars, means long term thinking. Strategic vision to see those things that are built through the years, in decades to come. Not to get stuck in the short term, day-by-day attitude. Investments in the long run, looking at subsequent generations. Don Pablo used this expression frequently. It was cited many times to define the vision of different internal CREA projects.
“gentlemen’s pact”	Many interviewees referred to the value of the given word. This “pact” was cited by members describing the nature of their involvement with the CREA Movement. It is a commitment of people who are responsible for their actions. Implications that CREA members are gentlemen, that have been educated as such, and should behave as such, treating each other with respect. This includes compliance with time and money commitments that have been agreed.
“have your eyes in the sky, but your feet in the ground”; “tie your plough to a star”	These were two of Don Pablo’s favourite phrases (so I was told). They mean dare to dream, dare to think big, but do not lose your contact with reality. Do not lose contact with your farm, with your land and hard work.
“arrow’s point”	Leadership. The founder of the CREA Movement believed CREA farmers were called to have a position of leadership in society, in terms of agricultural excellence and of showing the way. Without any political orientation, there is a vocation to progress, of achieving efficiency for the good of all members and for the good of the country.
“being a catalyst of a new mind frame”	Don Pablo used to say that everything was a question of attitude, more than of contextual conditions. The responsibility laid in farmers, in changing their mental limitations to improve and face changes.

Most of the above metaphors come from direct quotation of Don Pablo’s speeches or quotes from his writing. A tribute to the trajectory of Don Pablo is compiled in a book made by AACREA that has his major speeches (AACREA, 1995b). These thoughts have also the purpose of enhancing the strong identity of members to the organization and the promotion of its basic values. They have constituted the basis of a doctrine that served to promote a

feeling of belonging and the building of a common identity. The following quote reflects many of the above metaphors. In Hary's words:

I leave you these memories as precious material, and as a basis for action offered to those who will receive the torch in this relay race of coming generations, saving them the cost of getting lost in walking along paths which bring consequences that have already been registered by others (personally translated from AACREA, 1995b, p.12).

3.8 Conclusion

The CREA Movement has been developing slowly and steadily for over fifty years. Its growth into a complex institution and its peculiarity as an NGO that serves farmers can only be explained by looking at how it was created and how it has developed in time. Its institutional needs, driven by the growth in numbers of its members, have fuelled the development of the organization as we now know it. As explained in the current chapter, the history of the institution is still very important within its internal culture. The horizontal structure of groups working along the country and the effort of AACREA to provide linkage to those groups, have developed governance structure of very unusual conditions.

There is a hierarchy with AACREA's president and the executive commission, who guides the strategic steps of the Movement. But the real governance lies within the CREA groups, within the bases at work. This dynamic is very active and keeps the Movement alive between the organization's bureaucracy and the down-to-earth practical culture of its CREA members.

In this chapter I described with as much depth as possible the countless aspects that the CREA Movement has, to present the rich contextual setting in which this research was conducted. I got immersed in the lively exchange of the Movement, (for details of this involvement, please see *Chapter 4*), and tried to look at it at an arms-length. This description tried to reflect the institution's main points collected in my ethnographic experience.

The particular characteristics of the CREA Movement make it an interesting case study to look at in terms of knowledge creation and sharing. The variety of its members'

activities, and the richness of the CREA Movement in terms of its historical advent and its present organizational form, is as an interesting setting in which to place my knowledge related research questions.

CHAPTER 4: METHODS, SOURCES & THE RESEARCH PROCESS

“I know that I know nothing” (Socrates)

4.1 Introduction

This chapter presents the research design of the study, how the data was collected and transformed from being raw materials into more elaborated thoughts. I describe the setting where the research took place, the description of its main sources, the methodology used, the collection of the data and the analysis process.

I have made 27 in-depth interviews with people either presently involved in the CREA Movement or who were involved in the past (further details are developed below). I have talked to countless other members in coffee breaks over the 26 CREA and other meetings I attended. I have listened to what was being said at two National Congresses and two Regional ones, and got the chance to share them with CREA members for 10 whole days throughout these years. To do what is previously described I travelled a total of 8,489 kms; I got a real taste of what the expression “geographically challenging” subject of study means.

Within the knowledge as practice paradigm, from a critical perspective, it is of paramount importance to reflect about the involvement of the researcher in the process of conducting the research. Throughout the years that I was conducting the study I made an effort to outline as much as possible the steps of my thinking and my evolution as a researcher. In trying to write about the process I went through in my study, I reflect on how my *persona* had an impact on the data collection and on its further interpretation. As part of the requirements for this dissertation I am required to smoothly present in a chapter the steps taken to collect and analyse my data. The process I experienced was

far from linear and chronological, but rather iterative and complex, going back and forth between facts, ideas and epiphanies. My research journey was like transiting a complex maze. I chose to write it in past tense because I believe that more faithfully reflects the whereabouts of where I have wandered.

Reflexivity is considered an important aspect to acknowledge as critical organizational researchers (Alvesson & Skoldberg, 2000). Starbuck (2006, p.1), reflecting upon the process of creating knowledge writes: “Research findings often tell more about the researchers’ tactics than about the phenomena studied, the tactics being shaped by the culture in which research takes place”.

In this chapter I first describe the setting and analyse the implications that such a scenario brings into the research conducted; farming as a context determines the nature of what is being studied. I then present my methodological stand, in the larger picture of knowledge as practice. I continue to describe storytelling as a data collection method, a narrative-based approach within the qualitative research paradigm.

Stories and narratives are considered a useful methodology to access ongoing processes of sensemaking. The relationship of stories to sensemaking seemed a pertinent one to explore as they are the ‘tools’ with which I conducted the analysis on my data. I also reflect on sensegiving, and how change and stability are related to the collective sensemaking in an organization.

The second part of the chapter contains a description of the sources of data, how it was collected, followed by a description of how I analysed it. The chapter ends with a reflection of my role as a researcher in the learning process and some considerations on its limitations.

4.2 Setting the Scene of the Research

The setting of this study is farming. Farming may seem like an unusual site to study knowledge, but I was drawn to study it for several reasons. First, there is a passion in farming that transcends the working scenario and forms part of the person’s identity. These are not men working in farms, these ‘are’ farmers. Farming is much more than a productive enterprise; it is a way of life. Like the “sailors in the sea” that Mack describes (cited in Gherardi et al., 2007, p.322), farming implies that nature is a

protagonist. Farmers' proximity to their source of production and their visceral relationship with their land come to influence their sense of being. This has an impact on the identity of farmers. Setten (2005) writes that protecting their individual self and protecting their landscape heritage is, for farmers, an existential issue. "The farmers' response [cultural response to their land ownership condition] is thus to negotiate their lives into a 'landscape' that is produced between notions of nature and culture, past and present, public and private" (Setten, 2005, p.74).

Second, farmers have a special bonding with the place where they work, many times given by the fact that they own the land. Most often farmers may have inherited their land from previous family generations, and are in turn expected to pass it on as a legacy to their children. This aspect is a cultural feature of the Argentinean countryside of relevance for the present research because tradition and heritage will be considered taking into account such context.

Third, as an activity related to natural cycles, farming presents an ever-changing status, causing knowledge as practice to be extremely related to change. My conception of change as ever-present in organizational life (as described in *Chapter 2*) is particularly suitable for the permanent state of change that farming activities operate in. Berger (1978) described change for Russian farmers, although CREA farmers are commercial farmers and not peasants as the author describes, some commonalities in farming experiences apply:

[Farmers] live with change hourly, daily, yearly, from generation to generation. There is scarcely a constant given to their lives except the constant necessity of work. Around this work and its seasons they themselves create rituals, routines and habits in order to wrest some meaning and continuity from a cycle of remorseless change. (p.354)

Geography researchers also talk about the particularity of studying farmers; especially of talking to farmers actually "on-site", standing on the land. For example, Riley and Harley (2007) claim:

The material landscape carries forward understandings which become co-constructed, unpacked and narrated by farmers. Taking their cue from the physical landscape, such oral histories were commonly intertwined with

biographical events, which allowed a temporal structure to be added to recollections. (p.401)

The authors make a point that will be developed in the next section, the narration of stories. In addition, I then decided to look at farmers organised in CREA groups because I felt drawn to study farmers that already got together to discuss their practices. I found that these farmers were reflective of their application of knowledge to their farms. In addition, in order to be able to gather in groups, farmers needed to overcome their isolation, there was a strong social motivation to belong to a peer group.

Taking farming as a context into account is important for another reason. Farmers mostly work in the production of commodities, produce that has a price set by market forces. In general terms there is no direct commercial competition among farmers as they are always able to sell what they produce (although price conditions and negotiating skills may vary). Context explains why some things work the way they do in the studied organization. The characteristics that farming presents as a framework for this organization's activities may be a reason for its particularities. Although not directly the purpose of this study, it could be an interesting further research question if a similar organization would have emerged in a setting where direct commercial competition is present.

The Argentinean context also poses particular characteristics. As a developing country, Argentina has had a number of economic and political meltdowns throughout its history¹⁰. Farmers have had to learn how to survive in an unstable and challenging environment, and they have developed state of the art technology which places them

¹⁰ See Rubinzal (2010) for a description of the country's main economic historical and political events.

amongst the most competitive agricultural producers in the world. However, while in other parts of the world issues that concern agricultural and livestock production are starting to veer around environmental issues, installing the debate “production versus protection”, these are not yet seriously established on the discussion table in farming in Argentina (Morris & Ubici, 1996).

4.3 Methodology: Approaching Knowledge as Practice

My general methodological position draws on knowledge as practice. Epistemologically speaking, I place myself among those authors that can be considered as partly interpretative and partly discursive (Brown, 2004, 2006; Gherardi, 2000, 2001, 2006).

In presenting my research methodology I presume that people live trying to provide meaning to their actions and to collectively develop shared meaning. Such meaning is not always conscious, and by looking at their discursive practices, I strive to interpret such meaning. My understanding of the social world, as Golden-Biddle and Locke (2007) express, is that it is not an exterior object but a subjectively lived construct.

The CREA Movement, a private institution of farmers, has been chosen as an interesting case study (Yin, 2009; Eisenhardt, 1989; 2007) to look at because it represents a rich empirical setting in which knowledge practices can be explored through the activities and the stories of its members.

Storytelling has been used as the key method for approaching this case study as oral stories have also been effectively used by the organization itself contributing to its survival (see *Appendix 7* for some examples of popular stories in the Movement and *Appendix 9* for an analysis of an institutional video that uses stories as well).

Stories were used as points of entry for looking at this organization. I found that by choosing stories and narrations as a methodological venue to “enter” the organization’s idiosyncrasy I entered an academic conversation (Huff, 1999) more related to the role of narratives in organizational life than to the literature available on case study research.

The methodology employed stems from the theoretical standpoint in which this study was set. The way this case study research has been approached is through analysing the stories that were told by the interviewees. I used qualitative interviews to find out about stories that were emblematically told. I also researched archival material (see *Appendix*

4) to get access to those stories that mattered. Stories were considered as key elements of the sensemaking processes that go around in the organization. Stories were not only taken as mere descriptions of organizational life, but rather as constitutive of the organization. Stories shape and mould the reality of the organization and carry strong symbolisms which help nurture the organization's identity and its members' sense of self.

It is important to early on clarify the ambiguous concept of identity that will be used throughout the study. Identity issues will be discussed taking into account the context previously described, in which the farming setting is considered constitutive of farmers' self. Identity will be used in this constructive sense.

4.3.1 The use of Stories

The Weickian literature presents extensive references to the importance of stories for the process of sensemaking (Weick, 1995). Some of the stories that get repeated frequently and form part of the culture of an organization may even be portrayed as exemplars. From these exemplars, people "induce an ongoing sense of what other events mean. These stories are the extracted cues and the seeds for sensemaking" (p.120). Further,

Stories remind people of key values on which they are centralized. When people share the same stories, those stories provide general guidance within which they can customize diagnoses and solutions to local problems. Stories are important, not just because they coordinate, but also because they register, summarize, and allow reconstruction of scenarios that are too complex for logical linear summaries to preserve. (Weick, 1994, p.160)

Clarifying a sometimes ambiguous concept, Boje (1995, p.1000) provides a definition of a story: "By a story, I mean an oral or written performance involving two or more people interpreting past or anticipated experience". I interpret this definition to mean that the second person is the listener of the story, co-creator of what is being told.

Further, Boje continues, "stories do not require beginnings, middles or endings", as they do in other alternative definitions.

In his argument that accuracy was not necessarily needed for sensemaking, Weick (1995, p.61) asks, what is needed for sensemaking?

The answer is, something that preserves plausibility and coherence, something that is reasonable and memorable, something that embodies past experience and expectations, something that resonated with other people, something that can be constructed retrospectively but can also be used prospectively, something that captures both feeling and thought, something that allows for embellishment to fit current oddities, something that is fun to construct. In short, what is necessary in sensemaking is a *good story* (emphasis added).

The challenge is then, for the researcher looking at sensemaking, to nail the good stories that exist and recreate an organization's life. I realised that in my data collection process, I needed to find the stories that meant something to the organization. The stories that mattered, those that are important because

...a good story like a workable cause map shows patterns that may already exist in the puzzles an actor now faces, or patterns that could be created anew in the interest of more order and sense in the future. The stories are templates. They are products of previous efforts of sensemaking. They explain. And they energize. And those are two important properties of sensemaking that we remain attentive to when we look for plausibility instead of accuracy. (Weick, 1995, p.61)

Stories are important for organizations not so much for their content but for their symbolic and metaphorical meaning, and more importantly, for the connections that enable storytellers and listeners to establish with each other.

I will use the stories that are created and recreated within AACREA and within the CREA groups to learn about the sensemaking processes that members make. Not any story will be used, but rather stories that people very much involved in the history of the institution tell and retell over and over again about their experience in the founding years. These are stories of what it means to be a CREA member in today's 21st century. In the content and linkage of these stories, of how farmers tell them making retrospective sense, I found my raw data. The stories are my empirical material. In light of the theoretical framework employed, the monthly CREA meeting a farmer hosts was found to be rich occasions for sensemaking. The everyday productive flow of activities is put on hold; farmers stop their chores and attend to this conscious exercise of sensemaking. Occasions for sensemaking are actively constructed and constitute

interruptions in normal day activities “...interruptions are consequential occasions for sensemaking” (Weick, 1995).

Although these monthly “interruptions” are not spontaneous, as they are planned many months ahead, they are not deprived of the reflexivity and the search for meaning that characterizes sensemaking processes. Finally, sensemaking theory seems to be the perfect frame to study an organization like the CREA groups because in sensemaking smallness “does not equate with insignificance. Small structures and short moments can have large consequences” (Weick et al., 2005).

4.4 Collecting data: Embedding into Organizational life

Although my main methodology for collecting data were in-depth interviews, almost as important as the interviews was the fact that I was allowed to sit as an observer and visitor to the round of CREA meetings of the members of one group, the CREA 9 de Julio group (NJ). I participated for one year (2006) in multiple CREA meetings and in many institutional AACREA meetings and became very familiar with the whole process of what being a CREA member means. See *Appendix 3.2* for a description of the dates, places and host farmers that welcomed me throughout 2006. This was of extreme relevance in my further approaches to CREA members, as it made me become an “insider” to them. These were my initial steps for embedding into the organization’s life.

4.4.1 Interviewing: A Reflexive Pragmatic Approach

Before conducting the interviews, I became familiar with Alvesson’s (2003) reflexive pragmatic approach. Alvesson provides a review of how qualitative interviewing has been considered in general as a valid method for data collection and claims that the wide-spread critique of positivism that took place in organization studies has remained at a theoretical level. The author argues that there is a need of a more profound integration of epistemology and theory with methodology.

As a contribution to close this gap, he provides an alternative, more thoughtful approach to interviewing, by developing a framework that goes beyond what he calls “romantic”, “neopositivist” and “localist” views (pp.14-15). Alvesson calls the interview a socially

and linguistically “complex situation” and explains that such complexity of language and of the social encounter should be considered not only as a source of bias, but be reflected upon by the researcher. In his words (1993, p.14):

A reflexive approach to research means two potential advantages: (1) avoidance of naivety associated with a belief that "data" simply reveal reality and (2) creativity following from an appreciation of the potential richness of meaning in complex empirical material. Reflexivity operates with a framework that stimulates an interplay between producing interpretations and challenging them. It includes opening up the phenomena through exploring more than one set of meanings and acknowledging ambiguity in the phenomena and the line(s) of inquiry (...) Pragmatism means balancing endless reflexivity and radical scepticism with a sense of direction and accomplishment.

Bearing in mind the authors' warnings I tried not to fall into any of the wrong assumptions about interviews as a means of data collection. Once conducted, I went back to Alvesson's (2003) metaphors trying to understand each particular interview situation in a more critical way.

4.4.2 “Living” the Organization

Data was collected intensively from my direct participation in the organization's events during 2006. In 2007 I attended two more CREA meetings. There was a farmer, which I am related to, who still invited me during the forthcoming years (2008, 2009 and 2010). In addition, while I was writing up the dissertation I kept reading the monthly CREA magazine and the “Round of news”. I also kept track of the appearance of the Movement and any public activities of their members in the local media, and of changes in their website. I also had a chance to participate, (as a wife's member) in all further Zonal and Annual Congresses up till 2010 (when this thesis was finished). The feeling that the collection of data was endless was frequent during those years. However, there was a point in which I was also confident of having reached a saturation point of information, when nothing I read seemed entirely new to my thinking.

CREA is a complex organization that has countless simultaneous activities going on. As described in *Chapter 3*, each group holds a monthly meeting in each of its members' farms. Before this doctoral study, I knew more or less what CREA was. When I decided

on it as a subject of study, I began reading about it, in old magazines my uncle gave me and in Don Pablo's book. It was then that my initial presence in a CREA meeting was facilitated through the invitation of a family friend who was hosting his CREA meeting. I went to the meeting not too sure about what data I was going to collect. It was a fascinating experience. I kept taking notes and scribbling down everything I could, and it was then that I knew I had chosen a good context in which to talk about knowledge. That first meeting (attended in February 2006) could be considered the "pilot" meeting of what would then be my data collection process.

I then approached the *asesor* and president of a nearby CREA group, and asked their permission to attend to their meetings. One of my husband uncles was a member of the group and he supported my petition. This group, located in the west of the Buenos Aires Province near 9 de Julio city, allowed me to participate as an observer in their different meetings. Since I became, informally speaking, a "temporary" CREA member, I was allowed to witness not only their CREA encounters, but also all the other kinds of meetings that constitute the fabric of this organization's life.

When I started interviewing people for my study I was rapidly recommended by the *asesor* and other CREA members to talk to other people, other friends of theirs that belonged to other CREA groups in different Zones. I was also recommended to talk to the staff at AACREA which had been working at the institution for many years. I ended attending CREA meetings from six other more groups. My belonging to the farming environment also influenced positively to a warm welcome to the Movement, as I am married to a farmer and have a legacy of CREA belonging in my father-in-law.

Many meetings I attended were held in farms and places far away from my home. I would usually drive to the location. As I am a woman in a male-dominated environment, my presence was noted. I would introduce myself to the host farmer or the person leading the meeting, and explain the purpose of my research. Once the meeting started, I would then just sit in the back, observing. Nobody seemed to mind my presence or the purpose of my research.

As mentioned, I took part in 14 CREA meetings and 12 other related encounters of diverse nature. I was able to access these meetings through the same CREA group in which I seem to become a temporary member of. I attended particular technical meetings about management and economic results of the wheat, soybean and sunflower

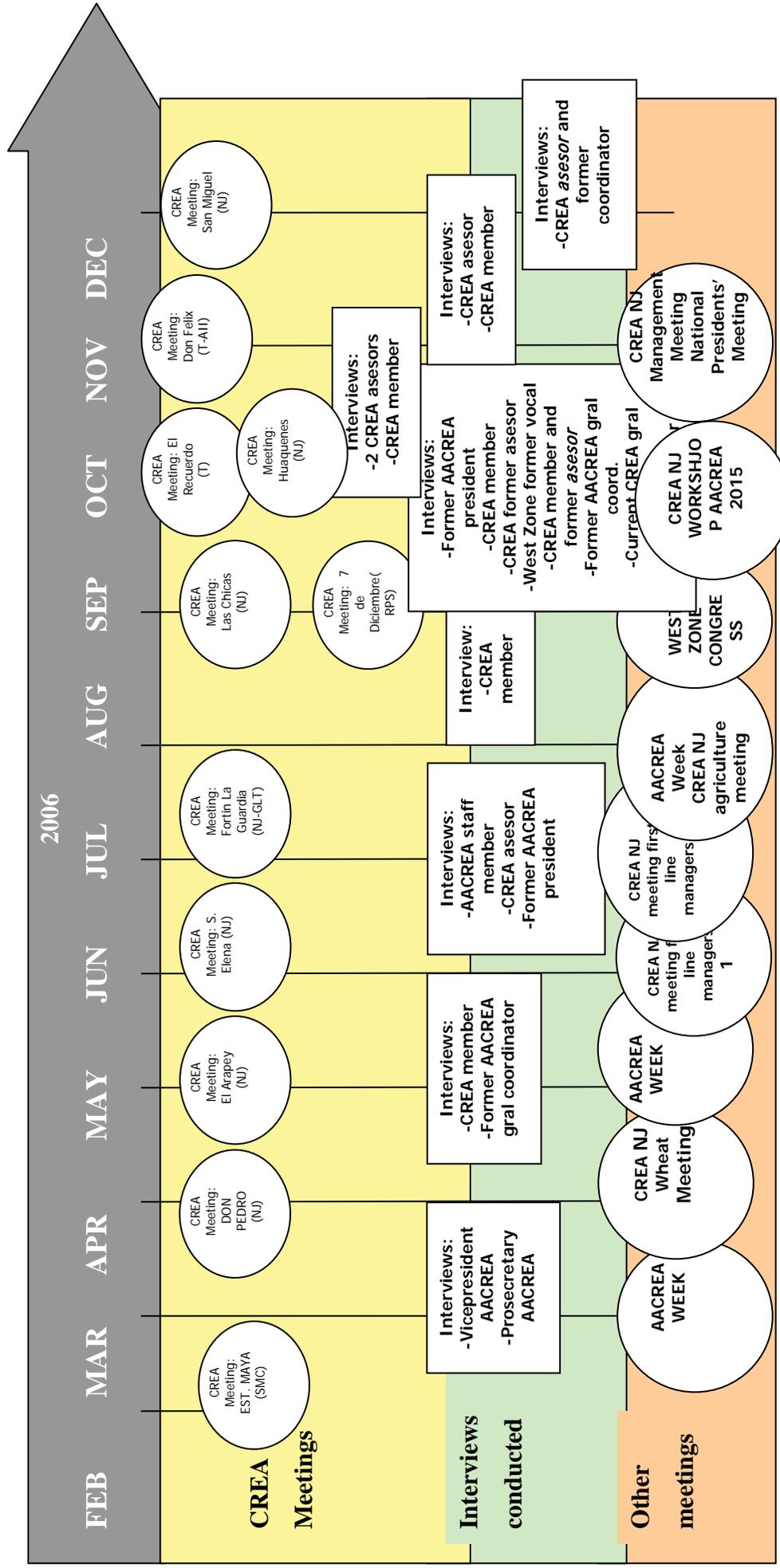
campaigns; I also sat through meetings designed not only for members but for their first-line employees too.

I was able to witness the intensity of the AACREA week (March and May of 2006), (see glossary) when many members travel to the headquarters in Buenos Aires and a series of meetings are held among most CREA members' representatives.

I sat through a president's meeting and a national CREA president's convention, held annually to work together with the group's presidents. I attended two National Congresses (held every three years in the city of Cordoba), with over 4000 people, where we would listen to first class speakers. In addition, I also attended two regional congresses and got to see the commitment CREA groups had with their Zones.

The following table provides a chronological description of my data collection and methodology journey. All of the CREA meetings I attended were held someplace in the Buenos Aires province.

Table 4.6 - Data Collection Timeline



The objective of such extensive participation was to get acquainted with a wide range of activities of the Movement. As I collected data mainly in the West Zone, people got used to seeing me around for months. My presence was perceived as natural in many of the events I participated.

In addition to my observation notes in meetings, I interviewed 27 members and former members of AACREA, who belonged to different groups within the Buenos Aires Province, including farmers, *asesores* and administrative staff (see details of the interviews conducted in *Appendix 3.1*). The interviews were in-depth, mainly conducted with open ended questions, and lasted on average an hour and a half. Besides the ethnographic participation, the main data collected for this study is summarized in the table below.

Table 4.7 - Description of Data Collected

Type	Description	Collection period	Authorship
Ethnographic accounts	Observation in the field. Participation in 26 encounters, note taking.	2005-10	Myself
In-depth interviews	27 Interviews with CREA members, former members, <i>asesores</i> and administrative staff	2006-7-8	Myself
Archival Material	21 Interview transcripts done for the elaboration of a historical compendium of AACREA	2001	Staff Member of AACREA, Alicia Campos
Audio-visual Material	Institutional KM video that launches the AACREA digitalized document database.	2007	AACREA's Knowledge Management Group (15 members)
Archival Material	35 In-depth interviews done to zonal members about their CREA journey	2004-2010	West Zone Secretary, Maria Elena de la Rosa

The variety of data sources, the longitudinal nature of data collection and the depth of exposure to different situations provided me with multiple opportunities for triangulation, a point which will be further discussed. Interviewees' testimonies were analysed in a broader context than the particular situation in which I talked to each of them. In addition to listening to their testimonies I got the chance to visit their farms, see where they worked (and many times lived). I also got to see the AACREA headquarters and buildings and where Congresses were held. All of this provided me with further insight into the questions I was asking.

I experienced that the knowledge which resided in farmers' stories and in their actions, in their personal involvements with their CREA groups and AACREA, was something eagerly shared by the people I talked to. These knowledge-embedded practices became available to me mainly by observation (in the present) and by hearing the stories of their experience (in the past). Being a 'CREA farmer' is a complex defining term because being part of the CREA Movement had an impact on identity-related issues for interviewees.

4.4.3 Conducting In-depth Interviews

The interviews conducted included people of a rather heterogeneous sample. As described, I first approached the CREA Movement through the CREA 9 de Julio group. I was at the time living on a farm (located near the town of 9 de Julio, west of Buenos Aires Province), whose owner was a CREA member. I found that potential interviewees considered me as an "insider", as I was mainly introduced by many of them as "the wife of"..., which had its implications for the study I was conducting. Referrals for interviews were immediate. I found that the CREA Movement had not been much studied by outside academic researchers. I got access to and interviewed members who had belonged to their CREA groups for different periods of time, members who had served in AACREA's ad honorem positions; *asesores* and paid coordinators, staff members of AACREA, former general coordinators, and people who no longer were a CREA member and were disappointed or critical of the organization.

I would be referred to these people by the initial interviewees I contacted. I approached the Movement through the *asesor*, who provided me with two more names, who in turn recommended I should talk to other people, and I was slowly referred to a lot of people who would later become my interviewees.

I would approach my interviewees either by email or a phone call, and most of them would agree right away to an interview. I would then carry to the interview the Information Sheet (see *Appendix 5*) for participants and the non-disclosure agreement for them to sign.

Rather than number and statistical representation, I was looking for variety and for a wide range of viewpoints; I wanted to hear the constitutive stories of the Movement. The topic at hand, their present involvement or past participation in the CREA Movement, made interviewees feel quickly at ease as they talked about something they felt familiar with. I mostly listened and guided open ended questions towards issues related to their involvement in the CREA Movement, group belonging and motivation for pertaining (see *Appendix 6* for examples of questions used in the interviews). For some members it meant talking about a commitment they felt proud about. For others it meant remembering good times, still to others it meant an opportunity to criticize some of the things that they considered were wrong about the Movement. Some of those who left, were nostalgic about it, while for others meant talking about something painful or it was a regretful memory. In many cases testimonies flowed in a cathartic manner. The general feeling I got from the interviews was that voluntary work does not get enough recognition. The interview situation sometimes became a space in which the people could tell about their efforts and activities. For some, it became a space of recognition.

After conducting the interviews I personally transcribed them and wrote up my feelings of it. Things like the atmosphere of the interview situation, nonverbal attitudes of the interviewee, the ambience of the setting where the interview was conducted. I tried to describe in much detail as I could my whole impression of the experience. It was very useful for me to do this when I had to go back to the transcripts later, as it helped me remember accurately the interviewee and the moment of the interview.

During my analysis I worked on all transcriptions in Spanish. It was very important for me to have personally transcribed the interviews. It strengthened my knowledge of my raw data. I translated to English only those paragraphs that I chose to cite in the thesis, trying to keep the spirit of what was being said as faithfully as possible. I encountered some of the problems that Gherardi (2010) mentions in translating from a second language to English. I am aware of some of the limitations of translation and mention some related issues further in the chapter.

4.4.4 Complementary data: Archival Material and Secondary Sources

It is worthwhile to mention the openness that the CREA Movement as an organization has to researchers and outsiders who come and ask for information. There is a tradition of knowledge sharing that is made extensive to any researcher that shows interest in its process. The oral culture exists parallel to a thorough technical information service AACREA has working in its library, which has only recently been launched in an online database in their website.

The most common recommendation when I looked for data was “You should go and talk to...”, or “ask to see and talk to her...” and that’s what I did. People were still the best references within the organization. Networking and the recommendation of informants was clearly an established practice within the CREA culture. Other researchers mentioned having trouble in accessing the archives or data in the organizations they were studying (Eliot, 1993, cited in Boje, 1995, p.1005). I must say this was never a problem for this study, as generous access and information was granted to me in an open and welcoming manner.

I conducted a thorough screening of AACREA’s archives, reading its press material, reports and various internal documents. Among the wide array of information (see CREA’s related bibliography in *Appendix 4*), there were two particularly helpful sets of interviews which I found very useful and worked as a complementary source of reliability. The first was a set of transcripts of 21 interviews with almost every president and key person who had been involved in the development of the organization. The interviewees were farmers and administrative staff of AACREA (most of them were conducted by Mrs Alicia Campos, staff member for over 25 years) who were approached in 2001 in preparation for the writing of an institutional booklet called “40 years in Movement”(2001), the first written history of the institution.

The second useful data were 35 interviews published in the West Zone magazine, under a section named “Getting to know our people”. These were conducted by the West Zone secretary, Maria Elena de la Rosa, who asked the interviewees about their journey in CREA in exhaustive, in-depth conversations. She and the Zone authorities granted their permission to use the original interview transcripts for this study. Although interviews conducted by another person rather than me are not rigorously primary data, they were very rich accounts that provided me with insightful material belonging to different

temporal moments. That material was found useful to see whether my findings had consistency through time. I was able to see in these interviews if my thinking, if the categories I used for analysis were useful when looking at secondary sources.

4.5 Ethical Considerations

When dealing with people, ethical issues are involved. When you are sitting down with someone and asking them rather personal things there is a certain privileged position you acquire into the intimacy of that person. Trust needs to accompany the encounter. Rapport building is important in order for the interviewee to feel comfortable. However, what is more important is the consciousness of the researcher about the responsibility implied, about the ethical issues surrounding the encounter.

All interview participants were previously sent an Information Sheet elaborated by myself according to Massey University's recommendations (see *Appendix 5*). It described the purpose of the study, what the study was about, in which University I was studying and for what purpose the interviews were going to be used. The information sheet also outlined the rights to which interviewees were entitled to, such as non-disclosure of their identity, their right to decline the answering of a question or to ask that the tape recorder be turned off at any time during the conversation. It also clarified that the research project was approved as being low-risk by the Massey University Human Ethics Committee. Supervisors' contact information was provided and the assurance that, according to the University's policy, raw data was going to be held for five years and then destroyed.

Most interviewees considered the sheet as a formality and acted as if they did not mind about the "institutional" aspect of the interview. Some of them even asked me if it was absolutely necessary to sign it, saying that they did not need any "papers" to answer my questions. Some of them preferred that their identity was not disclosed, giving me a sense that they wanted to be able to speak their minds freely, and not worrying about what other members might think of what they were saying. I was always very careful not to expose any of the informants without their expressed consent.

4.6 The Research Process: Analysing the Data

When I first set out to study this phenomenon I sketched out what I thought would be my three levels of analysis. For analytical purposes I figured I could separate my data into: i) the overarching institution (AACREA); ii) the group (CREA group); and iii) the individual (the farmer and his enterprise). However, what I had so neatly set out to start with started to blur as I furthered my understanding of how CREA works. The distinction between “levels” was not as neatly cut in reality as I had expected. There was a true network of relationships working simultaneously that made me quickly realise that my levels of analysis were a structural theoretical attempt to frame a much more complex reality. In addition, taking into consideration my theoretical framework of sensemaking, it made no sense to divide in clean-cut levels what was relational in practice. For example, if I considered the role of the *asesor*, the distinctions I sketched were far from useful. A CREA *asesor* would normally meet with his CREA group once a month. He would also normally provide one-on-one consultancy services to the group members, and he may or may not be in one or several of the technical commissions that work in AACREA. He also takes part with other *asesores* in the same Zone in a monthly meeting in AACREA where he exchanges his information and experience with his peers. The role of the *asesor*, for example, relates to, connects and overrides the three levels described above.

I did not completely dismiss the above mentioned categories, but realised that it was more appropriate to think about the mesh of relationships of this institution as a networking system with multiple connections. Those who had studied knowledge in practice before guided my path. I turned to the following quote:

The study of knowing in practice can follow the same methodological principle stated by Latour (1987) for the analysis of science as practice: ‘follow the actors’ in order to identify the ways in which they associate the various elements that make up their social and natural world. (Hughes, 1971; Callon, 1980, cited in Gherardi, 2000, p. 219).

Upon reflecting who my actors were in the present study, and according to the theoretical framework presented, I reformulated the question into ‘Whose sensemaking process am I trying to understand?’ I realised needed to “follow” the sensemaking

process of different actors in order to grasp the richness and complexity of such a wide organization. Actors would include CREA group members, administrative staff at AACREA, CREA members who voluntarily fill in the governance positions, CREA group *asesores*, presidents of CREA groups, among others. It is in their relation to the wider CREA Movement that farmers become interesting for scrutiny for sensemaking processes. Weick (1995, p.49) warns:

It seems like people can make sense of anything. This makes life easier for people who study sensemaking in the sense that their phenomenon is everywhere. But effortless sensemaking is also a curse for investigators because it means that they are more likely to see sense that has already been made than to see the actual making of it...To counteract this, we need to watch how people deal with prolonged puzzles that defy sensemaking, puzzles such as paradoxes, dilemmas and inconceivable events.

As I chose to analyze stories and look at narrations in context, in order to find traces of significant sensemaking, the challenge for me was to identify the correct stories. My challenge then was to pick up those stories that were the drivers of sensemaking processes. Not any story would do, so I learned. The analysis needed to be more profound in order to nail the process of sensemaking being done, not sensemaking already been made -which would have rendered, as Alvesson (2003) warned-, a romantic use of the technique of interviewing.

As mentioned earlier, another reflection that was a permanent concern in my analysis was that I had to worry less about individuals and more about the relationships of those individuals with one another. So the “following of the actors” I had to pursue had to be “following the actors in their relationships with each other”, or rather “following the relational features of my actors”.

With these ideas “bubbling” up in my head (Weick, 1995, p.xi) I several times read and reread the transcripts of my interviews and notes taken in my field observations, trying to see if I could find broad relationships in what I was reading (at this point I wanted to see whether I could find any point of entry into my raw data). After several readings, I was so familiar with my transcripts that I knew by heart which interviewee said what. At this point I became fully aware of the importance of having been me who had collected and processed the data.

Questions for the interviewees varied (see *Appendix 6*). I let the interviewee talk about what he felt most comfortable with in relation to their belonging to CREA.

Although my introductory questions were practically the same, the way people answered and the aspects each chose to highlight had more to do with their own history and experience of CREA than with my questions. My re wording of what they tried to say also was a helpful technique for further clarification of what they meant. What I tried was to create a space for listening and tried to see the “story” behind the words used by the interviewer. To see the overarching story behind the telling of anecdotes. It was not at the time of conducting the interviews, but rather once I began analyzing them and repeatedly reading the transcripts that I started to realise that on a deeper level, many interviewees were talking about the same thing. It was at that moment that several general themes started to emerge. I had reached a point where everything I had “collected” and read came together as a favorable environment for the emergence of clearer ideas.

For instance, I realised that concerns in the interviewees’ accounts could be grouped into belonging to the past, related to a previous time; or, instead were about the future, what they think would happen to their group and their farms. I myself started to see how these large themes related to each other. The process was not an easy one, although I did not code the transcripts or the notes, I recurrently went back and forth trying to find consistency between the relationships I identified. These themes, in a way, contained the puzzles that Weick talked about.

I then moved to a second stage of the analysis, I identified struggles and oppositions in the themes I had discovered, as if unveiled tensions existed and affected the perceptions of interviewees related to what a CREA member was and how a CREA group worked. While I was in this stage of analysis, I watched an institutional video AACREA had made for the launching of its Knowledge Management database. The video, which is available at <http://www.youtube.com/watch?v=JS6kFMcjjE>, is described in detail further in the chapter. Upon watching the video the categories I had, suddenly began to have a meaning and a relationship. It was at this stage when, remembering something I had read in the literature, I introduced the dualities concept for my analysis, taken from Martin et al. (1983). Something ‘clicked’ on me when I watched the video. I was able to find the relationships between the categories I had.

I present a detailed analysis of the dualities found in my data in *Chapter 5*. In *Chapter 6* I further continue with the discussion and results regarding the key stories found and my interpretation of the interviewees' sensemaking process.

4.6.1 Identifying Dualities

Martin et al.'s (1983, p.477) discussion on dualities was found very useful to further my analyses of the stories I encountered. The authors present dualities as an explanation of why some common stories within organizations have proliferated while others have not. "A duality", the authors define, "is an issue that cannot easily be resolved, because contradictory aspects of the issue are inevitably present and are simultaneously desirable and undesirable. Dualities cause tension" (p.477)

Although the type of conflict is different, we found the relationship between stories and dualities to confirm what Martin et al. (1983) affirm: "Organizational stories, then, express tension created by dualities, perhaps reducing that tension by expressing it."

I decided to use the definition of "duality" that the authors present:

- an issue that by definition cannot be resolved
- an issue that contains contradictory aspects inevitably present
- an issue which such aspects are both desirable and undesirable

After rereading my transcripts for several times, and having clear the broad themes that emerged from them, I analysed the video on KM. In doing so I identified struggles and oppositions, cycles in what was being said, as a balancing act between stability and change. The pattern I discovered became clear to me, because that was what was also present in the interviewees' accounts. It was after multiple times of watching the video that these became evident to me. Further, I checked in the archival material other interviews conducted within the institution –mentioned in section 4.4.4. (the 21 interviews done on the history of AACREA and the 35 interviews conducted by the Zonal secretary) and became more confident about the identification of such struggles. I was able to confirm that the same dualities appeared repeatedly, providing validity (through triangulation) to these categories for my analysis.

The main dualities encountered were related to instances of change, as opposed to stability, where the stories tended to maintain the *status quo* of the organization. They all moved from something stable, or established, to something new and changing. From

a preliminary, more extensive list which had 10 dualities, I have chosen those dualities which were again repeatedly found in the two sets of interview transcripts of AACREA. I also found these had the greatest impact on knowledge creation in practice. The five more relevant dualities are presented in the following table and developed in depth in *Chapter 5*.

Table 4.8- Dualities Present in the Stories

	STABILITY	CHANGE
Time wise	past	future
Organizational wise	self-organised (few)	formally organised (many)
Group composition	homogeneous	heterogeneous
Technology wise	man	machine
Knowledge wise	personal interest (loss)	collective learning (gain)

Dualities have been used by researchers before. They have been referred as sources of change, pluralism and of tension, which in some cases has been what can be called a productive tension, forcing the organization to move forward. For instance, Eisenhardt (2000, p.703) referred to paradoxes as:

This duality of coexisting tensions creates an edge of chaos not a bland halfway point between one extreme and the other. The management of this duality hinges on exploring the tension in a creative way that captures both extremes, thereby capitalizing on the inherent pluralism within the duality.

In an editorial introduction to a special topic forum on change, Weick et al. (2005b, p.409) wrote:

To deconstruct is to actually analyze the relations between dualities in stories – such as the positive and negative, the central and the marginal, the essential and the inessential, the insider and the outsider- to show ambiguity embedded in them and to show the storytelling practices to discipline particular meanings.

The stories in my data I found carry these dualities. It is through them that I was able to learn about knowledge practices.

4.6.2 Audio-visual Analysis

A key source of my data was the institutional video mentioned before (see section 4.6.1), launched by AACREA on KM. The video, showed to members in 2007, is titled

“Knowledge Management in AACREA”¹¹. It was created to promote the new online database for the institution’s archival documents. The video lasts 4:43 minutes and is available in Spanish audio with English subtitles. As often happens in institutional work, no single authorship of the video was claimed. I could trace the video’s main storyline back to a 15-member group, the Knowledge Management commission of AACREA (composed by a mixed team of CREA members and administrative staff). The KM group of AACREA had been working during the last year in this concept of KM and was trying to communicate to other members the importance of the cultivation of that knowledge. The result of this work was this video (created by a hired consulting company) which turned out to be a rich source of stories for this thesis (AACREA, 2007).

In order to find guidance in the analysis of the video, I looked for research exemplars on how to deal with audio-visual material. I reviewed journals looking for an example of an audio-visual analysis but could not find anything that could guide me through the process. I had to figure out how to analyse the data from images, sound, and interactive text on my own.

I sketched a table in which I transcribed everything that the short movie presented. I isolated three different areas of analysis:

- image (describing what I saw)
- sound (describing what I heard) and
- text (transcribing what I read).

¹¹ Although the title of the video says “Knowledge Management in AACREA - Video 1”, no further videos were done on KM up till November 2010.

Soon I started to find the relationships to my previously found themes and I added a further column in which I ventured the story implicit in each moment of the video. The table I elaborated for my analysis can be found in *Appendix 9*.

I realise this video has been an explicit communication effort of the organization; an explicit sensegiving effort. Still, I found that it was a valid source of data. Consider what Gherardi (2000, p.216) writes on sensemaking:

...sensemaking occurs when a flow of organizational circumstances is turned into words and salient categories...organizing itself is embodied in written and spoken texts...reading, writing, revising and editing are crucial actions that serve as the media through which the invisible hand of the institutions shape conduct (citing Gioia et al, 1994, p.365).

Although the invisible hand was in this case quite visible, and the collective sensemaking process was really a sensegiving one, it nevertheless served as rich source of data for my study. This video is an artefact, an object that was edited, written, prepared from within the organization. In deconstructing its meaning I believe I made an honest effort to understand more about the sensemaking process of its authors, and more importantly, of the assumptions the organization had about the process of sensemaking of its members.

As I could not find an exemplar that could help me analyse audio-visual material, I elaborated the following table in which I personally translated what I would see in the video. I described what I saw and heard (Image/Sound column), what text appeared on the screen (Text column) and finally, my interpretation of the story behind the obvious image and text. From this table and by watching the video several times, I discovered patterns, broad categories that were in conflict with each other. These would later become the dualities I described in *Chapter 5* and I would then use them as categories for my analysis.

Table 4.6.2.7 - Audio-visual Analysis on Knowledge Management Video of AACREA

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Hand writing with pencil on a white note-pad paper / Sound of pencil scribbling	In 1957 there was no Internet. There were no cell phones. There were no GPS services.	We used to be a knowledge network without the technology. We did not need the high-tech to do what we did. TIME: PAST (1957). The way it is presented, by hand writing. TIME: PRESENT (cell phones). TIME: FUTURE (GPS services).
Sign on a fence of a farm / music	Handmade signs were used to call a meeting.	TIME: PAST Notion of closeness, of smallness, of belonging. There were few of us. Everybody knew each other. We used to be neighbours.
Farmer speaking to a group with a megaphone / music	Oral communication was the regular way to share knowledge	TIME: PAST We could talk and all of us could listen.
Music	Shared knowledge among equals. Shared words within small groups.	Notion of equality. Notion of closeness. TIME: PAST
CREA Magazine zooms to its subtitle. Hand written spreadsheets with numbers and graphs /music	Published information spread slowly... ...reaching more and more people. Faster.	Expansion and growth beginning to develop. Commercial venue, the magazine, lowering of some entry barrier (not all of them). TIME: PRESENT
Two men reading extensive spreadsheets. Graphs, numbers / music	Knowledge means interpreted information. A new habit has emerged from the economic analysis spreadsheets... Information systematization. Agricultural producers from different regions could compare their yields. Standardized (sic) information = Knowledge Management	TIME: PAST (spreadsheets) TIME: FUTURE (information systematization) TIME: PRESENT (comparison of yields) TIME: FUTURE (SI = KM) First time Knowledge Management appears cited in the video, it was only mentioned in the title.

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Different magazines with headings / music	Crop rotation...Plow Based Effect Coefficient (UTA)...Gross Margin.	TIME: PRESENT (things the farmers already know and use in the management of their farms)
Different magazines with headings / music	Creation of a common language = Knowledge Management	Pedagogic definition of KM, is something common to us all, we share it. It is language, something we already know and use. TIME: PRESENT = FUTURE
Typing in real time on a white screen / Typing on computer keyboard sound	Shared knowledge fuels the development of nets Shared knowledge fuels the development of trust Shared knowledge fuels the development of support.	The typing gives notion of immediateness, of real time, of quickness, on the spot state-of-the-art information. The sharing is enhanced; the message sent is "together we can do it". TIME: FUTURE (nets) TIME: PRESENT (trust & support). Machine versus Man, trust and support helps man to handle the lack of hospitality of the net. All of the above is possible only if knowledge is shared (condition).

(The rest of the table can be found in *Appendix 9*).

4.7 I, the Researcher

Sensemaking was used in this study in a two-fold way. Firstly, as the theoretical framework to study the knowledge that is created within the organization; secondly, I used it as a researcher trying to make sense of what I was studying and explain it to my academic fellows. I am studying stories and sensemaking in farming and in its relation to knowledge as practice. In addition, I am trying myself to gain instances of stability and understanding in order to tell “my” story about this organization. I am trying to make sense of my analysis, and trying to tell you, my readers a good story about it. I am fully aware of my own sensemaking in this process of writing this dissertation.

My data collection is then, the collection of people’s (of people related to CREA groups) sensemakings. Further, myself as an academic researcher, I also interpret their sense-making bringing in further elements from other data (secondary texts, archival data, cultural elements, and so forth) and provide my interpretation of such cultural artefacts.

This double staged process, may be called a meta sensemaking, as I am making sense of the narratives of people that are in turn, trying to make sense of the past events they have lived. I, as a researcher, am interpreting what they already have interpreted as being their reality. In their widely cited book, Golden-Biddle and Locke (2007) also refer to us as researchers doing sensemaking, as a way to rationalize the story we are trying to tell to our fellow academics.

Another element I bring into my analysis, as I place myself in the research context, is my background in relation to farming. I was raised since a child in an environment where frequent travelling to a family-owned farm made me love the rural environment. I felt closely identified with Setten (2005) when I read what he wrote about feeling horrified to see geography students walking through a cultivated field:

My unease, and moral position, within that particular situation was a demonstration of another, yet much wider, ‘situation’—the fact that I had grown up on a farm. My knowledge of not walking on the cultivated fields during the growing season was thus something that I had brought with me from home. I have no memory of anyone telling me exactly why one should stay off the fields—you just did. It is something you know and to which you have a strong

embodied relation—it is ‘natural’. This ‘naturalness’ can only be understood if seen as a product of its circumstances—it needs to be mirrored in the context of our situated knowing or, as Shotter suggests, we need to identify ‘what is “afforded” us by our circumstances’. (Setten, 2005, pp.69-70).

The setting of my study made me recall my own experience of farming. I felt familiar with the things I saw, and the places I went. I think that this background worked in favour for me as a researcher. It helped me blend in and embed more quickly into my study. I always understood what farmers talked about in the meetings.

There were some moments amidst my interviews that farmers made these particular enlightening reflections about their reality and their lives. On occasions, it was just a sentence. To be honest, there were dozens of interview transcript pages per one of these “epiphanies”, but they were worth it. In trying to understand the complex knowledge creation relationships these farmers are embarked in, these phrases worked as light posts in the way. I return to these issues in the results and discussion chapters (*Chapters 5 and 6*).

Upon collecting my data, my strategy was to try to become part of the landscape while I was observing the group at work. I would take notes on what would be a normal routine, a taken-for-granted in their meetings. I tried to sit as quietly as possible, without calling attention to myself, and tried to be fully aware of possible impacts of my presence.

Sometimes this was hard to accomplish as many times I was the only woman in the meeting. Although in time, as I was attending group meetings for a year, members became used to seeing me there. My presence ended up being considered as something normal rather than extraordinary.

Within the qualitative critical methodology tradition, it is recommended to take a close look at the impact the researcher has on the research conducted, in an effort to be more transparent about the whole process. Authors who write about responsible writing (Rhodes & Brown, 2005) also belong to this tradition. Suddaby (2006, p.640), citing Strauss and Corbin (1998), refers to an intimate relationship between researcher and site: “Because of this close and longstanding connection, the personality, the experience, and character of a researcher become important components of the research process and should be made an explicit part of the analysis”.

What follows is an extract of my hand notes taken on meetings during 2006, presented as an example of what things I experienced through my observation process. I made an effort to “look” at myself during a meeting:

“I usually arrive to the meeting site on time... farmers slowly start to arrive. Every member greets me with a smile, getting more used to seeing me around. They are usually all men except for me. Occasionally, when it is a farm meeting the wife of the host member is present and acts as hostess of the place, taking over her role when coffee or lunch is served...I try to sit in the back and make others unaware of my presence. I take notes in silence. Soon I realise they have forgotten about my presence” (June 11th, 2005, 9 de Julio, Buenos Aires Province).

Here is another reflection I made was regarding how my *persona* may have had an impact on what I was observing:

“In this meeting, like many others, they are all men except for me. It is my first attendance with this group. I try to sit in the back and make myself as unnoticeable as possible. I do not want my presence to alter what is going on in the meeting. Although I think that men are probably conditioned by the presence of a woman in the room...How? Will they shout less, try to act more civilized, or keep from cursing?...In addition, I cannot help it, but at this point in my pregnancy I am not able to hide my large belly which before I could effectively camouflage in my farmers’ like clothes”... (November 10th, 2006, Tapalque, Buenos Aires Province).

This last reflection where I hint that my pregnancy (I had three babies throughout this study) has started to get noticed is brought up because men tend to react differently to pregnant women. They become overprotective as if something will happen if you are not sitting down, drinking something often and so on. I tried as much as I could to avoid such things, but it was hard and it brought consequences to my interaction with my subjects of study. I elaborated a broad chronology of my study years which can be seen in *Appendix 3.4*.

4.7.1 Lost in Translation

This research was done in a Spanish speaking country by a native Spanish speaker, but had to be written out and communicated in English. I have to admit how challenging the double language use was. I personally translated every Spanish document into English for quotations for the thesis. I found it was especially hard when I had to explain to my interviewees and other farmers “what my research was about”. In studying all of my literature and theory constructs in English and having to translate it in Spanish, and to people who were not academic made me extremely conscious of the meaning of the words in each context. I discovered then, that meaning and sense was not always easily “translatable”. I also learned that there is literature available that helped me with this kind of struggle (Manchon & de Haan, 2008; Woodall, 2002).

I also faced the inverse problem, some words and meanings in Spanish I found difficult to translate to English because they carry cultural implications. For example, the notion of *Don Pablo*, which at last I decided to leave in Spanish, had no comparable denomination in English. I also found difficult to translate words which had no English equivalent, and did my best to explain them. Another example I can provide is with the word trust: the direct translation of the English word “trust” and “trustworthiness” into Spanish is through one single concept “confianza”, and the verb “to trust” gets translated as “confiar”. However, this word is also the Spanish translation for the English word “confidence”. These could be considered methodological issues, given that the study was done in Spanish (the native language of the author), and must be reported in English to its doctorate committee and to the English-speaking scientific world. Another word that presented problems is the Spanish word “alimento”, which means “food”, but it is as a more broad word than “food”, which can also be translated into “comida”.

Language and the choice of certain words do matter. Gherardi (2000, p.216) cites Wittgenstein’s 1953 notion of linguistic game and explains how language is not a private, but rather social and collective fact: “linguistic terms arise within a social practice of meaning construction”. There are some realities constructed around some terms used by CREA members, that as the research progressed, I became aware of their importance and feel compelled to explain at some point in the thesis. For example, my choice of not translating the word *asesor* (as awkward as it may sound) to “advisor” was because *asesor* is used in Argentina as a word that includes the advice and the

“coaching” that an extensionist working in CREA performs. And there is a whole social and cultural implication constructed behind this notion. Elements of recognition and prestige are in play. It is as if one provides a credibility presentation card when is presented as a CREA *asesor*. Nicolini et al. (2003, p.11) would have agreed that the correct use of language is of utmost importance if I am to understand the culture of the CREA Movement, as they wrote: “participation in a practice entails taking part in a professional language game, mastering the rules and being able to use them”.

4.8 Addressing Research Limitations

One of the limitations of this research is caused by its main data collection method. Stories, as the primary form of the data, have both the advantage and disadvantage of being closely intertwined with the very personal journey of life. Each interviewee was given the chance to narrate their particular subjective experience. The nature of this data, as personal as it is, makes it very difficult for the researcher to reach a saturation point, as stories are almost never the same, personal experiences vary, and circumstances change from person to person. In addition, the characteristics of the subject of study, made it almost impossible to cover all stories from all members. AACREA is a widely spread organization, CREA groups are geographically expanded throughout the country, which also accounts for its richness. Things are lived differently by members who are in different places, even during the same periods. The interpretation of everything could never stop.

I realised I had embarked myself in a never-ending search for stories that could continue as long as I kept searching. For practical purposes, and to comply with this thesis requirement, I had to put a stop to my collection of data. My list of potential candidates to interview is still long.

However, as endless as my search for stories was, I also reached a point in which my broad theme categories (those discussed as dualities) contained almost every concern mentioned in the interviews. It was then that I stopped interviewing. I had interviewed 27 persons, travelled 8,489 kms, and attended 26 different meetings. I believe my data collection journey has provided me with deep insights into the CREA belonging experience. Throughout a long time during the research process I felt that I was just

scratching the surface of an unseen, large iceberg. As I found out more, the more I realised I knew less. In time, although I make no claims of knowing it all, I started to feel secure enough to reach my conclusions with the responsibility of having come as close to my data as I could. The subjectivity of interpreting interviewees' accounts was moderated by the ethnographic embeddedness I tried to accomplish.

4.8.1 Reliability and Triangulation

As a checking method that what I had come up with could be elaborated into theorized categories (and be used to analyse other situations), I consulted other interviews done by staff within AACREA.

These independently collected interviews were conducted at different chronological times by other staff members of the Movement. Seeing that my dualities were also found in them worked as a way of triangulating the common storylines identified by me in the video and in my transcripts.

Another form of reliability came through the experience of having a paper published from preliminary results of the thesis (Peirano-Vejo & Stablein, 2009, see *Appendix 10*). I submitted the analysis of stories through dualities and had the chance to have my thinking and ideas peer-reviewed by fellow scholars.

I then had a semi-closed storyline I could tell to some of the interviewees, and ask their opinions about it. I showed the paper to AACREA's president at the time (Oscar Alvarado†), and we had an interesting discussion. He was very interested in the dualities and tensions that I had identified as existent in the organization. Rather than approval or applause I was searching for a reassurance that I had understood the philosophy of AACREA as an organization, and that my conclusions on its sensemaking process were not far out. I was risking a negative evaluation of what had been my sensemaking interpretations on the sensemaking processes of others, but I felt compelled to run the risk. I wanted my research results to matter and to help farmers as members of this organization to better understand themselves.

In that matter, I was asked by the group I had been observing for a year to provide some feedback on my observations. I did a short presentation (which lasted 20 minutes and can be found in *Appendix 8*) on one of their CREA meetings (9th June, 2009). It was a most enriching session because it provided the group with a moment of reflexivity about issues that were not *per se*, talked over much. I could see it was a most valued moment

by the attendees of the group. Upon the closure of the meeting, each member spoke about the evaluation of the day and many of them mentioned my presentation as a positive highlight.

Later that day, I was told by another member that a debate sparked when some of them wanted me to speak in the Zonal Congress that was coming up next (although the agenda for the congress which was already set a year beforehand would not allow this).

I think I triggered thoughtful reflections by some members when I analysed one of the dualities, group versus institution. This group had been having some internal struggles with AACREA and the way I exposed the tensions in the duality felt very familiar to them.

Finally, a further source of reliability was the opinion on the paper of a former General Coordinator of AACREA, who had been directing the administrative staff team for over twenty years. He congratulated me on my work, and said that I had indeed captured the “spirit” of the Movement (personal phone communication) and that he believed no one had studied the organization from this perspective before.

Another range of limitations of this research stems from the interviewing situation.

Alvesson’s (2003) warning that interviews are not pipelines of unattached and unstrained information, but instead complex social encounters I took to heart. I made an effort of contextualizing each interview, and was especially careful of looking for background on each interviewee. Gender and language issues may also be considered limitations on every interview situation. However, by incorporating these issues in my analysis and reflection I think it is a way of acknowledging their potential effects and make them part of the analysis.

4.9 Conclusion

This chapter tried to describe the process that took place “behind” the research, what I experienced through the elaboration of ideas. As this research is placed in the knowledge as practice tradition, there are methodological implications for this paradigm.

The first implication is the consideration of the researcher in the actual conduction of the research. From the first moment in which I started writing this thesis I used the

personal pronoun “I”. I am assuming my authorship of the research I conducted. I explicitly do. I am not eliciting behind language but rather reflecting on my responsibility on the claims I make.

Another implication from the knowledge as practice paradigm is the attention paid to everyday events. The theoretical framework I chose (sensemaking) is also suitable for looking to understand small details that make up the everyday practice and the knowledge they carry in the flow of events.

In terms of the methodology employed, I tried to get really embedded in the organization’s culture by taking part in a number of organizational events. I was in search for key stories that were constitutive of the organization and carriers of the sensemaking processes of its members.

The CREA Movement is a complex, extended organization that has developed its tentacles throughout the Argentinean countryside. To choose it as a case for studying was a considerable challenge, as it was necessary to understand its very particular culture. The richness and unique nature of the Movement go beyond its institutional growth but rather lie in the lives of its members that is why the knowledge as practice approach was found to be a suitable framework.

In addition, I think that using storytelling as the entry strategy into the organization’s reality proved to be a sensible choice. The Movement grew in complexity and numbers throughout the years, and it helped to go back to its origins to understand how the enormous working network that one sees today emerged. This historical *racconto* of the organization’s older members provided me with a very necessary context. In addition, people’s sensemaking is always done on their past. It was crucial for me to understand and learn about the Movement’s history. Data available was endless. I believe I have made my best effort in presenting a solid account of the data I gathered to inform my interpretations and reach my conclusions.

CHAPTER 5: CONSTITUTING STABILITY AND CHANGE THROUGH STORIES

“...the world is both unknowable and unpredictable. All you can do is engage in transient moments of sensemaking” (Karl Weick).

5.1 Introduction

This chapter and the next contain the results and discussion sections of this thesis. I decided to present both results and their interpretation in an intertwined manner, following the reasoning of my methodological chapter. In the upcoming chapter I try to answer questions such as: How are instances of stability amidst changing times handled by farmers? How did the organization manage to survive so many crises in time? Have CREA groups managed to develop resilience?

As discussed in the theoretical chapter (*Chapter 2*), change is always present in reality. When I heard the stories the interviewees told, I heard their accounts of how things happened. I was presented with their sensemaking of past events. And surely that narrative recount must have changed today, not only due to the oral nature of speech - that provides it with flexibility and immediateness- but also because in making sense of the past, and in an effort of understanding what happened, memories surely mutate in time.

In assuming a narrative approach, as in all storytelling approaches I am aware that change is always tinted with either a positive or a negative connotation. How things are changing to either a positive or a negative direction is only told by the interpretation of events of those who are telling the story at that point. It is the “telling” that makes it right or wrong, that interprets events as something either negative or positive in the long run. The ones telling the stories are, in some way those who get a voice and therefore a

chance to explain, according to their interpretation and their sensemaking of events, what happened and how history has developed in the past.

5.2 Dualities Present in the Stories

Stories have been found to be appropriate to deal with instances of change and stability because it is in their reasoning that the retrospective sensemaking of the interviewee arise. Stories often provide the vehicle for stability construction and maintenance because they are flexible carriers of meaning. Storytellers integrate elements of time, sequence, plot, character and motivation in diverse ways. Since thought is reconstructed in narrative terms, storytelling can reveal how people endure through stability and change (Cohen, 2006). Stories can also serve a variety of purposes that have been well documented by Rhodes and Brown (2005). “Stories help link the past to the present and the present to the future” (Boal & Schultz, 2007, p.417).

This wealth of work from those who used stories in their research (Boal & Schultz, 2007; Boje, 1991a; Clegg 1993; Currie & Brown, 2003; Czarniawska 1999; Hatch 1996; Martin et al. 1983; Van Maanen, 1988;) is both indicative and constitutive of narrative’s impact.

I focus on the sensemaking and sensegiving functions of stories (Gioia & Chittipeddi 1991; Maitlis 2005; Rhodes & Brown 2005a) because the flux of organizational life that is central to an organizational becoming perspective on change provides a constant trigger for sensemaking (Weick et al. 2005).

The dualities used for my analysis (refer to Table 4.8) namely: time wise (past versus future); organizational wise (self-organised versus formally organised); group composition (homogeneous versus heterogeneous); technology wise (man versus machine) and knowledge wise (personal interest versus collective learning), are a selection of those found in most of the interviews conducted, providing evidence of their relevance.

In addition, I made an analysis of the audio-visual video that was designed by the Knowledge Management (KM) group in AACREA because I found it was an emblematic example that presented the dualities in a story that told how the institution had endured throughout its history. I am aware that this audio-visual material represents an institutional, consciously reflexive instance of storytelling, specifically designed as a

public relations exercise in sensegiving to encourage CREA members in the adoption of a specific innovation. The very existence of the video reveals that this change potentially disturbs the texture of on-going relations. The audio-visual text provides a rich example of how AACREA communicates the adoption of a new technology, deals with the past, and faces the future.

5.2.1 The Intrinsic Tension of Time: Past Versus Future

For the CREA Movement past times are a resource. The time of founding is bigger than other times; it is laden with positive values and works as a source of nourishment for identity and organizational culture. *Handmade signs were made to call a meeting.*

The richness of the data relies on how the adoption of technology is narrated in its relation to this past. The past is mentioned with a special sense of identity, values, and strongly rooted traditions. In the video, the introduction of KM is linked to this past. *A new paradigm does not mean new values*¹². Although this sentence may sound contradictory, the storyline it presents is that a new reality (paradigm) represents the future, but without discarding the past, the values, and those things that are familiar and important to members.

Progress and the incursion into the future, fueled by technological innovations, are reflected in the stories as being in tension with present stability. AACREA is known in the Argentinean agricultural sector for having a historical pioneering attitude towards the adoption of new technology (farm management, no-till sowing, and use of genetically modified soybeans, among others). However, farmers and especially those who belong to AACREA are very concerned with retaining their collective identity,

¹² Text extracted from the video are presented in italics. Translations were done by myself.

enabled by their very particular history. *Knowledge was shared orally among equals. Published information was spread slowly.*

The future lies ahead; the challenge the organization presents is to face it whilst maintaining connection with the roots of its identity, with their values and historical culture. This fear of losing oneself in the postmodernist whirlpool causes “information anxiety” (Wurman, 2001), and is partially related to the great amount of available information. There has been a transition from the past when information was a scarce resource, to the present when information is everywhere and almost impossible to process. The new challenge seems to be whether AACREA that has so successfully provided scarce information in the past can protect farmers from the overload of information in the future.

Identity and its relation to the past serve a very distinct function here; it is an anchor, a bridge to a safety Zone that provides steadiness in an ever-changing environment. The connection to the past, to their truth, is used in the narratives as a resource to help face the uncertainty of change.

The stories present the future as un-chartered territory; it lies there inevitable, yet scary to face alone. The future is where farmers are headed, with total uncertainty of what can be expected of it. Technology and innovations make it even harder to bear and provide a vertiginous pace for change. This tension is handled by the support of the collective; the story underlying the video is repeated after new concepts (like knowledge management) are introduced: “together we can do it”; “if we keep working in groups we can handle it”. The final closing of the video with the traditional bumper sticker of the CREA logo carries a reassuring symbolism – “we have done it before, we can do it again”: *Since 1959*. The unknown becomes bearable if we continue to stick together.

The video narration presents current times as an intersection of this duality of past and future. The present appears symbolized in those technologies already mastered (cell phones, chat messaging, internet searching), and in those innovations which are already part of today’s running of farms (GPS, farm management, soybean cropping). These are not frightening to farmers, but rather familiar elements they feel comfortable with.

Farmers feel secure because they know how these work; they use them every day; they have a sense of control around them. The intersection between past and future tense is used effectively as a transition mechanism in the stories in the video. To introduce the future, the present is shown as controllable, as a medium step that has already been

taken successfully. Besides, today's present was yesterday's future, so in this interplay of tenses and historical positioning the stories are told and retold in ways that go back and forth communicating the message that stability and change can co-exist.

The sensegiving stories told in the video presume a narrator, an entity that does not have a body or a face (the video has no author or name behind it). It is the organization talking to its members. It is the voice of the institution that speaks and presents the scary future in an understandable way and soothes with a paternalistic tone "together we can do it". The way the story is told, the presence of Don Pablo and the values he promoted are recalled and redefined to suit current changing times.

Time and the past matters to farmers; so confirms research from other authors. Setten (2004), for example, in studying landscape change found that farmers' oral histories commonly went beyond recollection from personal biography and experience, and incorporated a wider genealogical framework. The author remarks that "farmers embody their past practices, both their own and that of their ancestors" (Setten, 2004, p.396). Similarly, Riley and Harley (2007, p.402) wrote:

Sometimes, aspects of a deeper past, beyond the living memory of respondents, were used to date particular events, (...) 'the land was bought in the 1800s when my great-grandfather moved to the area', or the 'moorland was all burnt by a fire in 1903 when my father was born', representing a longer oral tradition or 'genealogical knowledge'. (2007, p.402)

5.2.2 Self-Organised (few) Versus Organizational Form (many)

Another duality found alive in the CREA Movement is the tension between being a self-managed, small group versus becoming an institution with an expanding membership. In a select group of close friends with whom everything is easily shared, trust is more likely to exist. However, this contrasts with the messianic vocation of the CREA Movement of "open doors" (see glossary), expanding its frontiers to many more. In its origins, the CREA groups were mostly friends who shared socioeconomic conditions, culture, values, and geographical locale. Mainly based in the Pampas, the farmers' main concerns for coming together were related to productive issues (the erosion of the soil) and to the isolated social condition in which they lived. These two causes came together as a reason to join forces back in 1959. Elderly farmers remember their life before they joined their CREA group:

CREA for us meant a lot of exchange with others...It opened us to friends and to a network of people. We were very lonely, because of the distances, because of the roads, because of the type of cars in those days...

As word of CREA got out, farmers from different geographical areas, which produced different crops, beef or milk, became involved. Growth was explosive at this stage, with some resistance on part of the founder to the relentlessly expanding number of groups. Word-of-mouth, anecdotes and stories seemed to play an important role in the formation of new groups. As Boal and Schultz (2007, p.413) write, stories work as “A powerful way of making outsiders feel insiders and imparting tacit knowledge or its emotional component”.

Size brought complexity and the need for organizing. Soon productive and geographical differences started creating communication problems: “*it was like a dialogue of deaf people, we spoke different languages*”, said one of the interviewees that worked for many years as an asesor and general coordinator. The AACREA institutional structure followed the growth in the number of groups; regional Zones were created. As mentioned, a National Congress in 1970 was the milestone when AACREA introduced the geographical division of its groups.

Growth in number of CREA groups pushed and fuelled the development of AACREA as an institution. However, what may seem today like a natural development into a complex organization only took place with considerable internal resistance and struggles. The following quote of a farmer who was a former AACREA president explains why and how the institution came to exist (E.P., personal communication, September 1st, 2006):

First there was one group, and then.....when there were 20, or 30 they realised that the richness of the exchange among those 12 people had to be communicated on between the groups. So it grew organically. ...Then they said ‘experiences have to be exchanged in a more structured way’...AACREA was created... and then the regions were born. And so as a fruit of growth, the structure was being formed, but the cell of all that is each group.

The final sentence provides a hint of the underlying duality that is present between the CREA farmers and AACREA. Closely related to the representative nature of a

democratic system, the interviewee insists that the essence of the Movement is the group; the “cell” of the organism is the CREA group. Further:

The movement was developed through the years, but what we must not forget is that the essence of it is the CREA group. The CREA group is the 12, 10, or 9 members, each with their monthly meeting, their asesor, and each group is a cell, and each cell is autonomous.

What can be read as the formal history of the institution with accurate dates and facts is not representative of the deep problems that AACREA as an institution suffered to convince some of the farmers of the importance of its existence:

The members of the CREA groups did not understand why this was necessary, they said it would only generate bureaucracy; it was something very very resisted. It was terrible, terrible. They said but why? Why create an association if we are fine the way we are? This took years, years to overcome... (Former General Coordinator of AACREA).

A very important distinction is made in this story: most people strongly identify with their CREA group, but often tend to resist AACREA, the organization. This resistance to bureaucracy and formality resonates with farmers’ identity, as self-organisers and resistors of paperwork. Farmers like their own group intimacy. They like to work on their own. They do not feel comfortable around structures and formalities. An institutional representative describes his experience from within:

There were CREA members that used to travel very little. The man that imagined AACREA¹³ used to live in a selected neighbourhood in Buenos Aires, and he travelled to the farm. But the farmer who lived in the farm, very very far away said: ‘AACREA for what?’ So it was very difficult...we were very worried by the miscommunication that existed between the CREA groups and AACREA.

While AACREA has grown, it is far from being monolithic. The vast majority of Argentine farmers are not members. A former president explains how the nature of CREA limits massive expansion:

It is not easy to be a CREA member; that is the question. It is not easy...So, it is a wonderful idea, but one asks, so why it doesn’t get spread massively? It doesn’t spread massively because of the level of commitment you have to assume, the hard work, the transparency, the dedication...

5.2.3 Group Composition: Different Versus Alike

Related to the previous duality, a greater number of members bring to the organization the richness of differences and heightens the salience of identity issues, which are central to sensemaking. CREA started among a selected group of friends who were mostly wealthy countrymen of their time. Growth in numbers does not come without conflict, as smaller (different to the initial founding group) farmers became interested in participating in CREA groups.

¹³ AACREA is located in an office in downtown, in the middle of the Capital Federal District, Buenos Aires.

Tension is generated by the diverse origins of people. Some farmers felt threatened by the incursion in CREA groups of what was politically correctly called a “different” type of farmer. The growth of the CREA groups among different production systems, different geographic locales, varied climatic conditions and diverse size farms caused tension, which was not existent in the beginning when members were more homogeneous in production and farm size.

Class, in particular, presented a challenge to the expansion of the movement. The 60s and 70s were years of difficult political transitions for Argentina including outbreaks of class-related violence and military fighting of guerrillas, which had an impact on the agricultural sector as the following quote reflects:

We were in a very difficult national context in those years, and there were tensions within the CREA Movement, with people of a more humanist orientation. But everything went settling down in time, and eventually, AACREA was opened to a new type of farmer. (Former General Coordinator of AACREA)

The tension of opening up the entry of the association to a different, smaller farmer is described. It was with an important degree of internal conflict and power struggles that the institution survived. Once these years of conflict were overcome, AACREA learned how to embrace heterogeneity among its members. The phrase “*things went settling down as time went by*” reflects a sensegiving scheme, looking at the conflict retrospectively. The telling of the story implies conflict has been resolved. In the choice of plot and words many of the difficulties suffered become erased. The “new” type of

farmer concept is explained. It is called “diverse” when compared with the initial profile of the CREA farmer, as the following quote from an interview shows:

Until the year 1966 CREA was formed by large farm owners (estancieros). We started to work with small farmers who were wary of the farmers with large ranches. It was an extraordinary experience, because at the table of AACREA, farmers with the fat fingers started to be seated. Farmers who had the white forehead and fat, big fingers¹⁴...It was a hard transition for AACREA ...but we overcame it, we became the only Movement in Argentina where large scale farmers, small businessmen and small farmers sat down at the same table. It was unique.

Another important factor used to manage, and successfully coexist with this duality was the introduction of consensus as a decision-making strategy:

How to reach consensus in a decision is not easy. I always say that decisions have to fall by their own weight, because it is not easy for a group of people to agree on everything...The decision process becomes slower, but is very important to reach such agreement. (Former AACREA President, CREA member).

The institution has developed this process of consensus, incorporating it as part of its culture. Consensus has become essential in the CREA working methodology. It is the preferred way of making decisions, rather than voting. This major importance given to consensus guarantees a common agreement on some fronts. Consensus is stressed in the

¹⁴ The white forehead is a signal among countrymen of people who work in the sun. The use of hats for protection causes their faces to be really dark from sunburn, whilst their foreheads remain of a contrasting white colour. Fat, big fingers are also a symptom of manual, hard labour.

video too, mentioned as a *philosophy*, as an *attitude* that has to *emerge from the differences*, and finally, is given the utmost significance: *consensus legitimates knowledge*. Knowledge for CREA exists and is validated through the consensus reached amongst its members. The importance given to consensus as a philosophy is a narrative strategy to counterbalance the tension created by the heterogeneity given by different people. If momentarily everybody agrees at least on one decision at a particular time, homogeneity is achieved on that decision and difference is -at least momentarily- conquered. If consensus continues to be promoted as its distinctive characteristic, the organization is in a way guaranteeing its own continuity, its own survival. There is room for difference, as long as consensus exists among those who are different.

Martinez Nogueira (1984, pp.35-36) wrote about an example of how consensus had changed its institutional role in CREA. In its initial, founding times there was a consensus not to get involved in political issues. This consensus was natural and corresponded to the vision that farmers had of themselves, centered in their own working groups and far away from state matters. At this point it was more of a doctrinarian affirmation, in line with the characteristics of farmers at the time. When national circumstances changed, this consensus of not to get involved in politics had then a “different functionality” when some members did want to get involved in government issues. Today, consensus on that front implies a definition of the institutional role and a reassurance to maintain the Movement’s internal cohesion in a situation of increasing political heterogeneity of its members.

Heterogeneity is the frame. That which had been perceived as a menace in past times of AACREA has been redefined in the video as a *source of richness*, as a *frame for action*. The stories that stress the message, “we accept the different”, “it is ok to be different”; reflect an on-going tension around difference. Although the content of such difference remains unspoken, AACREA is no longer presenting itself as homogeneous (although its barriers to entry may still seem high to outsiders); it claims to value difference. The duality described implies that acceptance of difference is not yet a taken-for-granted.

5.2.4 Technology: Man Versus Machine

Yet another tension is the duality that faces man as opposed to technology and machinery. The premise behind this duality is that technology can get out of control and be dehumanizing. There is a fear of technology taking over, instead of the other way

around. This duality is related to the tension around time and incursion into the future. The way humanity is presented in the stories is through the defense of values, of rescuing that which is characteristically human: will, feelings, sentiments, thoughts, dreams, and identities. These elements are contrasted with the coldness of machinery. The video introduces first those technologies which have helped farmers improve substantially everyday life, like for example, technologies that improved their communications. A recounting of their initial history is introduced: *knowledge was shared with the spoken word; handmade signs were used to call a meeting*. That was as close as they were. Cell phones, emails, wireless internet have changed the communication habits of farmers, improving greatly their quality of life, as it almost conquered their physical isolation.

The testimony of the wife of one of the interviewees (who was present during the interview) describes difficulties they endured in the past:

There was a train that left at 1 am, and for us, 40 kms in dirt roads at night, it was impossible to travel...We used to come to Buenos Aires twice a year, till I moved there permanently. Enrique [her husband] did not have telephone in the farm, it did not exist yet. He had to go to Daireaux to speak, and he had to wait for hours. So, instead, we would ask the waiter of the train...to take our letters back and forth from the farm to the city... (Wife of one of CREA founders).

This openness to communication technologies does not mean that farmers quickly embrace any innovation. The duality of man versus machine is caused mainly by a tension endured between farmers and their *asesores*, the rural technicians, who were many times guides in the process of technology adoption. The following quote was made by a technician; you worked for many years as an asesor:

We tried to make progress without creating any financial disturbance to the farmer, because normally the producer has always been short of money...So the technician had to have in mind what we called empathy with the farmer. The asesores...with great initiative, they tried to get the information out of the farmers, which was not an easy thing to do... (Former CREA *Asesor*).

The story is told as if *asesores* shepherd farmers into the adoption of new and convenient technologies for their production. Some farmers tell the same story the other

way around. Nevertheless the distinction between farmer/*asesor* existed subtly and surely affected the groups' interactions.

A reflection made by Orr (2006, p.1809) on technology seemed most appropriate to illustrate the depths of this duality:

My point is to emphasize how much care is needed to socialize technology, to suggest that it is an ongoing process, and further to suggest that one cannot yield to the urge to forget –to believe that because something is in the field, the problem it was intended to solve is now taken care of for all time. Nor is it just about technology.

It is not important that Orr was talking about photocopier technicians, or that I talk about farmers, the reflection on technology use and adoption is valid whatever the setting.

Technology is also introduced in the “way” the narration is presented, by using a chat conversation or a live search in Wikipedia. Further, AACREA is redefined with novel, “futuristic” terms; we are an agricultural *Wikipedia*. The interpretation behind this is “we found a novel term to define what we have been doing for decades”. *Open doors*, almost an axiom of the CREA philosophy, can be almost considered synonyms with “open source” knowledge development. The video bluntly reaches the duality's climax by expressing an important “BUT”: *But people are ANALOG*. There is a difference from the digital virtual world. People are concrete, flesh and blood and feelings, and cannot be reduced to numbers or bits. There is a close up in the video to the face of a CREA member. Each individual matters. “You matter to us”. Technology should not be about erasing individuality. The balancing negotiation between technology and humanity, between progress and past, works effectively as a rhythmic tune in the general narration of the video.

The story on technology is told carefully and shows that not all farmers are on the same level of innovation adoption: *Can we still share knowledge with those that do not have cell phones? Yes we can!* in flies an animated cartoon of Don Pablo, agreeing, promoting the inclusion of the marginal member. The institution presents itself as prepared to reach out to everyone, including those who have not adopted basic technology.

Technology and the future in the narration of the video follow a rhythm, negotiating constantly with reassuring messages that go back to the history and values of AACREA.

KM is introduced cautiously in the beginning and explained through a series of associations with things that members feel already comfortable with such as cell phones, Internet, or GPS.

5.2.5 Knowledge: Personal Interest (loss) Versus Collective Learning (gain)

The knowledge created within CREA groups, by CREA farmers is of a collective nature. The institutional video on KM tells stories that run through the dualities, juggling tensions that need to be sorted for knowledge to be created. I discovered that the knowledge AACREA handles has very precise characteristics which are closely watched over and need to be made available for all members. The following quote reflects what an interviewee said about this:

My source of technical actualization and training was the CREA group. ...So there is the importance of the exchange of information, of giving and receiving, of being transparent, of reaching consensus, of friendship,... of doing things right. So there you start generating a connection between members that if an adversity comes we won't break apart, we face adversities together. (CREA member, Former AACREA President).

Looking at the above quote, the farmer starts talking about technical information and finishes the reflection referring to the group's commitment to stick together in adversity (like a flood or a long drought). As it was an evolution from sharing to sticking with each other in adversities.

Several definitions and metaphors of knowledge are provided in the video clip: *Shared knowledge* is equal to *shared words*; *knowledge means interpreted information*. And then, a step further, the notion of *Knowledge Management* is introduced as *standardized information*. "We already do that", "we are used to having that", the message is sent. A past known technique is presented alongside the KM concept.

Knowledge Management is then defined as the creation of a *common language*; later as an *attitude* and finally it is redefined with three words: *as a decision* (an internal disposition), *as behaviour* (an external conduct), and *as commitment* (an external conduct related to others). The construct of what management of CREA knowledge means is presented in a progressive definition towards commitment with the collective group.

There is tension caused by the fact that sharing is needed in order for learning to occur among more people. If somebody fails to share their own information, they are compromising the benefit for all. They are also losing the benefit of the collective, virtuous cycle that CREA groups have generated. The key focal point is placed on the sharing of knowledge. The knowledge CREA talks about “has” to be shared, it “needs” to be shared in order to exist. It then fuels, as portrayed in the typing in real time on-screen, *shared knowledge fuels the development of nets*, which can only exist if there is *trust*; if we trust each other we have *support* for everybody. Finally, the video closes with the CREA bumper stickers farmers’ use, and their motto “sharing knowledge”. The storyline behind this concluding image is: “This is what defines us”; “this is what we do”; “this is what we are good at”. The storyline is clear, the institution is saying to its members: “this new database comes only to reaffirm who we are, because it will help us at what we do best, and what we have been doing before technology caught up with us”. The following quote sums up the key issue for CREA *asesores*, it is not about technology, but rather the process behind the creation of knowledge:

I think that CREA managed to create a space which was favourable for the rural professional to have contact with the farmer, because the farmer was afraid that they would come and complicate his life. In those days, technology was related to uncomfortableness, that’s why I have insisted so much in the distinction of technology of inputs and technology of processes. The technology of process is the technology of CREA works...the technology of knowing, of knowing how to do things. For example, herd management, pasture management, feeding ... (Former CREA *Asesor*).

In explaining what KM is, the narratives in the video identify why knowledge and learning are CREA’s core elements. However, the values and the definitions provided behind their notion of knowledge are quite unusual. Knowledge is legitimated by consensus, and appears as a socially constructed reality.

The leadership that AACREA has tried to communicate through this video was unpersonified as there is no visible face talking to members, but rather, as previously described, the personification of the organization talking to its members. The changing directive roles of AACREA contribute to this lack of leadership personification.

In spite of this diffusion of leadership in a horizontal type of organization, the leadership practice of storytelling is effectively employed. It can be illustrated with

what Boal and Schultz (2007, p.426) affirm: “strategic leaders achieve innovation and change by demonstrating its legitimacy and consistency with the past. Maintaining this balance –between the past and the future, between stability and disorder- allows organizations to evolve and learn, and is the essence of operating successfully at the ‘edge of chaos’”.

5.3 Conclusion

The way the CREA Movement as a whole handles its cycles of stability and change was found to be foundational for the creation of adequate organizational conditions for knowledge practices to prosper. By the use of dualities as analysis devices, tensions that are permanent in the organization’s life and its members’ activities were better understood. The instances of stability I found were patterns amidst the ever present change typical of organizational life. These patterns of stability worked as milestones providing the organization with strong cultural identity factors and key elements that constitute it as a network of farmers working together.

AACREA is an organization with a history, which is frequently brought in the current practices to find stability, actively using its past to understand the present. And it is also an organization that is very much affected by its geographically expanded context, a feature which forces it to deal with its spatial dimension.

Time has played an important role in my analysis of stories and change. Time is central to narrative (Rhodes & Brown, 2005a). AACREA’s strategy of introducing a new technology to its members has been fruitful in capturing stories that go back to its foundational roots.

I found that stories told in new ways can contribute to this virtuous mechanism and continue to nourish the organization’s credibility among its members. AACREA’s survival is dependent on this notion of sharing and on this concept of “we”; of belonging that transcends the local thirteen-member group. AACREA only exists if farmers contribute to it and in turn use the knowledge it generates. The tension between farmer and institution is always present, as a latent reminder for the organization not to forget its humble, farming origins. AACREA will continue to exist as long as it keeps

paying attention to the sensemaking processes farmers make and understanding the collective sensemaking process groups come up with.

CHAPTER 6: CREA KNOWLEDGE

Knowledge grows when shared (Bhartrihari)

6.1 Introduction

This second chapter of results and interpretation refers more specifically to the characteristics of the knowledge handled and created within the CREA Movement.

Following the format in *Chapter 5*, results and discussion are presented jointly.

In talking about the features of the CREA knowledge I ended up talking about values and other factors such as trust that cannot be considered separately from the relationship network that was cultivated and developed through the years of development of the Movement. Although for an outsider this growth may seem to have happened in a spontaneous way, if a closer look is taken, one can see that these relations have been nurtured and consciously developed.

For clarification purposes, I found it necessary to make some artificial dissections, like separating “crisis survival” and “trust” and “value sharing”, three very much related constructs. I arrived at these constructs from my multiple readings of the interview transcripts. I would highlight paragraphs in which one of these three themes appeared and found them hard to differentiate. A sentence on crisis survival, would come immediately followed by one on trust and values.

These subsections attempt to focus more deeply on subtle yet key issues of my analysis.

6.2 Trust: The Foundation for Relationships

When I asked our interviewees about knowledge, I realised that they would first start to talk about their relationships with their fellow members in the group. For example I would ask: *what can you tell me about the knowledge your share with your CREA group?* And an answer I got was:

“My CREA group is very important to me; it is a group of people that have walked with me through the years, helping me...”

This pattern repeated many times, showing me that to be able to talk about knowledge and its properties in this context, my informants found it necessary to talk first about the relationships that existed before the knowledge was shared or created. It was over these relationships that a propitious environment for the creation of knowledge was established. One of the main features of this net of knowledge exchange is a strong bonding among its members. Such relationships between people, by their very nature, cannot be easily replicated nor hastily expanded

6.2.1 Sharing of Values and Ideals

In the interviewees’ descriptions of reasons for belonging to the CREA Movement and working in the building of a network of knowledge, sharing of values was found to play a crucial part. Today, from an institutional standpoint, as part of its mission statement, AACREA advertises in its website seven main values: integrity, commitment, respect, team working, solidarity, generosity and search for excellence. Although all these sound promising for any institution that strives for its members’ commitment, I found similar values instilled through the testimonies of how the “CREA spirit” was lived. After multiple reading the interview transcripts I started to group as “values” these categories that started to emerge. Almost every interviewee referred at some point to these values that were needed to understand what was considered a particular “CREA philosophy”. In those values, members claimed, laid the explanation for the real drive behind the sharing of information. Values (or issues related to values) mentioned were: commitment, generosity, humility, solidarity with peers, ability to learn, supporting of

fellow farmers in times of crisis, among others. The following quote from a former *asesor* provides an example:

A lot of people that today belong to the CREA Movement do not know how all this was created small step by small step. CREA mindset is helping the other. Here in Suipacha¹⁵, there was a man who got killed by a machine; his wife was left all alone... His CREA group managed the farm for her; she did not know a thing, and the CREA group managed the farm on her behalf...that is CREA.

These values were mentioned as the real reasons that moved farmers to participate and remain participating in their CREA groups for many years. Not only out of a motivation to learn and acquire knowledge but rather to live under certain ideals, to belong to a particular group of peers. The following quote reflects how in some cases these values were ingrained as a general attitude to face life:

One continues to remain faithful to the CREA idea even in other activities. One tries to take to practice the same thing. (Former CREA *Asesor* and Former General Coordinator of AACREA)

If you make a U-turn in your car, knowing you shouldn't, you feel like a burden for having the CREA bumper sticker on the back of your car. You feel more self-conscious about doing a bad thing. (CREA farmer)

In many cases, interviewees felt quite strongly about their relationships with their peers. A CREA member talked about his "tribe", using a compelling image:

¹⁵ Rural town in Buenos Aires Province.

CREA is my tribe, a small tribe in the large tribe of farming and agriculture. It is a group in which we, as hunters and gatherers, we hunt together...and that is important because it constructs a bond of affection to do something together, united even in risk. (J. Lastra, Former CREA Vocal, Zona Oeste CREA, 2008, p.26)

In a way, you feel that you are a part of the enterprise, or a part of the progress of the firm, and of the crisis of that firm...but more than the firm, you are like a part of the families that conform those firms...The human aspect gives you like a bonding and a commitment with the enterprise that is much much bigger than the simple number of profitability. (CREA *Asesor*)

This last quote describes how after many years of advising a family business, the *asesor* feels not only part of the business, but further as though being a part of the family. The bonding that is generated through human relationships runs beyond the business contract or the knowledge sharing.

The historical timeframe through which the institution had its most important expansion were the decades of the 60s and 70s. In their testimonies, interviewees mentioned that AACREA was founded in a time when there was a social collective aspiration of ideals. The sixties were years of turmoil and idealistic commitment. The institutional discourse of those days was very much related to ethics and ideals and CREA emerged within that context. A frequently quoted saying of Don Pablo, which I heard during my data collection process, was:

Don Pablo used to say: 'It is not of gentlemen to give back less than what they have received'. If people turn to become only receivers, the system dies...'' (CREA *Asesor* and Zone Coordinator).

6.2.2 Crisis Survival

Relationships are especially tested during critical times. Several interviewees particularly mentioned the support they received from their peers when rough times came along. Major crises endured worked as a sifter of the quality of farmers' relationships in groups. In radical conflicting times like huge flooding of farms, or terrible droughts, groups either survived and grew stronger, or disappeared. There was

no room for doubt. Members whose groups made it through historical flooding, droughts, or important economic meltdowns of the sector tell a completely different story from those who have not endured such traumatic episodes. In those situations, CREA groups have become collective support structures for facing the crisis. The following narrations show that belonging to CREA, rather than cows and crops, becomes a matter of a different nature:

In our region people had to drive their trucks on top of the railways to escape from the water. The positive thing about flooding is, at least in my experience, the consolidation of great human relationships. The things that were done in those days! Sick people were dragged out at night, under the pouring rain on the railways...I have a very special memory of all those episodes, memories you don't forget in a lifetime. In the middle of that crisis I had to work to keep the groups together. There were people that were completely under water, who had lost 80% of their farms. (P.Uribelarrea, Former Vocal Zone, Zona Oeste CREA, 2006, p.17)

When our farms were flooded, we did not know what to do in the meetings; we had no farms to show...We would look at the bridge built by one of us, or how another one had to drive the cattle through the water...things like that. So we had this idea of bringing people who had gone through similar situations and listen to their testimonies, to make us stronger. (Former CREA *Asesor*, CREA member)

Maitlis and Sonenshein (2010) wrote about the importance of enhancing two core themes in sensemaking “shared meanings” and “emotions”, and call for further research in those areas, which have been largely overlooked in the sensemaking literature on crisis. The environment of the interview situation, when this is last citation was said by the CREA farmer, was full of a strong emotional tone.

6.2.3 Trust

Although frequently taken for granted, trust was a common factor that appeared at the cornerstone of relationships and motivation for information sharing. For example, in the recent launching of a new Knowledge Management database (AACREA, 2007, Video 1

Gestión del Conocimiento); AACREA has very carefully communicated its preferred form of organizing: working in networks. The message is also clear in another point: the development of networks conveys the development of trust among its members.

In its mission statement, AACREA refers very explicitly to trust: “We sow trust”, as something that is carefully planted, taken care of, and expected to see it grow.

The fact that you work in a group changes your culture, it changes the way you see things, the way you relate to other people, your suppliers, your clients, even your family...that is why the permanence of things is important. Because deep down, this entire network...is trust. Trust. I acknowledge there is also a working methodology, but the important thing here is the progressive building of trust, from that working methodology and from that exchange. And trust is not created out of two years of meetings; it is slowly built...And obviously, trusting others allows you to grow, allows you to create knowledge, allows you to put that knowledge into practice, allows you to learn from others... (Former CREA Coordinator, CREA member and *Asesor*).

Knowledge creation is mentioned in this context; in a trusting, comfortable, supporting context. A crucial point is brought in the above quote: trust is slowly built. Trust needs time. The structure on which knowledge is then built is established over time. Intimacy takes time to develop. Time is a construct which I have learned changes in different historical contexts. An *asesor* remembers the ‘old times’ (with barely any communication technology), when distances and transport conditions made him stay overnight after a day’s work:

When you get invited by a farmer to stay over, you are not being invited to a firm’s headquarters; you are invited to his home... You are allowed into their intimacy, especially in those days, when it was common to stay and spend the night in the farm as a guest. The more meaningful conversations were held over dinner, having a glass of wine... Being a guest in their homes was different than being taken around the farm to see weeds. Our assessment in those days was something more of a personal encounter with a certain degree of intimacy, with the conversation revolving around different topics. Today, there are other time constraints, other requirements, more to do with efficiency and utility...Visits are quicker, people farm more land...more work...In the beginning there was a

different speed for things, which allowed for a different type of conversation.
(Former CREA *Asesor*)

The negative aspect of the farm becoming more efficiency-oriented and enterprise-managed is the impact it brings in terms of relationships. The previous quote expresses how before there was room and time for another type of relationships, which needed a different rhythm to get cultivated and be developed into friendship.

We learn from this story about the nature of the foundations of present networks. The structure of the organization we see today was built throughout the years of feeding of these close human relationships, of feeding of trust. It was over these that knowledge sharing and developing took place. As Snowden (2002a) wrote, human knowledge is deeply contextual and is triggered by circumstance. Difficult circumstances favoured the strengthening of networks because of the challenging collective experiences lived. These networks of practice and of knowledge were nurtured and cultivated alongside human relationships. Available literature shows that trust leads to openness which in turn favours the development of joint knowledge (Nahapiet et al., 2005; Nooteboom, 2002). Further, in a farming context, Ingram (2008) reports: ...“there is evidence that agronomist–farmer encounters that are underpinned by trust, credibility, empathy, and consultation can provide a more effective context for knowledge exchange...The question of how to foster more facilitative encounters is important...”(p.418).

I found similar results, as trust is crucial to sustain the cohesion within CREA groups.

It is necessary to clarify that contemporary time pressure does not necessarily mean that trust cannot be developed or that CREA will start to shrink as older groups (which developed their trust in the “old” way) hit retirement. Newer groups simply just have a different way to develop trust (like for example, email groups, blogs and online chatting). The way and the tools used to develop trust have changed. The way the relationships are built has changed too. In contemporary time, pressures may have increased, but so have technologies facilitating exchange and communication.

Nevertheless the strong cohesion of CREA members have within their institution has its foundation in the “old type” of trust development. And this history will be always foundational of times to come, reminding members of how the foundations were built.

6.3 Autonomous Groups: The key for Horizontal Growth

Each CREA group has its own knowledge needs, and they also have their own standards of what is acceptable or not in terms of knowledge. AACREA had no interference on these types of issues, although they may recommend and ask groups for their data. For example, in one of the observed groups it was compulsory for members to elaborate the annual financial budget and proforma annual report to the *asesor* in time, so that he may elaborate a meaningful comparative analysis of the economic performance of the whole group. If a member did not provide his numbers on time, or chose not to present them, he was cordially invited not to attend the meeting in which the analysis would take place. However, that was not the case for another group I was able to observe. I was invited by a CREA *asesor* to sit down in some of his group's meetings (see *Appendix 3*). In this other group, some members did not financially analyse their businesses, nor mastered the management software and were allowed to attend the meeting, even without showing their own financial performance. Some peers strongly disagreed with such situation, as I learned from a heated discussion that broke out when the member who had not presented his numbers left the room. I presume that this type of situations had an impact on the general trust among members of the group.

The heterogeneity from group to group in terms of the quality of information handled was surprising. In this way, each group constituted a closed community of peers that judged what was acceptable or not. Starbuck (2006, p.75) reflection on knowledge is relevant here:

Acceptance by other people is crucial, for knowledge is what people say it is. People, individually and collectively, decide what they regard as knowledge, so human physiology and human social systems mould human understanding of facts or truths and they influence definitions of knowledge.

There are no general actions from AACREA on the matter; although there have been efforts to standardize as much productive and economic information as possible, to be able to compare CREA groups nationwide. The policy from AACREA is that all groups present their information and the institution would then compare this standardized data, process it and present it back to its members for the benefit of all (under a non-disclosure policy).

I found that one of the keys for success of AACREA as an organization -whether they have established it as a policy or it has just been that way since its foundation is a matter that has not been internally clearly determined- is the paramount respect of the autonomous evolution of each group. The organization has allowed each group to keep their own codes, their own working methodology and their own peer-judging communities, while all belonging to the same greater paradigm.

By making a comparison with some other knowledge creating systems there are similar roles that peers perform. Although contested, Kuhn's (1964/1970) vision of how science works and academics interact is in some ways comparable to the CREA knowledge creating system. According to Kuhn (1970), peers judge whether there is useful knowledge being created or not, within a given paradigm. Peers may also determine who may belong to a particular community or not.

CREA has high barriers for the entry for new members. It is a closed circle where trust is of utmost importance. Rules for letting someone in are not written, but people know how the entry system works. A current member must know the newcomer and recommend his inclusion to the group. They would allow him to sit for two or three CREA meetings, and after a trial visit to the new farmer's place by a small commission of older members (usually three or four) his entrance is submitted to voting. All members must vote in favour for a new member to be accepted. Voting is anonymous.

An interviewee affirmed:

The fact that you can use your vote if you do not want someone new in the group, for whatever reason that is, is something very important because it protects the intimacy of the group. (CREA farmer, former Vocal)

6.4 The Person Behind the Technology

CREA groups and their knowledge creation practices have been information pioneers since 1963. The concept that described the foundational belief of CREA was: "the sharing in common of individual experiences", the opening up to neighbours and peers for the collective good was done without the facilitating technology that exists nowadays.

Embedded in the so called “knowledge society”, the current discourse of words such as “networking”, “networks”, “communities” relationships, interaction, and so forth has proliferated in both management research and practice (Huysman & Wulf, 2005).

CREA groups as organizations were innovators pioneers in developing their networking system based on relational knowledge. The available technology made communication between members mostly carried out in face-to-face encounters. With the development of their group working methodology they seem to have discovered the advantages of plurality of opinions and networking ahead of their time. In my analysis I could see that in terms of networking, they were pioneers in practice (with slower tools) of what technology is allowing organizations to do easily today (Newell & Swan, 2000).

CREA groups were pioneers in organization structure. They discovered that the system of working in groups was an effective one to create collective knowledge. The following quote reflects such a spirit of knowledge sharing:

There was a great deal of exchange between Zones and within the Zones. Not professorial lectures, but exchange of observations enriched by the producers themselves; the producer as a participant and not only as a receptor (N. Marangon, CREA *asesor* and Zone coordinator, Zona Oeste CREA, 2006, p.19).

A second implication of the above conclusion is that technology is not as important as the human component behind it. This research contributes to what Huysman and Wulf (2005, p.87), the editors on a special issue on how IT came to affect communities claim: before learning how IT affects their relations, the editors wrote, “we need a better understanding of the social dynamics of communities”. Tools and technology may sooner or later catch up with what we can term a human attitude or component that must exist *a priori* for connections to take place. The following quote reflects my point:

Our networks are not merely functional, they are existential. They are built on the bonding, the values, the relationships and the person...This network is not a utilitarian one as many that exist around. The network provides security to its members...have you tried this? How did it go? And you trust, because he belongs to the net and he is a part of it. (Former CREA *Aesor*)

Nowadays, the internet has facilitated the expansion of social and professional networks. The information revolution has brought the democratization of “open source”

systems, where everybody contributes for the benefit of all members of a community. What is known as “open source” system may be a metaphor of some of the activities that CREA had been doing for a long time, before the technology for its easier and fluid implementation was invented and adopted. CREA groups had already developed and worked on nourishing the human component. Context played a crucial role in the motivation that was needed for the sharing and the knowledge creation to take place, within a tough scenario of isolation, precarious roads, long distances and no telephones. CREA had constituted itself in a non-electronic yet efficient knowledge creating system, which had its rules for pertaining (like for example high barriers of entry) and resembled the freedom of self-regulating mechanisms that we find today in online communities. The essential difference with these online communities, or for example a threaded conversation in a web-page of open forum, was the face-to-face interaction that was needed for the exchange, and the relationship established among farmer friends.

I present here a quote from a farmer that uses these types of technologies but nevertheless recognizes the importance of face-to-face interaction:

Although I use the internet a lot, and I work with my team for organizing the Congress, it is still of utmost importance to meet face to face. We still get together once a month and you can tell by how we work at these encounters, that that is irreplaceable. (CREA farmer, president of the Zonal Congress)

The salient characteristic of CREA farmers is the discovery they early made that by sharing the information and experience of many, they took the short road to learning. Practical knowledge is based on the premise that you learn by experience. In farming, you learn how your crops behave under certain weather conditions, sowed and harvested in a determined time. Although farmers certainly learn from their own particular experience year after year, by sharing it with their peers, they gain the equivalent of years of experience and information, merely by participating in this collective space.

Following the above reasoning, one would think that by multiplying the knowledge by the numbers of CREA members around the country the available trove of knowledge would be enormous. However, considering all the things discussed above which need to be in place for knowledge to be shared and created, it is not as simple as basic maths.

There are many factors that have to come together for this network group structure to work beyond the cell groups. The network will not work if trust and friendship is not developed *across* cell groups. The fostering of a collective sense of fellowship and camaraderie among people who understand the CREA spirit and contribute to its development is crucial to enable the channels through which knowledge is developed. I found that the relationship of the CREA Movement with technology is at times, a paradox. Many groups have incorporated user-friendly technology to communicate better among themselves. However, I observed other cases in which the more technology assisting the exchange, the more impersonal and cold it seemed to some farmers, and inhibited instead of fostering their participation. The CREA Movement has a culture of presence, as Martinez Nogueira (1984) describes in his study, personal communication was considered paramount for the Movement: “it is the most efficient way to communicate...planned visits and congress attendance should be fostered” (p. XII). The conclusion I make, is that face-to-face interactions are still important for the CREA culture.

The proliferation of technical alternatives of communications has changed the way CREA members relate to each other. However, technology does not work as a substitute for trust. Web networking or online communication does not seem to require the same trust or the same time. Although different groups have adopted different types of technological connections, one thing remains unchangeable from day one: the face-to-face monthly meeting. As explained before, this is still considered to be the “cell” of the Movement.

6.5 Traces of a Paradigm Change

From CREA founding times until a few years ago, membership of the movement was strongly related to a physical factor: the ownership of land. Only farm owners were CREA members and they were personally required to attend all meetings (as opposed to a more flexible policy today, which allows an administrator or a manager to represent the farm’s owner). I will call this the “paradigm of land-ownership”. As explained before, among other conditions such as social kinship, it was the ownership of land the first requisite that made someone suitable for joining a CREA group. You had to be a land owner farmer to qualify.

At the time the data for this study was collected, there were traces of a significant paradigm change. The “paradigm of land-ownership” began to change as the traditional way of doing business of agriculture changed as well.

The practice of renting land for cropping has dramatically increased in the Argentinean countryside during the last decade. Agricultural production, especially soybean cropping, had an international context of historically good prices, which combined with other production factors, turned to be a profitable activity. The increase in commodity prices, the massive adoption of no-till sowing, and the use of glyphosate resistant seeds (RR) caused a boom in the rural industry, expanding the productive frontiers of the country. Some climatic changes also favoured agriculture in land which before was only suitable for meat production. More land started to be leased for cropping and all kinds of business agreements were made in this historical increase of crops production. Land renting became a business practice which escapes the original concept of ownership and territoriality of farms, and refers more to a productive activity. My point is that this is changing the relationship among farmers, and ultimately, the nature of the CREA groups.

There are CREA members today that do not own any land, yet they are still legitimate members. In the last years (2005, 2006 and 2007), the debate sparked when farmers that did not own land, but had a farming activity renting land, asked to join CREA groups. The transition began at first with firms that belonged to CREA members who did own land. For example, in one group the son of a CREA member (who had been one for many years), founded a new firm that rented land and petitioned to become a separate member. After months of consideration, the unusual inscription was allowed. Today, there are much more no-land members, in several groups. This has turned into a practice that is no longer considered unusual.

Before, membership was greatly related to owned hectares of land. Today, membership is a broader concept. Conditions for belonging to a CREA group are measured through other factors such as commitment and participation. Interviewees’ testimonies show that intangible factors such as group commitment and involvement play a paramount role in the ‘no-land owner’ members.

When owners cease to work their own farms and rent land to others, resources change. The ownership of scarce resources, in which capitalism is based, changes, and thus

changes the relations. Land is no longer the necessary resource to own to become part of the Movement.

Those CREA groups that have members who do not have any land, but rent and manage an agro-related business have a challenge (openly admitted) of measuring results in order to be able to compare with the other members. The assumption that has been accompanying the CREA culture all along is the need for measurement in order to compare, and the good will of the members to share their information for the benefit of all. As long as valid points of comparison with peers are found, a farmer can participate, regardless of the amount of land owned, if any. Examples of these points of comparison are profit margin per hectare, production indicators for agriculture, and so forth.

This 'paradigm change' has consequences for the knowledge the groups share and co-create. I attended a CREA meeting where a challenging conceptual discussion was held: whether the amount of hectares not owned but rented affected the percentage of the AACREA fee members had to pay. The debate revolved around a controversial issue: should all hectares managed by the CREA member be stated? Or only those hectares owned? What are the criteria to decide whether members were using knowledge generated within the group to apply elsewhere? What was considered an ethical behaviour in the matter? The practice of renting land and not declaring it in total number of hectares was questioned by those members who did not rent.

The discussion headed to the view that all learning members achieved within the group had to be somehow accounted for. After an hour of debate, consensus was reached that members would honestly declare how many hectares under their management were affected by the knowledge exchange that took part in the CREA group meetings. The *asesor* also informed that he was going to find out how other CREA groups were handling these issues and would report on it back to the group.

Additionally, this paradigm change brings along another difficulty. Part of the reasons that cooperation and trust among farmers have developed so fruitfully is that they are mainly producers of commodities. As such, price is set by the rules of the market and there is no competition between peers, as everybody gets to sell their produce in fairly similar conditions. With land renting and leasing this situation has changed, as land becomes a scarce resource. Farmers who rent are now competing for land. Some interviewees expressed their worries that this new situation could undermine the true CREA spirit. Information may be held untold, or competition for renting may come in

the way of an honest exchange in a CREA meeting. Others, those who rented, assured that they would let go of a deal if it meant that it could ruin the relationship with a CREA peer. As this farmer expressed in the interview:

If I am after renting a farm, and I find out that another CREA member is analysing the same opportunity, I would call him first and would let go of the business. I would never compete with a fellow CREA member. However I would compete if the other farmer belonged to another CREA Zone. (CREA farmer)

The consequences of this paradigm change are still in its starting stages. Perhaps in 1959 nobody thought that somebody could be a CREA member without any land. The conclusion that can be reached from this incipient paradigm shift is that the ‘CREA idea’ has evolved well beyond land and production. It has consolidated itself into a more abstract concept, and has developed into something present in the attitudes and values of CREA members, whatever their activity may be.

The ultimate source of the paradigm change I analyse can be traced back to the origins of the CREA Movement, when its founding members got together concerned about the erosion of their soils. Initially, these farmers’ worries were mainly productive and material. However, somebody who is worried about soil conservation is also looking into the future. They are thinking about coming generations and their right to have good soil too. They are considering their land a heritage and a legacy, of which they are responsible and accountable for. CREA’s founder was worried about the cultivation not only of the land, but of the person as well.

The topics that concerned the Movement went gradually evolving to more abstract themes. The economic aspect of farming was then developed. Farm management started to be applied. Still later, farmers realised that they managed their firms in a social context which needed to be modified, and issues such as corporate social responsibility, the construction of social capital, education, and rural local development began to be incorporated in the agenda of the Movement. For example, the 2004 National Congress was called “Being part of a Possible Argentina”, and several national and civic responsibilities issues were addressed.

All this evolution from more specific topics to more abstract ones is embarked within a philosophy of values that needs to be understood and embraced in order for a member to

be able to “live” the CREA spirit. And a logical by-product of this evolution is shown when a CREA member with no land can still become a true CREA member.

6.6 Nature of CREA Knowledge: Relational

What is hard to understand from the groups is...that the important thing in their work, in their professional task, is to try to make things transcend in some way... The little things that one does, the few ideas one may have, or the things one can contribute, to remain....And the only way to transcend in your work, in your profession, is through an institution. That little thing you can contribute...it starts to build up...nobody will know that it came from you, but that doesn't really matter. But the good thing of pertaining to an institution is that in some way, you know that what you leave behind, the seeds you leave... may remain and endure for society, it remains for your country... (*Asesor*, Former CREA Zone Coordinator).

The previous quote conveys the significance of belonging to a CREA community and signifies the importance given to the sense of being part of something bigger than oneself. The CREA group becomes that link with a larger institution, with a larger group of people to pertain. The group becomes a witness of a farmer's activities; of things that without the group would have been performed in anonymity. Peers and the network they conform provide a “magnifying glass” for a particular human action that may prove to be valuable and, thanks to that relational mesh, be shared creating knowledge.

For example, if a CREA farmer finds out a useful innovation and shares it with his fellow CREA members and in this sharing small improvements and synergies of ideas occur, the group is a catalyst for change. What the metaphor of the magnifying glass is trying to convey is that the relational property of an act (that may very well be a learning act) is what provides it with permanence beyond the person who performed it. In this case, it is by belonging to an institution that a person is given the possibility to leave something beyond his own professional life, beyond his own particular activity. The belonging to a group of people, and further, to an institution that relies on values, self-involvement and commitment, has surely consequences on farmer's self-perception.

Knowledge is in this context influenced by the sensemaking processes that rule the life of the members of the group, and in turn, influence such self-definition. When a farmer defines himself as a CREA member farmer, several implications are set in motion.

Looking back into the literature I had reviewed I found a very relevant paragraph by Setten (2005) which talks about the knowledge created by the multiple particular relationships farmers have within their familiar heritage:

The knowledge created by these multiple relations between people, present and past connects the family and provides a strong sense of identity with the farm and the land. This knowledge constitutes a physical and symbolic heritage that is very much personal, even private. Even though these places and events obviously constitute a heritage of and for many people, both within and outside the family, these ways of relating to the land have, in broad terms, their being within a world that is situated, contextual and narrative and it is in many ways a world that simply 'goes on' through time as a continuous process. My landscape heritage is thus a heritage that centres on my family's and my own practices, and it is the nature embodied in these practices that helps explain the difficulties involved when trying to account for them (Setten, 2005, p.71)

Setten was raised in a farming environment. He acknowledges the difficulty to account or disembody those practices that make life "go on", in a natural way, which is in some way what I have tried to accomplish in this chapter.

To say that CREA knowledge is eminently relational does not rule out that useful or valuable knowledge does exist through weaker relational links. A concern I noticed in an interviewee was the worry of the Movement's lack of capacity to take advantage of the knowledge that may exist across other types of human bonds. He expressed his concern that if only stable, long-term relationships were the channels on which knowledge was created, there would be a risk that CREA would lose its cutting-edge innovation skills. Given my understanding of the CREA phenomenon I think that the heterogeneity of its members has allowed for some groups and members to establish weaker links with others, in a more efficiency-oriented knowledge relationship, while still being able to sustain the deep, significant, strongly bonded relations among their group. As these two styles of relations coexist within the Movement, there is room for

both types of knowledge to be fostered and distributed. The key has been the allowing of diversity to flourish and the resistance of members to any type of centralization.

6.7 Nature of CREA Knowledge: Practical

Considering another noteworthy aspect of the CREA philosophy, the following quotes reflect on the value given to practical experience: “A CREA meeting should never start with a theoretical discussion, on the contrary it should start with a visit around the farm”(AACREA, 1982, p.19). Although such a recommendation is probably not sustained nowadays, as styles of meetings have changed considerably through the years, it illustrates the spirit of the practical nature of the CREA encounter. In the voice of some members:

The possibility of being able to say to someone in your team, ‘Look, it is better to do it this way because it works’; and ‘I did not read it in some book, it is done in our neighbor’s farm and works’...that is something very valuable. When people are not sure whether to make certain changes or not, the concrete practical experience of someone becomes undeniable evidence that something may work. (CREA Farmer, Former Vocal)

There are lots of things that one can quantify through mathematical equations and others in which something else starts to play... ‘I have seen this before...this crop is getting ugly...get the spade, look at its roots, smell the soil, fill your nails, your hand and your knees with soil, that there are a lot of things to learn there, too. (Nestor Marangon, CREA *Asesor* and Zone Coordinator Zona Oeste CREA, 2006, p.21).

That practical spirit is not *per se* the most salient characteristic of CREA knowledge; it is in combination with its relational nature that makes it distinct. It is in the sharing and opening to the community of peers that the practice and the experience acquire their value. In this mesh of relationships a different kind of knowledge is created; different from the traditional sources of academia and scientists. We are in a paradigm of knowledge-as-practice and in this farming community, the relationships between members, agronomists and *asesores*, administrative staff and others, sustain a lively exchange that generates a dynamic knowledge.

As the following quote presents, the key contribution of CREA has been the building of relationships that would be the supporting basis for the development of their knowledge creation process:

When I saw anyone thinking that the information had to be kept within the group and not shared, I used to say: “but if that information is old!” Because the information that comes out of a CREA group, if that group is working properly, is already old. When it comes out it is because there is more information coming rapidly after it. (Former *Asesor*, Former General Coordinator of AACREA)

What did this *asesor* mean? He did not mean that only fresh or new information has an economic value. The *asesor* undermines the value of actual information because he places the focus in the process that generated that information, rather than in the content. It is the process that matters. It is the nature of the relationships that makes that process unique. If the group continues to work successfully, it is rapidly generating more information.

The knowledge that CREA groups share and create, as it is tied to natural cycles and constant change has very dynamic characteristics which makes it valuable. The available productive information is cyclical, meaning natural processes are repeated year after year. Yet part of this information gets sedimented in experience, and only some part of that information becomes outdated. Natural cycles allow situations to repeat themselves altering some conditions but allowing for learning and experience to add up. Data recording always refers to information from the past. At the time of analysis of such data, new information is already available as natural processes never stop. As Setten (2005, p.73) writes, “past conduct affects present and future management of the farm and the state of agriculture in the area as a whole”.

My findings about knowledge concurs with what Starbuck (2006, p.60) wrote, that in order to be preserved, knowledge has to be suitable, to be practically applied:

...merely storing knowledge does not preserve it over long periods. For old knowledge to have to relate it to their current problems and activities, translate it into contemporary language, and frame it within current issues. Thus, effective preserving looks much like applying. However, as social and technological changes accumulate, applying knowledge comes to look more like creating

knowledge; and conversely for newly created knowledge to have meaning, people must fit it into their current beliefs and perspectives. (p.60)

I find a similarity in my analysis to the way in which the academic paradigm works, with the difference that in academia, besides the oral exchange among scientists at conferences, it is mainly through writing that contact is established and the scientific conversation takes place. These farmers are part of a knowledge creating paradigm where the face-to-face encounter is of utmost importance. The care for the survival of the cell group appears to have been crucial for the survival of the organization (see Peirano-Vejo & Stablein, 2009, p.452). It is in the cell group, in thirteen member groups that the strongest friendships are established, that values are shared and cultivated and over these relationships that knowledge is created and recreated. It is also among these relationships that the commitment to voluntarily run an organization like AACREA is fostered.

6.8 Conclusion

I conclude that the nature of the knowledge generated by CREA groups has two essential characteristics: it is both practical and relational. These defining properties are given in a particular context of groups working in a determinate setting. To arrive to these concluding remarks on CREA knowledge it is necessary to revisit some of the main findings expressed in this chapter.

One of the lessons we can learn from the nature of the CREA relational knowledge is that it requires trust to develop. Trust would be like the highways on which knowledge then flows, it is a foundational structure needed to be rightly in place for the flourishing of knowledge relationships. Trust was built by the consistent work of small units of farmers. Size of community and size of the immediate group matter in an essential way in knowledge creating processes, because by definition intimacy requires small numbers. That is the reason why CREA groups try to keep their membership between 9 and 13 people. Trust is more likely to be developed in small, intimate environments, and trust, I have found, needs time. In addition, trust is more likely to flourish within people

that share similar values and is strengthened among those who have endured difficult situations together.

A second lesson learned is the importance of the respect of the autonomy of groups at work. In spite of being members of a common network and of AACREA's cohesive function, there is no direct intervention in how each group must work. I believe that this respect for the group's uniqueness was also an important factor for their relational knowledge development. The social networks favoured a horizontal growth of the amount of groups, which in turn demanded an also horizontally organised institution. Yet a third lesson the CREA Movement has taught us is how to organise the human component of a knowledge creating network. Groups had already developed and worked on nourishing the human component before the networking technology existed. In organizational terms, CREA's way of communicating and working in a collective manner can be considered pioneers of their time.

The knowledge that CREA develops is hard to replicate for a number of reasons: the first one is because intimacy takes time to develop and by definition cannot be multiplied. The networks described here have been developed alongside human relationships and these affect the type of knowledge that is created. A second reason, closely related to the first one, is that the networks in this case proved to be not only functional but existential, in the words of one of our interviewees. These knowledge creation processes are hard to replicate because they are related to identity definitions of self.

Finally, I draw a further conclusion regarding the dynamic feature of practical knowledge. The value of this knowledge did not reside in its content, which in some aspects rapidly became obsolete. The value was found in the relational process that produced the knowledge collectively, hence the lack of hesitation of farmers to share it. CREA members learned early on that their uniqueness and their advantage were not found in the hand-outs of a farming meeting: it is in their established group relationships where their strength resided. Content of knowledge is dynamic and changeable, it is in the process of its creation that its essence lies and therefore remains.

CHAPTER 7: CONCLUSION

“The important thing of belonging to an institution is to transcend as a person...” (CREA member)

7.1 Introduction

Knowledge creation in the CREA Movement is essentially relational, it takes place in a context of a strong cultural belonging and identity building that is maintained by the relatively high barriers of entry the Movement has. The content of the information shared within groups and throughout the Movement is not as important as the process of collective knowledge creation that takes place within groups and across them. It is in this process that the real strength of the Movement lies.

This exercise of gathering together to exchange knowledge and experiences works as a tight mesh that also allows for value sharing and identity issues to emerge. I am referring to the practice of building knowledge together, of living similar experiences and of sharing them, because farmers’ sensemaking processes have a lot of elements in common. Hence their sensemaking converges and the cell group can claim to have a collective sensemaking activity altogether (for example, when the group has to provide their view or opinion on an institutional matter).

The conclusions reached above do not rule out the existence of heterogeneity of thinking among members. Consensus is sought above all differences. In spite of diversity, which adds richness to the Movement, interviewees’ testimonies and stories show that a strong “nucleus” of shared sensemaking by members needs to exist in order for the group to keep surviving through the years in a hostile environment. In addition, some core elements are indeed shared in common across groups in order for the Movement to adapt in a resilient manner to changing times.

A second conclusion that stems from the above is that identity building and self-awareness is very much related to learning and the knowledge processes that take place within a group. Once a new member becomes part of the group, in most cases, there is a

desire for relating to peers. Knowledge creation within the group, successful learning by its members, and value sharing, are all elements of attraction and consolidation of the organization's culture.

Within the past years, more and more academics have come to realise the importance of studying knowledge as a contextual endeavour. I think I have made a contribution by showing the way in which context is important. This thesis shows that the way in which context is important is in the setting. By setting I mean time, place, and circumstance of the organization studied. I have looked at how time is a construct that has different roles in the sensemaking process and different meanings in the storytelling timelines of the interviewees. The organization has a history that has been visited and included as an important element in the analysis. History is a reservoir of explanatory phenomena of how things work today the way they do. Finally, I have explained the place, the geographical location and environment in which these knowledge creation processes take place. How these farmers operate, how their surroundings are and how do these things affect them in their work and self-definition. In addition, the present circumstance of the organization, with its current challenges has been described too. Sensemaking expressed in the stories collected reveals a great deal of the context I am talking about. The same is true for the organization's stories and effort of storytelling. My contribution runs along the ideas of how, from a researcher's outlook, we need to be sensitive to context by analysing the setting. You reach a far more complete understanding of knowledge as practice from this viewpoint.

In addition, I find there is a methodological claim I can make. Stories provide access to knowledge. Although knowledge can be approached in numbers of ways, like conducting a survey, analysing a website, or reading archival data, I claim that stories are a better way to reveal things about knowledge. Why? Because I can confirm that stories really "are" flexible carriers of meaning. Stories are preferential for getting knowledge because in their telling, stories create knowledge, reproduce knowledge and stories help the sensemaking processes. Knowledge is defined in the telling and continual sharing of the stories.

7.2 Lessons From the CREA Movement

The site of this study for knowledge practices was atypical from the normal sites of organization study in, at least, two important dimensions. First, I studied knowledge in an organization of farmers, a group long considered to be locked into a pre-modern, pre-organised mode of production (Stinchcombe, 1965). Second, I studied an organization in Argentina, an emerging developing country with a history of volatile economic and political situations. In spite of its unusualness I found the CREA Movement was a suitable case study, used “to explore a significant phenomenon under rare circumstances”(Eisenhardt & Graebner, 2007).

CREA is interesting in that it is an organization that has survived in a quite unstable and changing context, showing quite a remarkable resilience. What makes it an interesting case to study is that part of the explanation of why it survived was because of its work in networks and its particular knowledge creation and sharing practices. CREA members discovered early on the advantage of groups working together and were pioneers in nurturing and developing these groups.

I conclude that key to this organization’s success was the respect for the autonomy of each group and the maintenance of a horizontal governance structure. In this way, CREA members were all equally important stakeholders of their groups and of the movement as a whole. The challenge was (and still is) for members to feel part of a wider organization while still maintaining the intimacy of their group of peers.

Although the setting and the historical context in which my subject of study is placed are unique, the main issues I have explored may be common to other organizations deployed as expanded networks in large geographical locations.

Further, a conclusion that stems from the dualities analysis presented in *Chapter 5* relates to the contextual organizational factors that may enable or disable knowledge creation practices. Dualities have been discussed before in the academic literature, as opposing and antagonistic forces which are counterbalancing each other (Martin et. al., 1983). I support those who argue that dualities may coexist without reaching a converging solution. What I discuss in my findings is that the existence of dualities in organizational life is not *per se* problematic. It is not an issue to be completely resolved. On the contrary, the stories that I heard (like for example having farmers with the white foreheads and fat fingers sitting at the table, or using technology without losing the person) suggested that the tension created by dualities has proven to be a creative force for the CREA Movement. In the management of dualities, there is a productive richness

that has been extremely beneficial for the development of the institution. Dualities then do not have to be resolved in a hegemonic way, but rather handled as productive forces that, although may produce tension, may also produce a creative process.

These analysis categories may help to reflect on how different organizations may cope with finding instances of stability and assurance for their members amidst ever-present change.

7.3 Lessons About Knowledge

One of my findings calls for a necessary future research issue, that knowledge is contingent on context. In farming, one cannot refer to knowledge and its creation in CREA groups, without understanding other related contextual factors that influence its creation like values, identity, organizational culture, and the impact of time, tradition and the past. These contextual features influence the sensemaking farmers make of reality and therefore condition the tight network constituted and fed by their present knowledge creation practices. This is so because farming is an activity strongly oriented to nature. It has a strong relationship to land, to land-ownership and to working the land. This research shows that in settings in which natural production processes take place, context determines knowledge related practices in a particular manner. Nature determines knowledge in a different way than in other contextual settings. I found that the close relationship that is established between individuals and their work, between people and their way of life (which may also be found in other nature-related occupations, like fishing) helped to explain some of the features of the knowledge I studied.

My finding is, as in previous literature, that trust is a necessary element in the flourishing of knowledge creating relationships. The specific contribution of my research is the identification of some factors that yield a context that encourages trust to flourish.

In this study, the context that encourages trust has several characteristics: not having immediate commercial competition among agents exchanging information, the sharing of a lifestyle (farming) and a productive activity, the establishment of long term relationships over time, the small size of the group, the respect (by the overarching

institution) for the autonomy of the group, the respect by all members of the no-disclosure of their sensitive data, and the high barriers of entry were all contextual characteristics that should be considered beyond this particular case study, in that they provide a framework for fostering trust.

What this finding teaches us is the way in which context has to be reflected upon and accounted for when referring to knowledge. Time is a construct that affects relationships, which in this farming context has very particular characteristics, for example in decision making. Decisions made today will have an impact in a month or a year's time for farmers. Decisions made around biological processes, such as how and when to harvest, whether or not to buy cattle, and so forth have implications that will impact for many years the farming production. This characteristic in the time of a natural context also affects relationships in that context. Relationships also take time to build. Decisions made together in the intimacy of a group will see their results in a year's time. Long term group relations are paramount for the creation of knowledge. In addition, the past is seen by this usually traditional, value-attached people as a source of nourishment and identity-building.

Knowledge is relational. The conclusion that knowledge is relational means that knowledge creation runs over previously established relationships. You need 'others' so that the construction of knowledge takes place. In a Weickian sense: "I don't know what I think until I hear what I say", meaning you have to see the recognition in the other person's eyes to be sure of what you are thinking, to see whether what you have learned is knowledge. There is a need for 'others' in this construction of a social space propitious for the learning and knowledge sharing of a group. In the CREA Movement case, the geographic isolation imposed by farming activities has been conquered through this collective creation of knowledge and peer learning. Solitude has been overcome by the formation and maintenance of small groups of neighbours.

A second conclusion that derives from knowledge being relational is the implication that knowledge is either constructed around people or is rarely constructed at all, as you need those others to validate and improve your knowledge with their input. My findings indicate that in a stable group context, and in particular, in groups working together, human values such as intimacy, friendship and trust are seminal for knowledge to be created. Groups in this context have also been shown to fulfil not only knowledge and learning demands but other needs such as peer belonging, trust building and support. I

also found that another function groups have is the provision of collective security to face future uncertainty.

To conclude that knowledge is relational does not mean that other knowledge which is not relational may not exist. It does not imply that all knowledge has to involve more than one person. Relationality is not exhaustive of the properties of all types of knowledge; however, it can be affirmed that within an organisation, group or network, knowledge was found to be strongly based on relational properties. The better the relationship among farmers, the more trust and strong bonding between them, the easier the sharing of knowledge seemed to occur.

CREA groups work because it is the system of many groups together, not each group just working independently. If they were only individual groups getting together, members would disband after enough learning was achieved. Instead, what we have here is a dynamic system that generates commitment, that generates trust, that generates on-going participation of volunteer work at different levels so that these farmers not only get involved in their individual groups where they see immediate results, they also cooperate in making AACREA work and they are volunteering their energy, their minds and their money and resources in a significant manner.

To say that CREA knowledge is eminently relational does not rule out that useful or valuable knowledge does exist through weak relational links. Given my understanding of the CREA phenomenon I think that some members were able to establish other weaker links with people outside their groups, in a more efficiency-oriented knowledge relationship, while still being able to sustain the deep, significant strongly bonded relations among their group. As these two styles of relationship coexist within the Movement, there is room for different types of knowledge to be fostered and distributed. My contribution to Granovetter's (1973) thinking could be that my findings support that key for this network to flourish has been allowing diversity, and the resistance of members to any type of centralization.

Although to conclude that knowledge is a social endeavour which needs others may seem a truism at this point, I arrive at such conclusion by using fairly new elements.

Weick (1974, p.501) wrote nearly thirty years ago:

There is a need to think in new categories because old categories too often lure people towards the obvious explanations of the obvious...But the impoverished imagery used when trying to understand the obvious in organizations is

objectionable. With richer imagery goes a higher probability of seeing more of the puzzles in the obvious.

I believe that farmers working together, belonging to their CREA groups, dealing with the dualities that endure within the organization, are examples of a substantially rich imagery Weick is asking for.

7.4 Knowledge and Sensemaking

Sensemaking also depends strongly on context. The evidence found in this study points to the conclusion that collective knowledge creation and sensemaking are two fairly similar processes. In the first place, it is much more feasible for knowledge creation to take place, to learning to occur among individuals who share similar conditions for sensemaking. Their sensemaking activities have much more in common when their contextual working and living factors are the same. Sensemaking sharing provides a suitable frame for collective knowledge creation.

Second, knowledge is very much related to sensemaking because in those moments of explicit sensemaking, people tend to realise the knowledge they have acquired. In having to explain something retrospectively, they tend to become aware of the new things they have learned from their past. For example, in responding to my interview questions interviewees were acknowledging the things they had learned from their past practical experiences. Interview situations may also be a moment of sensemaking in terms of testing interviewees' perceptions of self-worth, but under the appreciated effort against the fact that a PhD student is interested in their stories. Interest in their stories may indicate to storytellers that there is something of value in them, which may have positive effects in their identity-building as CREA members.

In addition, I have provided an empirical application using a sensemaking approach to explore stories as a mechanism of organizational change. I emphasise how change can be consistent with the emergence of stability and on-going connectedness in action. In the telling of stories among each other, when striving for collective meaning, knowledge is momentarily fixed and shared. In spite of being also present in the actual practice of farming, it is the sharing (as explained before) that connects with collective understanding.

The theoretical implications of this study have to do with the tension between stability and adaptation. My analysis of organizational and individual artefacts suggest that there is some credence to the Weick et al.'s (2005) claim that sensemaking analysis may provide a micro-mechanism for linking individuals and the need for institutional change. I have also concluded that those instances where sensegiving and sensemaking converge are moments or occasions for stability. Sensegivers probably find themselves in a position of power and have more leverage in directing change. Change can be faced by the way sensegivers deal with time, identity issues and knowledge flows because these can provide the elements others can use to make sense of who they are, or what is happening in their worlds. Some actors will have more access to sensegiving positions and resources providing the opportunities to develop a hegemonic discourse. The interaction of sensegiving and sensemaking may provide one lens for analysing the micro-processes of power dynamics, a further topic to develop.

7.5 Storytelling and Knowledge

As in any long-lasting organization, stories play an important role in the internal culture of the CREA Movement. CREA is an organization with an exceptionally oral-based tradition. Narrations are used by its members to enable stability in the constant presence of change. Storytelling and self-serving explanations of the past have been used as a useful data source for learning how stability and change can coexist in the culture of an organization. Furthermore, my findings show how the institutional video on the one hand, and the interviewee's reflections on the other, are both instances of sensemaking, where a "space of reflection" has been provided as an occasion to make sense of the organizational life. Sensemaking is a collective endeavour; it is a relational practice (Weick, 1995). Stories express this sensemaking; they are efforts to communicate the sensemaking process.

A methodological contribution of this study is the entry strategy used to look at an organization, which demonstrates the usefulness of stories as a significant tool for understanding knowledge processes. Not all organizational members' stories will serve every research purpose, but those stories that are charged with meaning and are emblematic of the phenomenon the researcher is trying to explore are very fruitful

insights into a study. The identification of which stories are important and which are not relies on the topic being researched and on the contextual factors that surround it. In addition, being able to acknowledge that I am myself a storyteller, in my role of researcher telling my story to my examiners and fellow academic peers, with the presumption that the plot I have put together is a plausible one, enlightened me in my role as an informant.

7.6 Time Matters

Another conclusion of this study is the consideration of time as an important construct to consider. Narratives are essentially time-driven. They build up a temporal reality that is made up of sequences presented together by the narrator, in an effort to make sense of the storied events. Time is modified and changed according to inter-subjective experience, for example in the sensemaking efforts the construction a person makes of its history is subjective and modifiable, but still important. The way a person re-stories the past matters because he or she is giving meaning to the events they choose to recall. I am aware that some past times are chosen to be silenced and forgotten, while other times, like some of the founding periods of AACREA, are recalled and remembered, used as a nourishing source of values.

Time, in particular, through its historic past has had an important function in the life of this particular organization. Its founding period is where CREA farmers find answers to who they are and what defines and constitutes them. The interplay between past and future, change and stability, showed a particular relationship of the organization with its earlier period, actively and consciously enabling it as a resource to validate change and progress. The organization managed to adapt to the environment (absorbing technology, changing its leadership structure, growing in number) while maintaining and feeding a strong cultural identity that nourishes itself from its past. The past is in this case a resource to support innovation rather than a barrier to change or a source of resistance. However, this may not be applicable to all organizations. For other organizations the past may be a source of resistance to change, or the past may be forgotten, or the past may be irrelevant. The consideration of how time is treated in an organization is important and provides a richer context for analysing data.

A detailed attention to how time is constructed is a contribution which may be generalizable to other cases – which times are considered, which times are forgotten or silenced, which times are significant or insignificant. In the comprehension of this time construction one can better understand more intricate aspects of complex organizational life.

7.7 Limitations

As in every study, there are limitations to account for. The theoretical framework chosen does not claim to have managed to find “the” true story. Rather, that in their effort to bring back continuity to their lives, people try to make “better” stories and in doing so find motivation, identity assuredness and such. By looking at what things people try to remember and why, it is one means of understanding them and the collective organization they are part of.

Other authors (Anderson, 2006; Basbøll, 2010) have criticized sensemaking approaches, among other things, for being naïve and deprived of conflict. I did not avoid looking at conflict, all dualities originated in conflicting situations. The fact that they are not resolved issues within the Movement present them as permanent sources of tensions and difficult situations, which have to be permanently faced and handled by the temporary governance team of the institution and its permanent staff.

I also acknowledge a theoretical limitation to my approach: stories are rarely just sensemaking efforts. Stories can also be persuasive attempts open to rhetorical analysis (Buchanan & Dawson, 2007) or enmeshed in complex political processes (Brown, 2004) or hegemonic vehicles of the state apparatus. My focus on sensemaking and sensegiving will almost surely neglect some aspects of the stories I analysed, because many of the stories I chose can be read from multiple perspectives and are open to multiple analyses. Further, not all sensemaking is narrative. Weick (1995) clearly identifies stories as an important but not the exclusive means of sensemaking. For example, we may miss potentially significant sensemaking carried in argumentation. A key contribution of sensemaking theory to the analysis of stories is the criterion of plausibility, which provides an alternative to criteria such as “truth”. I have used such criteria in looking at a particular aspect of the organization. I have researched in a

responsible way trying to find meaning in the stories I heard and in the knowledge practices I witnessed.

A further limitation regarding sensemaking as a theoretical method is the danger of misinterpreting the cues and the particular sensemaking processes going on. That is, to make mistakes in interpreting the data and telling (other academics) a story that is far away from what really happened and what protagonists really lived in that particular moment of the organization's life. The way I tried to handle this danger was by cross-checking my interpretations with people deeply involved in the CREA Movement. Their confirmation that "I had nailed the Movement's spirit", provided me with assurance that I was on a right track. I was not looking for their permission or approval, but rather a reaction that the way I had thought about the organization I was researching was a plausible one.

Finally, a potential limitation I acknowledge is that I have been considered as an insider to the Movement, as I am married to a CREA member, which has granted me access to many data collection venues. The downside of it is perhaps having been too embedded in it. I began to know the CREA Movement at the same time I began this study. I tried to be an impartial outsider, by thinking in terms of my story listeners, trying to paint the picture as completely as I could. I tried to identify those commonly taken-for-granted, trying to find the explanation for everything, even those things that seemed obvious. I also tried to put myself in a critical position to scrutinize the Movement as if I was not a part of it.

A possible limitation is also given by the scarcity of resources for looking at such a complex, dynamic and ever-changing organization. I cannot claim in this research that I found all stories that matter to the CREA Movement in general and to all CREA members in particular.

7.8 Further Research

There are countless further research streams to follow that stem from the present study. Many times, I had to stop my thinking and realize that I was going down paths that went well beyond the purpose of this research, and yet would yield interesting endeavours.

The first research stream that constantly appeared throughout the study is the extent to which farming as a context influenced the results. It could be an interesting further research question to see whether a similar organization would have emerged in a different setting than farming. I think a further research on this topic would be important because it would allow to assess what characteristics of the current context are fundamental for the creation of a lively network and which ones not. What things need to be present, whatever the context, and what things are not as important.

Another stream for further research is to continue studying this huge organization internally in different ways. Although some studies have been conducted (Chaskielberg, 2010; De Bary, 2009; Ibarguren, 2006; Martinez Nogueira, 1985; Pettigrew, 2004), the range of alternative outlooks is still wide. Some alternatives (not exclusive) may be to conduct a longitudinal study of one CREA group throughout several years. An ethnographic study could pay attention to micro dynamics of the group and see its evolution and development during a long period of time.

Armenakis, Brown and Mehta (2010) conducted an interesting study on the institutionalization of ethical organizational culture by using Schein' (2004) cultural elements (artefacts, espoused beliefs and values, and underlying assumptions). A study following a similar strategy to look at the CREA Movement would throw light on its organizational culture.

Another possibility is to analyse deeply what are the national culturally determined factors that made the CREA Movement to be born in a country like Argentina, and analyse further if the model is exportable beyond Latin American countries (there are CREA organizations in Uruguay, Paraguay and Chile) or if there is a cultural impediment to be adopted in other continents. Up to what extent is culture determinant of the organization's success?

Still another perspective could be to explore the institutional fabric of the Argentinean context. Considering that in Argentina in general there is not a strong cooperative culture, it would be interesting to explore the paradox of why an NGO like AACREA, which is based on cooperation and commitment works.

Yet another alternative would be to conduct a study of an individual farmer's sensemaking process and study in detail if social sensemaking (of the CREA Movement) affects individual behaviour. Further empirical work is needed on both individual and collective sensemaking processes.

Furthermore, another stream of research is an analysis of the discourse power struggles that are going on in AACREA, within the academic staff and in their relationship with the rotational two-year periods for governance positions of farmers.

Another approach to study would have been a historical, institutional perspective on the constitution of AACREA and analyse its evolution throughout time.

On the other hand, outside the farming context, other researchers may also explore further research by looking at:

- How an organization's conflicts can be understood as dualities. Struggles and tension exist in most of an organization's life, whether these tensions stem from the history of the organization and whether there is productive tension in the management of its balance are further research topics.

- Knowledge and its contextual relationships are also further venues for academic research to be conducted. What are the assumptions of the people creating knowledge, what is their context, how is their understanding of their practice, how are their sensemaking processes influenced by their context and by their common (or diverse) history?

- The identity building process that interacts with collective sensemaking. A study in terms of identity self-perception.

- The impact of time in an organization's discourse. How time matters? How is time constructed? Which times matter? What part of history is recreated and has an impact in the current venue of the organization and what part of the timeline is erased, and so forth...

7.9 Conclusion

I conclude my research study still feeling passionate about the functioning of the CREA Movement. After more than four years of analyzing it, this dynamic organization and the way it recreates itself continues to amaze me.

The conclusions that have been drawn from this empirical study are important in that they further our understanding of how knowledge as practice is created and developed. The variety of sources, the longitudinal nature of data collection and the depth of

exposure provided multiple opportunities for triangulation, which prevented early closure and has informed my interpretations.

This tenuous set of relational knowledge practices that has been created, developed, and refined through the years and continues to work after five decades leaves still many aspects to further understand. Essentially, what amazes me the most and greatly makes the study of this organization a rich case to look at is the fact that the sharing of knowledge and the contribution to the organization is done in a quite unregulated manner, in which the free will for sharing has proven to be effective. Farmers have experienced that they found a new strength in the collective; they experienced that their sharing system works.

Human motivation to transcend beyond one's own time has inspired all kinds of actions in the arts and cultural arenas. The CREA Movement, I believe, has managed to create a space for personal transcendence in farming, through its farmers' belonging to their groups. The Movement's perseverance and resilience as an organization shows that at some point it has succeeded in doing so.

Maria Elisa Peirano-Vejo, July 2012.

GLOSSARY of TERMS

AACREA: (Argentine Association of CREAs) Private NGO, an institution that nucleates and fosters communication and information exchange among the CREA groups. Its headquarters are based in Buenos Aires, the federal district of Argentina. It is the country-wide community of CREA groups.

AACREA week: monthly encounter that takes place in the Buenos Aires headquarters of the institution. It is a week when the executive commission (former reduced commission), the vocals, the coordinators and the different commissions meet.

Asesor: *Asesor* will be used in its Spanish name to mean a farming consultant who plays a facilitator role in the moderation of the group. Usually he is an agronomic engineer or a veterinarian, who provides technical support to the members of the group, and more importantly plays a crucial role as a motivator and as a communication node.

Bases: CREA groups are sometimes referred to as the bases by AACREA staff and members. They are considered the main generators of information and the 'cells' (the DNA) of the CREA Movement.

CETA: Stands for Centre d'Etudes de Techniques Agricoles; they were groups composed by farmers in France. These CETA groups met among farmers to exchange information and knowledge on their production methods. The CETA groups were part of a complex institutional network and became involved with the national government. Pablo Hary inspired in them to form the CREA groups in Argentina. (Personal communication, September, 9th, 2006).

Coordinator: The coordinator is a paid position, usually filled by a former *asesor*, or someone with a strong technical background. It works for a particular Zone and it teams up with the Vocal in representing the Zone before AACREA. He participates in the AACREA week by meeting with the other coordinators and vocals.

CREA: Stands for Regional Consortium of Agricultural Experimentation in Spanish.

CREA Group: CREA groups are thirteen-member farmers' groups that get together on a monthly basis to share their working concerns. They work with an *asesor* that provides guidance to the group.

CREA Movement: Is the whole network of CREA groups working throughout the country.

Estancias: Spanish word for large farms.

INTA: INTA stands for Instituto Nacional de Tecnología Agropecuaria, which in English means National Institute of Agricultural and Beef Technology. It is the official institution that conducts agro related research in Argentina.

Racconto: Historic account of events.

Vocal: A vocal is a position filled by a Zone member, ad honorem, which represents the Zone (and its CREA groups) in AACREA. Vocals work teamed up with the Zone coordinator and attend meetings in the AACREA week.

Zones: Geographical areas in which AACREA is divided. CREA groups from the same Zone usually share production methods, climate, and institutionally speaking they conform a CREA of CREA groups that deals with AACREA. Some of the Zones often hold congresses and some of them even have their own internal magazine. There are different institutional developments across Zones.

APPENDIX 1- AACREA’S HISTORY TIMELINE

<p>1957: First gathering at Pablo Hary’s farm in Daireaux (Bs.As.)</p> <p>1960: Signing of Act of Don Roque, FACREA is created (formed by 4 groups)</p> <p>1961: Molina, a specialist in soil conservation, is elected as CREA assessor. The first coordinator of FACREA is also elected.</p> <p>1962: First brochure explaining “What is a CREA group?” is published</p> <p>1963: First meeting with all CREAs together (60 people).</p> <p>1964: Second Annual Meeting; the Directive Commission is created (president, 10</p>	<p>1960s</p> <p>GENERATION & GROWTH</p>	<p>1965: The CREA Bulletin is created. CREA groups are now 20 and 10 in their starting process.</p> <p>1966: The Farm Management technical commission is created</p> <p>1967: Bulletin turns into CREA magazine and FACREA to AACREA.</p> <p>1968: Technical Commissions of wheat & maize are created. Don Pablo suffers an aneurism in Belgium</p> <p>1969: Commissions of communication and dairy are created. Pereda assumes the presidency after Don Pablo. There are 68 CREAs and 22 waiting for approval.</p>
<p>1970: The division by Zones of CREAs is presented by the <i>asesores</i> at the National Congress.</p> <p>1972: Vocals start to be elected in their own regions (not in AACREA).</p> <p>1973: New statutory is created which includes the regionalization of AACREA. Vocals were now part of the Directive Commission.</p> <p>1973: AACREA is reorganised into an institutional, technical studies, communications and administrative departments.</p> <p>1974: Soybean starts being identified like a potential crop. <i>Asesores</i> start to assist to courses in AACREA (given by</p>	<p>1970s</p> <p>REGIONALIZATION & CONSOLIDATION</p>	<p>1975: CREA groups are now 127 while 7 are in its starting process.</p> <p>1976: “Open Gates” meetings start to be developed as a way of opening CREA information to the local communities.</p> <p>1977: National Congress; an agreement with banks is signed for R&D of economic information. A magazine called “Prices” starts to be edited.</p> <p>1978: Courses for planning and management in firms start to be imparted from AACREA. The purpose was to be able to compare farm’s numbers.</p> <p>1979: Many other agreements with other institutions are signed. There are 142 CREA groups.</p>

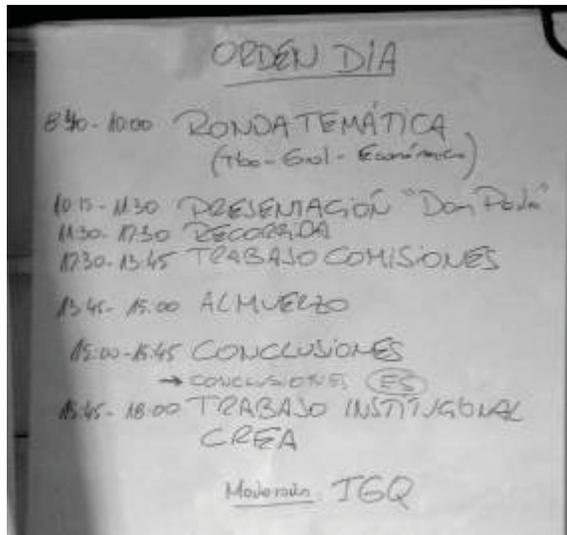
<p>1980: Transformation from CREA farms to CREA enterprises.</p> <p>1981: FundaCREA is created to develop fund-raising for institutional developments.</p> <p>1982: Falkland war starts against U.K. Difficult political moment for the country.</p> <p>1983: Communication specialists are hired by AACREA to improve internal contact with CREA groups</p> <p>1984: Institutional results are presented to all members in a “Reflection Meeting” at Hindu Club. Strategic issues were redefined.</p>	<p style="text-align: center;">1980s</p> <p style="text-align: center;">AGREEMENTS & CRISIS</p>	<p>1985: Institutional concerns reverse around the motivation of groups, and for belonging to CREA. The first Zonal congress, just for the CREA members of the Sandy West Zone is held.</p> <p>1986: The first congress for <i>assessores</i> is held. Terrible floods were endured in the West Zone and CREA groups founded social networks to assist farmers in need.</p> <p>1987: The information and statistics service is created.</p> <p>1988: Hyperinflation. Very difficult national conditions.</p> <p>1989: AACREA stops renting and moves into new headquarters. There are 163 CREAs and 16 waiting approval.</p>
<p>1991: M. Fouloun leaves his role as general coordinator of AACREA.</p> <p>1992: From number 154 the CREA Magazine is sold openly in shops.</p> <p>1993: What is known as “Colonia Plan” is drafted by the directive commission. Sets out the strategy for the coming years.</p> <p>1994: Concepts like mission, vision and marketing are integrated to AACREA.</p> <p>1994: The magazine is integrated to a monthly publication of agricultural prices. It is now edited in full colour once a month.</p>	<p style="text-align: center;">1990s</p> <p style="text-align: center;">COMMUNICATION & MANAGEMENT</p>	<p>1994: To communicate the experience of the AACREA week to all members, the bulleting “Round of News” is created.</p> <p>1995: Don Pablo dies at 94 years old.</p> <p>1996: The first president’s encounter is organised. It is established to be repeated twice a year. It is actually held once a year.</p> <p>1996: The website is launched.</p> <p>1998: The book “<i>Pablo Hary: Thoughts & Work</i>” is presented.</p> <p>1999: The general coordinator leaves his position and a major restructuring of AACREA staff takes place.</p>

Source: Personal elaboration from archival material

CREA National Congresses and Encounters

1963	I National CREA encounter in Magdala (Bs.As.) (60 people attended).
1964	II National CREA encounter in Junín (Bs.As.). Directive Commission is created.
1965	III National CREA encounter in Tandil (Bs.As.): “ <i>The modern rural enterprise</i> ”.
1966	IV CREA encounter Villa Carlos Paz (Cordoba): “Tuning efficiency to answer the growing requirements of an economy in rapid evolution”.
1967	V Congress in Mar del Plata (Bs.As.): “ <i>Produce more...for what purpose?</i> ”
1970	VI Congress in Rosario (Santa Fe): “ <i>Analysis & Perspective</i> ”. Zonal Division.
1973	VII Congress in Santa Fe (Santa Fe): “ <i>Farming at the service of the country</i> ”.
1977	VIII Congress in Mendoza (Mendoza): “The future of agriculture and beef production in Argentina”.
1980	IX Congress in Mar del Plata (Bs.As.): “Argentina in front of the technological question”.
1983	X Congress in Mar del Plata (Bs.As.): “Factors that limit the development of the farming enterprise”.
1986	XI Congress in Mar del Plata (Bs.As.): “ <i>Farming enterprise: Reality and future</i> ”.
1989	XII Congress in Mar del Plata (Bs.As.): “ <i>Innovation, the fundamentals of hope</i> ”.
1992	XIII Congress in Mendoza (Mendoza): “ <i>The market challenge</i> ”.
1995	XIV Congress in Cordoba (Cordoba): “ <i>Agriculture and the food business</i> ”.
1998	XV Congress in Mar del Plata (Bs.As.): “ <i>Man, the protagonist of the future</i> ”.
2001	XVI Congress in Mar del Plata (Bs.As.): “ <i>Understand, organise and take action</i> ”.
2004	XVII Congress in Mar del Plata (Bs.As.): “ <i>Being part of a possible Argentina</i> ”.
2007	XVIII Congress in Cordoba (Cordoba): “ <i>Farms working beyond farming</i> ”.
2010	XIX Congress in Cordoba (Cordoba): “ <i>All together building the Nation</i> ”.

APPENDIX 2 - A CREA Meeting in Pictures



Pictures taken by the author on March 27th, 2009, at a CREA Meeting in 9 de Julio, Buenos Aires Province. Above, the agenda planned for the day, this sign was posted on a wall where the meeting was being held. Below left, farmers listening to the presentation of the host farmer. Below right, the CREA group during the farm visit.



APPENDIX 3 - Data Collection Description

The following tables show in detail what has been the core of my data collection process. This information provides more details to what is described in *Chapter 4*. At the time of the gathering of this information I was living nearby the town of Carlos Casares, located in the Buenos Aires Province, 300 kms away from the Capital District. Part of the challenge of this study was the travelling I had to do to get to the places I here describe. In this first table, I do not provide names to respect the non-disclosure agreement with interviewees.

Interviewee's Background	Place	Date	Duration
1 AACREA's vice-president*, CREA member (RPS)	El Tejar - Saladillo - Bs. As. Prov.	03/03/2006	2 hrs
2 National Congress AACREA 2007 President, AACREA's Prosecretary (L)	Mitikile - Arenaza - Bs As Prov	20/03/2006	1 hr 30'
3 Veterinarian, CREA member (TLIII)	Don Pedro - 9 de Julio - Bs.As.Prov.	19/05/2006	1 hr
4 Zonal Coordinator, National Coordinator for Rural Change	SAGyPA Buenos Aires	29/05/2006	2 hrs
5 HR Consultant, Agronomist, Former CREA <i>Asesor</i>	Rural - 9 de Julio - Bs. As.Prov.	06/06/2006	1hr 15'
6 CREA <i>Asesor</i> (NJ)	Santa Clara - Carlos Casares - Bs.As.Prov.	21/06/2006	1hr 15'
7 Member of Administrative staff in AACREA	AACREA's Headquarters - Cap. Fed.	05/07/2006	1hr 30'
8 CREA <i>Asesor</i> (TL)	Trenque Lauquen - Bs. As.Prov.	17/07/2006	1hr 20'
9 CREA's first co-founder, and CREA member (HD)	His apartment - Cap. Fed.	06/07/2006	1 hr
10 Former AACREA president, CREA member (TAM)	Nueva Castilla - Pellegrini - Bs. As.Prov.	24/07/2006	1 hr 30'
11 CREA member and founder (NJ)	Las Chicas - 9 de Julio - Bs. As.Prov.	30/08/2006	1 hr 30'
12 Academic - Consulted by AACREA for its workshop AACREA 2015	IAE University - Pilar - Bs.As. Prov	01/09/2006	45'
13 First president of AACREA after Pablo Hary, CREA member (TAM)	Escritorio Pereda & Hnas. - Cap. Fed.	01/09/2006	1 hr 30'
14 CREA Member (NJ)	Car travelling to Mendoza for Zonal Congress	06/09/2006	1 hr
15 CREA member and president (NJ)	La Oracion - 9 de Julio	13/09/2006	1 hr

Interviewee's Background	Place	Date	Duration
16 Former Zone vocal (West), Former member of reduced commission of AACREA, CREA member (NJ) (I)	Service station - 9 de Julio - Bs. As. Prov	19/09/2006	1 hr 30'
17 Former CREA <i>asesor</i> , CREA member (NJ)	Service Station - Carlos Casares - Bs.As.Prov	22/09/2006	1 hr
18 Former CREA <i>Asesor</i> (GLT), Former AACREA general coordinator from 1968 - 1991	San Isidro - Carlos Casares - Bs.As. Prov.	27/09/2006	1hr 45'
19 Former INTA regional president, CREA member and founder (GLT)	His home - Lincoln - Bs.As. Prov.	27/09/2006	1hr 30'
20 General Coordinator of AACREA	AACREA's Headquarters - Cap. Fed.	30/09/2006	1hr 45'
21 Zonal Coordinator (West) - CREA <i>Asesor</i> (HD)	La Oracion - 9 de Julio - Bs.As. Prov.	02/10/2006	1hr
22 CREA <i>Asesor</i> , also <i>Asesor</i> of a CR group (A)	His home - Azul - Bs.As. Prov.	05/10/2006	45'
23 Former Zonal Vocal (West) - CREA Member (P)	María Teresa Sur - 30 de Agosto -Bs. As. Prov.	15/10/2006	1 hr
24 CREA <i>asesor</i> (T)	Luquez home Azul - Prov. Bs.As	07/11/2006	1 hr
25 Former CREA <i>Asesor</i> , Former CREA coordinator, CREA member (GLT). CREA representative before INTA.	Fortin La Guardia - Lincoln - Bs.As.Prov.	14/12/2006	1 hr 15'
26 Former CREA <i>Asesor</i>	Cordoba, National Congress	08/09/2007	1 hr
27 Former CREA magazine coordinator	Her home - Cap.Fed	19/03/2008	20'
* Current AACREA president			

CREA NAMES:

NJ (NUEVE DE JULIO) - RPS (ROQUE PEREZ SALADILLO) – L (LINCOLN) – TLIII (TRENQUE LAUQUEN III) – TL (TRENQUE LAUQUEN) -HD (HENDERSON DAIREAUX) – TAM (TREINTA DE AGOSTO MARILAUQUEN) – I (INFOSURA) – P (PERGAMINO)

GLT (GUANACO- LAS TOSCAS) – T (TAPALQUE) – A (ARENALES)-

Appendix 3.1 - Description of CREA Meetings Attended

CREA Meetings		CREA	A		
Farm Name	Date	Duration	Data collected		
1 Estancia Maya	15-feb-06	9:00 a 18:30	Hand notes - observation. Farm brochure.		
2 Don Pedro	11-apr-06	8:30 a 18:30	Hand notes - observation. Farm brochure. Other contacts to attend their meetings		
3 El Arapey	09-may-06	8:30 a 17:00	Hand notes - observation. Possibility to attend a new meeting with farm managers only.		
4 Santa Elena	13-jun-06	8:30 a 16:00	Hand notes - observation. Farm handout		
5 Fortin La Guardia	20-jul-06	8:30 a 12:30	Hand notes. Observation. 2 creas came together for a change		
6 Las Chicas	12-sep-06	8:30 a 18:00	Hand notes, evaluation of Zonal congress recorded and transcribed.		
7 7 de Diciembre	21-sep-06	8:30 a 17:30	Hand notes, observation, participation in groups' work.		
8 El Recuerdo	06-oct-06	8:30 a 17:30	Hand notes, recording, observation, acquaintances.		
9 Huaquenes	10-oct-06	8:30 a 17:30	Hand notes, observation.		
10 Don Felix	10-nov-06	7:30 a 16:30	Hand notes, observation, recording of informal conversations among producers.		
11 El Socorro	14-nov-06	8:30 a 18:30	Hand notes, observation, recording of discussion of election of AACREA's president.		
12 San Miguel	12-dic-06	8:30 a 19:30	Hand notes, observation, planning for 2007.		
13 Don Pedro	12-may-09	8:30 a 19:31	Hand notes, observation, planning for 2007.		
14 El Jabali	09-jun-09	14:30 a 19:30	Hand notes, observation.		
15 Maria Teresa Sur	15-mar-11	8:00 to 17:00	Hand notes, observation		

Appendix 3.2 - Description of Other Meetings Attended (related to CREA and AACREA)

Other Type of Meetings			
#	Name	Place	Duration
1	AACREA week	Buenos Aires, Capital District	3hrs + 2 hrs
2	CREA Meeting – Wheat	9 de Julio, Bs. As. Prov.	5 hrs
3	AACREA week	Buenos Aires, Capital District	2 hrs
4	CREA Meeting – Managers’ meeting #1	9 de Julio, Bs. As. Prov.	6 hrs
5	CREA Meeting – Managers’ meeting #2	9 de Julio, Bs. As. Prov	5 hrs
6	President’s meeting (AACREA week)	Buenos Aires, Capital District	5 hrs
7	CREA Meeting – Maize and soybean	9 de Julio, Bs. As. Prov	4 hrs
8	West Zone CREA Congress in Mendoza	Mendoza	2 days
9	AACREA 2015 - Workshop on vision	9 de Julio, Bs. As. Prov	4 hrs
10	National AACREA Congress in Cordoba	Cordoba	3 days
11	West Zone CREA Congress in Mar del Plata	Mar del Plata, Bs. As. Prov.	3 days
12	National AACREA Congress in Cordoba	Cordoba	3 days

Appendix 3.3 - West Zone Interviews

The following interviews were conducted by the West Zone secretary, Maria Elena de la Rosa. They appeared in the West Zone Magazine (from 2004 to 2010). This lady, who has been on her role for over a decade, is a supportive person for CREA members of the Zone. She has a background in psychology and by her own initiative, she started interviewing people that belonged (or had belonged) to the CREA West Zone (Zona Oeste) in Buenos Aires. The interviews became an important part of the magazine and they reflect many of anecdotes and history CREA members recall. I have read these interviews multiple times, looking for reassurance that my categories and results could be applied. I used them as a backup for reliability. Some interviews I have cited in the results and discussion chapters (as indicated).

	N° Magaz	INTERVIEWEE'S NAME	YEAR	CREA AFFILIATION
1	196	Ignacio Liceaga	2004	Pirovano-La Larga
2	197	Paddy (Patricio) Seré	2005	Infosura
3	198	Ignacio Zuberbuhler	2005	Pirovano-La Larga
4	199	Martín Forrester	2005	extra-CREA
5	200	Juan Pablo y Paula Russi	2005	General Villegas
6	201	Juan Guerrico	2005	Asesor Infosura
7	202	Jorge Palma	2005	Mones Cazón - Pehuajó
8	203	Alberto Hardoy	2005	Lincoln
9	204	Francisco (Pancho) Perkins	2005	30 de Agosto - Marilauquen
10	205	Enrique Bayá Casal (padre)	2005	extra-CREA
11	206	Federico Stegmann	2005	Bolívar
12	207	Francisco (Paco) Mayorga	2005	Tambero Ameghino - Villegas
13	208	Néstor Marangón	2006	Hn-Dx - ExAsesor
14	210	Alicia M. Campos	2006	AACREA
15	211	Pablo Uribelarrea	2006	30 de Agosto - Marilauquen
16	212	Iñaki Lizaso	2006	La Vía
17	213	Teresa Pereda	2006	Lincoln
18	216	Roberto Canale	2006	9 de Julio
19	217	Enrique Capelle	2006	Henderson-Daireaux
20	218	Germán Weiss	2007	AACREA (Oeste Arenoso)
21	219	Armando Mayorga	2007	General Villegas
23	221	Fernando Zubillaga	2007	Guanaco-Las Toscas e Infosura
24	223	Ignacio González Quesnel	2007	9 de Julio
25	225	Pedro A. Lacau	2007	Guanaco-Las Toscas y Lincoln
26	227	Marcelo Foulon	2007	AACREA - Ex Coordinador General
27	228	Ricardo Palacios Hardy	2008	Tejedor

	N° Magaz	INTERVIEWEE'S NAME	YEAR	CREA AFFILIATION
28	231	Santiago González Venzano	2008	Hn-Dx - ExAsesor
29	232	Domingo Iraeta	2008	La Vía
30	233	Jorge Lastra	2008	Guanaco-Las Toscas
31	234	Alvaro Tomás	2008	Casares - 9 de Julio
32	237	Luis A. Peluffo	2008	ex Vocal Zona Oeste
33	240	Fernando Perea Muñoz	2009	Herrera Vegas
34	242	Guillermo Lugano	2009	9 de Julio
35	248	Belisario Alvarez de Toledo	2010	AACREA - Ex Coordinador General

Appendix 3.4 - Chronology of Study

YEAR

- 2006** - Drafting of research questions and purpose. Start on literature review. Data collection. Ethnographic work as described in Appendix 3. Participation in the Doctoral Consortium at the IberoAmerican Academy of Management.
- 2007** - Processing of data, reading, interviewee's transcriptions.
- 2008** - Categories emergence. Data analysis. Writing up of paper to send to Special Edition of Organization journal. Attendance to Academy of Management Conference, participation in its OMT Doctoral Consortium.
- 2009** - Publication in Organization of paper on dualities (Chapter 5). Drafting of thesis chapters. Participation in Doctoral Consortium of the IberoAmerican Academy of Management.
- 2010** - Writing up and polishing of the thesis.

APPENDIX 4 - CREA's Related Bibliography

The following table describes archival material I was able to read during my research journey. AACREA has an information service department which I had access to. In addition, the most interesting material was given to me by interviewees who had known the organization for a long time. This material included really old magazines, documents from CREA founding times, old newspaper articles, and so on. I also visited the library of the National University in Buenos Aires, where I could find additional press material. I read everything and elaborated with that information the tables and appendixes for the thesis. It all contributed to my learning of the organization and my ethnographic role as a researcher. I classified all the material I had by date and author in the following table.

Date	Title	Author
18/05/1957	CREA Acta de Fundación y Estatuto	CREA Zona Henderson Daireaux
24/10/1963	¿Qué es un C.R.E.A? Política de Tranqueras Abiertas	F.A.C.R.E.A - Delegate council.
01/08/1972	Proyecto de Promocion de CREA	AACREA
05/07/1973	Las nuevas autoridades de AA-CREA	Newspaper La Nación
27/07/1974	Las nuevas autoridades de AA-CREA	Newspaper La Nación
14/07/1978	Nueva comisión de AACREA	Newspaper La Nación
01/08/1981	Nueva comisión directiva en AACREA	Newspaper La Nación
01/09/1982	Una Argentina posible	AACREA's Magazine article Number 288, Year 36.

Date	Title	Author
aug-1984	Los consorcios rurales de experimentación agrícola	Roberto Martínez Noguera
03/03/1985	Los CREA, 25 años después	Newspaper La Nación
06/07/1985	Autoridades de AACREA	Newspaper La Nación
06/07/1985	El productor ante la realidad económica	Newspaper La Nación
05/08/1985	Suscribió AACREA un convenio para el progreso del agro	Newspaper La Nación
07/09/1985	El plan antiinflacionario y su incidencia en el campo	Newspaper Tiempo
15/09/1985	Jornadas por el 25° aniversario de AACREA	Newspaper La Nación
29/09/1985	Diálogo con el titular de AACREA en los 25 años de la institución	Newspaper La Razón
12/10/1985	Las limitantes de la explotación agraria	Newspaper La Nación
19/10/1985	Manejo de la empresa agropecuaria	Newspaper Clarín
11/02/1986	"Las nuevas medidas nos da esperanza de que la ganadería no desaparezca"	Newspaper Tiempo
15/03/1986	Evolución del precio de la carne y los mercados	Newspaper Clarín
03/05/1986	La república Argentina es en materia de alimentos lo que es Japón en materia de electrónica	Newspaper La Nación
17/08/1986	CREA y los problemas de la empresa rural	Newspaper La Nación
31/08/1986	La realidad y el futuro de la empresa agropecuaria en el XI Congreso CREA	Newspaper Tiempo
10/09/1986	Los Grupos CREA proponen la industrialización del agro	Newspaper La Razón
13/09/1986	El nacional-industrialismo: Un sistema ya agotado	Newspaper La Nación

Date	Title	Author
17/09/1986	El trigo pampeano puede ser producido a sólo 47 dólares	Newspaper Tiempo - Author: Virginia Mastronardi
18/09/1986	AACREA: buscando una salida para el sector agropecuario	El Cronista Comercial - Author: Abel R. Rodriguez
28/09/1986	"La producción agropecuaria es frenada por ineficiencias externas a las empresas"	Newspaper Clarin
29/09/1986	Reunión de Aacrea en Mar del Plata	Newspaper La Nación
19/10/1986	Importantes conclusiones en el XI Congreso CREA	N/A
10/07/1987	Bruno Quintana, nuevo presidente de AACREA	Newspaper La Nación
09/09/1989	Optimismo, pese a un dólar bajo	Newspaper Clarin
sep-95	AACREA Análisis Institucional - Informe Pereda	Institutional Department in AACREA
jul-00	CREA 30 de Agosto -Mari Lauquen	CREA 30 de Agosto Mari Lauquen
01/04/2001	Asamblea Julio 2000 - CREA 30 de Agosto MariLauquen	CREA 30 de Agosto Mari Lauquen
01/10/2004	40 Años en Movimiento	AACREA - Communication Area
17/03/2007	AACREA: Pasado, presente y futuro	Clarín.com
01/11/2007	Anuario Estadístico 05/06	AACREA
20/04/2006	Pensar con los faros largos	Newspaper Clarin
Dec-2006	Los paradigmas de la nueva era del conocimiento - Los sistemas, las regiones y los nuevos esquemas de poder (I)	Martíarena Maria Luz
2006	Proceso de Visión - Planeamiento Estratégico	AACREA

Date	Title	Author
n/a	CREA ¿Qué? ¿Quiénes? ¿Cómo?	AACREA - Marcelo Foulon y Elisa Porrúa
n/a	El papel de las organizaciones de productores - AACREA	AACREA - Asociacion Civil Forges - Agencia Nacional de Promocion Cientifica y Tecnologica

APPENDIX 5 - Information Sheet for Participants



“La Generación de Conocimiento en Grupos de Productores Agropecuarios”

INFORMACION PARA PARTICIPANTES

Mi nombre es María Elisa Peirano Vejo. Soy una estudiante de doctorado de la Universidad de Massey (Nueva Zelanda). Me gustaría invitarlo/a a participar de mi investigación titulada *La Generación de Conocimiento en Grupos de Productores Agropecuarios*. Por favor, lea detenidamente la siguiente información para ver si decide formar parte de este estudio.

Este estudio cuenta con la financiación parcial del Instituto Nacional de Tecnología Agropecuaria (INTA), dentro del marco de su proyecto “Contribución al incremento sustentable de la productividad ganadera en la región del Centro Regional Buenos Aires Sur (BASUR2)”.

Uno de los objetivos del estudio es comprender cómo funcionan las instituciones AACREA y Cambio Rural. Usted ha sido identificado/a como un candidato/a posible para entrevistar. Su participación en este estudio es absolutamente voluntaria. Si usted lo autoriza, su participación será a través de una entrevista conversacional sobre el tema previamente mencionado.

Es importante que sepa que ninguna información que lo identifique acompañará sus declaraciones. Si usted decide participar, se le pedirá que responda a las preguntas de la entrevista, que típicamente durará una hora (puede ser más corta o más larga, acorde a sus necesidades). Si usted lo autoriza, la entrevista será grabada y luego transcrita por mí. Los datos recolectados serán usados en mi tesis doctoral y en las publicaciones subsecuentes que haya. La grabación será guardada bajo llave y solamente yo tendré acceso a esa información. Al final del proyecto, toda información personal será destruida, menos aquella información sobre la cual dependen los resultados del estudio. La política de investigación

de la Universidad determina que esos datos se guarden durante 5 años, luego de los cuales serán destruidos.

Si usted decide participar, puede preguntar lo que desee en cualquier momento de la entrevista, negarse a contestar cualquiera de las preguntas, proveer información sabiendo que su nombre será guardado bajo una estricta confidencialidad, y puede además pedir que se apague el grabador en cualquier momento.

Este proyecto ha sido revisado y juzgado como de bajo riesgo, aprobado por la investigadora y sus supervisores bajo la delegación del Comité de Ética de la Universidad de Massey. Si tiene alguna duda o consulta sobre la investigación que desea consultar con alguien más que la investigadora o sus supervisores, por favor contáctese con la Profesora Sylvia Rumball, asistente del Vice-Chancellor (Ethics & Equity), tel:+64 6350 5249, email humanethics@massey.ac.nz.

Si tiene alguna duda o consulta sobre el proyecto, por favor contacte a cualquiera de mis supervisores: Professor Ralph Stablein (Massey U.), tel:+64 6 356-9099 ext 2795, email r.stablein@massey.ac.nz; Prof. Roberto Vassolo (IAE), tel: (02322) 48-1072, email rvassolo@iae.edu.ar; o el Dr. Alvaro Romera (INTA), tel: 02266 439100 int 315 , email ajromera@balcarce.inta.gov.ar. Mis datos de contacto son tel: (02395) 15403047 o email: M.E.PeiranoVejo@massey.ac.nz. Desde ya muchas gracias por su cooperación.

Saluda Atte,

María Elisa Peirano Vejo

Estudiante de Doctorado - Universidad de Massey

APPENDIX 6 - Questions Used in the Interviews

As described in the Methodology chapter, I mostly used open-ended questions in the interviews. I would try to see what made my interviewees “click”.

Examples of the questions used are:

- How did you become acquainted with the CREA Movement?
- For how long have you known CREA?
- How would you describe the CREA Movement? And your CREA group?
- Tell me about your commitment to CREA
- Talk to me about the most important single thing the being a CREA member means.
- Do you remember any anecdotes from your journey in CREA?
- What would you say learned from CREA?
- What is the relationship between CREA and knowledge for you?

From these starting questions I would then rephrase what the interviewee said and mainly let them talk....

If my interviewee was a person that had known CREA for a long time, I would also ask them more specifically about its founding times. I used questions such as:

- What do you remember from CREA founding times?
- Have you met Don Pablo personally? What do you recall from him?
- How do you explain the survival of CREA for so many years?

APPENDIX 7 - Examples of Oral Stories in the CREA Movement

The story of the apple

In one of the interviews I conducted, a farmer narrated this story:

“That is why in this way of working, where you exchange without meanness, first you give and after, you receive. In that way, if we all give more, if we all contribute more, the more we will then receive. Have you heard the story about the apple? I am sure you have...

You have an apple and you give it to me. You then don't have an apple, and I do. But if you have an idea, and you give it to me, then you still have the idea, and I also have one, and we both can have two or more, or infinite ideas together. That was always something that Don Pablo used to say....he was a wise old man ...a wise old man”...

(Extracted from a farmer's interview transcript. Interview conducted in Trenque Lauquen, Buenos Aires Prov., on 24th July 2006)

The story of the “green islands”

This story was published in an interview conducted by Maria Elena de la Rosa to Marcelo Foulon, who has been the first General Coordinator of AACREA, and had a 23 year experience. The interview appeared in the CREA West Zone Magazine, issue 227, in December 2007.

“In the Movement initial times, CREA farmers were very concerned with recovering the fertility of the soil which was lost over a terrible drought... At the time, there were no fertilizers, so the cost of producing cattle was huge. That was the time when CREA really exceled. In the three years of the *super drought* (1960-1963) you could see “green CREA islands” from the airplanes. In that time, everybody moved around in private airplanes, for the long distances and the precarious roads. From above the planes you could see green stains which were all CREA farms.” (M. Foulon, personal communication, December 25, 2007, p.17)

APPENDIX 8 - Research Presentation for a CREA Group

“La creación de conocimiento en grupos de productores agropecuarios”

Tesis Doctoral por la Universidad de Massey, Nueva Zelanda
Presentación al CREA 9 de Julio
“El Jabali” - 9 de junio 2009

Mi Objetivo: Apreciaciones sobre los CREA

- Comentarles apreciaciones personales
- Brindar herramientas de análisis, ideas que los hagan pensar y que quizás les sirvan para algo
- Contarles un poco mi experiencia y agradecerles la apertura hacia mi participación

Recolección de datos

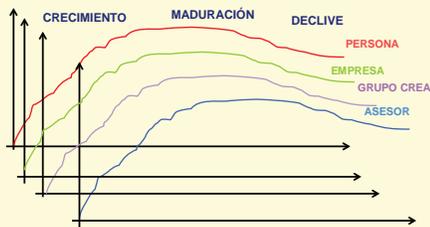
2006 y 2007:

- 10 reuniones del CREA 9 de Julio
- 4 reuniones de otros CREA (Tapalqué, Salazar-Mones Cazón, América, Roque Pérez-Saladillo)
- Reuniones técnicas, de minigestión, de encargados, Semana AACREA, Congresos, etc
- 28 entrevistas con miembros CREA (con distintas trayectorias de 11 CREAs distintos)
- Más de 10,000 kms recorridos

Características del Movimiento

- Fuerte cultura oral y enorme cantidad de reglas no escritas
- Gran heterogeneidad de miembros expandidos en todo el país (1800 en 190 grupos; 17 zonas)
- Asesores técnicos con demandas particulares (200 asesores CREA) 
- Creadores de un **CONOCIMIENTO** particular
- Un presente nutrido por 52 años de historia

Life Cycles



Un miembro CREA, Una Historia...



Los distintos roles...

“Los campos estaban en dos CREA excelentes, entonces aprendí mucho. Fue un apoyo impresionante, incondicional. Lo que se aprende en quince años, lo aprendí en dos. Además cualquier duda los llamaba, los consultaba qué les parecía... Gente macanuda. Eran más grandes que yo y con mucha solidaridad y experiencia.” (Miembro CREA)

Las distintas hazañas...

“En 30 de Agosto llegaron a funcionar un montón de camionetas arriba de las vías. Lo que se ha hecho en esa época... sacar gente enferma de noche y lloviendo por las vías... Yo tengo un recuerdo muy especial de todo eso, no te lo olvidas nunca más en la vida... Los viejos de la zona se tienen que acordar. Posiblemente los presidentes jóvenes no lo recuerden... La zona estuvo muy, pero muy mal... Nunca se bajaron los brazos y en eso el ser CREA fue fundamental. Prueba de eso fue que hicimos el primer Congreso Zonal en 9 de Julio en medio del agua.” (Vocal Zona Oeste)

Los ciclos de vida afectan a los grupos...

"Desde la vocalía nos habíamos propuesto que no podíamos dejar de ver todos los CREA en el año. Le dimos dos vueltas completas a la zona y más de un CREA tuvieron más visitas porque 'hacían agua'. Había que tratar de ayudarlos, con algunos tuvimos éxito y con otros, no... Tratábamos de que fueran más visitados los CREA viejos, que parecen sólidos, pero a veces no lo son tanto." (Vocal Zona Sudeste)

Dualidades que aparecen...

	ESTABILIDAD	CAMBIO
TIEMPO	Pasado	Futuro
ORGANIZACIÓN	El propio Grupo	La Organización
COMPISIÓN DE GRUPO	Homogéneo	Heterogéneo
TECNOLOGÍA	La persona	La máquina
CONOCIMIENTO	Interés personal	Interés colectivo

Dualidad: Sí al grupo, No a AACREA

"Al principio no entendían los miembros CREA la decisión de armar una asociación; decían que era burocracia... Fue muy resistida, muy... porque decían, ¿Para qué? Si estamos bien nosotros así... Y Don Pablo insistía, él decía, tiene que haber una institución que convoque, que nucleee y que lleve la cosa al resto del país.... Los miembros estaban contentos acá con sus reuniones y no entendían... y eso duró veinte y pico de años... para qué AACREA?". (Ex-Coordinador General de AACREA)

Dualidad: Sí al grupo, No a AACREA

"No sé si hoy todos los que forman parte de algún grupo CREA saben qué rol están jugando o por qué están en el Movimiento o qué tienen que devolver... En ese sentido recuerdo la frase "no es de caballeros dar menos de lo que se ha recibido". Si las personas se transforman únicamente en receptoras, el sistema muere. Yo he estado en muchas zonas del Movimiento y la verdad es que por suerte siempre hay gente valiosa en los grupos". (Asesor y Coordinador Zona Semiárida)

Dualidad: Sí al grupo, No a AACREA

"En el año 86 me quedé sin CREA, porque en el año 85, en tiempos de Alfonsín con los precios regulados, con las retenciones, los mercados en baja, las inundaciones en puerta, al presidente del grupo y otros miembros se les ocurrió salir del Movimiento porque decían que les resultaba caro y propusieron seguir funcionando como CREA, lo que duró unos seis meses." (Miembro CREA)

La clave: Confianza

"A mí el funcionamiento de los grupos CREA me sigue sorprendiendo. Uno llama a la opinión del CREA en cosas que parecerían muy personales, porque después de tanto tiempo es tanta la confianza que uno tiene en el pensamiento de los otros, en la capacidad que tienen los demás... Para mí es la oportunidad del año de expresar a diez personas a las que les tengo un enorme respeto y que vienen a dar todo lo que tienen. Para mí es un placer preparar la reunión". (Miembro CREA)

APPENDIX 9 - Audio visual Analysis on Knowledge Management Video of AACREA

AACREA (2007b). Gestión del conocimiento en AACREA. Video 1. [Video file]. Argentina: Author. Retrieved from: <http://www.youtube.com/watch?v=JS6kFMcjiaE&feature=fvst>

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Hand writing with pencil on a white note-pad paper / Sound of pencil scribbling	In 1957 there was no Internet. There were no cell phones. There were no GPS services.	We used to be a knowledge network without the technology. We did not need the high-tech to do what we did. TIME: PAST (1957). The way it is presented, by hand writing. TIME: PRESENT (cell phones). TIME: FUTURE (GPS services).
Sign on a fence of a farm / music	Handmade signs were used to call a meeting.	TIME: PAST Notion of closeness, of smallness, of belonging. There were few of us. Everybody knew each other. We used to be neighbours.
Farmer speaking to a group with a megaphone / music	Oral communication was the regular way to share knowledge	TIME: PAST We could talk and all of us could listen.
Music	Shared knowledge among equals. Shared words within small groups.	Notion of equality. Notion of closeness. TIME: PAST
CREA Magazine, zooms to its subtitle. Hand written spreadsheets with numbers and graphs /music	Published information spread slowly... ..reaching more and more people. Faster.	Expansion and growth beginning to develop. Commercial venue, the magazine, lowering of some entry barrier (not all of them). TIME: PRESENT
Two men reading extensive spreadsheets. Graphs, numbers / music	Knowledge means interpreted information. A new habit has emerged from the economic analysis spreadsheets... Information systematization. Agricultural producers from different regions could compare their yields. Standardized (sic) information = Knowledge Management	TIME: PAST (spreadsheets) TIME: FUTURE (information systematization) TIME: PRESENT (comparison of yields) TIME: FUTURE (SI = KM) First time Knowledge Management appears cited in the video, it was only mentioned in the title.

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Different magazines with headings / music	Crop rotation...Plow Based Effect Coefficient (UTA)...Gross Margin.	TIME: PRESENT (things the farmers already know and use in the management of their farms)
Different magazines with headings / music	Creation of a common language = Knowledge Management	Pedagogic definition of KM, is something common to us all, we share it. It is language, something we already know and use. TIME: PRESENT = FUTURE
Typing in real time on a white screen / Typing on computer keyboard sound	Shared knowledge fuels the development of nets Shared knowledge fuels the development of trust Shared knowledge fuels the development of support.	The typing gives notion of immediateness, of real time, of quickness, on the spot state-of-the-art information. The sharing is enhanced, message sent is "together we can do it". TIME: FUTURE (nets) TIME: PRESENT (trust & support). Machine versus Man, trust and support helps man to handle the lack of hospitality of the net. All of the above is possible only if knowledge is shared (condition).
Database AACREA document search / Typing on keyboard sounds	Document search: "no till regulation" Results: "No till seed chill" (and others)	TIME: PRESENT. The database is already working in AACREA, it is there now to use. Technology widely accepted. "no till", easy for farmers to see the utility of the search. It is a past innovation which is already an accepted practice today. TIME: PAST

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Share with a friend, Comments, clicks on send to a friend. / Computer browsing sounds	The more knowledge spreads, The more useful it becomes “send to a friend”	Many versus a few. The more people know about it the better. Encourages the mission of AACREA, to share generously. It fits an “open source” paradigm where the more the collaboration the greater the richness
National Congress Panel on stage / music	Other scenarios Other media Other tools...	TIME: FUTURE. The new, the unknown is still to come...
Name badge of a sitting person, an spectator of the Congress / Music Name badge of another spectator Name badge of another spectator	...But people are ¹⁶ ANALOGUE. Not digital People are different Heterogeneity is the frame...	TIME: PRESENT Reassurance, people is our concern. Man versus machine. We have flesh and bones and feelings. Embracing heterogeneity. Says it all. Political correctness, everybody has a place among us.

¹⁶ The English translation of the verb “to be”, in plural they “are” is different to the Spanish verb “somos”, which in one word jeans “we are” including the “we”, which gives in this context a connotation of belonging.

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
View from above, everybody sitting down / music	... and sharing knowledge is the method	Yet another definition of knowledge and the importance of its sharing. TIME: PRESENT
Typed into a white screen / typing sound	Consensus as a philosophy	Embracing homogeneity, consensus brings the different together under the same opinion. TIME: PRESENT
Group of farmers in a pasture / music	Consensus emerging from differences. Consensus legitimates knowledge.	Homogeneity and heterogeneity, it is possible to balance the two. Consensus is a condition for knowledge to be created. TIME: PRESENT
Wikipedia, the free encyclopedia, in the search option. Clicks on search / Computer sounds	“Open palisades + CREA” Open palisades: an agricultural Wikipedia... ...in a non-connected world ...in the 1960's!!!	TIME: FUTURE The definition of the CREA philosophy, open palisades is redefined with a modern term (Wikipedia) and a modern notion (open free encyclopedia). TIME: PAST & PRESENT. Today there are many of us, farmers, who have not embraced technology as much as others. We were not connected in the past, and we did it anyway. TIME: PAST
Typing on a white screen / Typing sounds	Values. Compromise. Teamwork.	TIME: PRESENT Values are preserved.
Text being edited in real time. Text being deleted and retyped in real time.	A new paradigm... Doesn't imply new values. New paradigm ≠ new values	TIME: FUTURE (by the way is presented in typing). TIME: PAST. Values do not change through time by definition, they are what they are, reassurance that things will change, but not in their essence. Comforting equation. Future does not over rides past.

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Text with the image of thousands of people scrolls upwards / Typing sounds	<p>Knowledge lies in people Values lie in people Attitudes lie in people Attitudes belong to people Attitudes belong to the people. People. Different people. People who live here... People who know if it will rain. People who live over there... People who don't know if it will rain. People who sow a field. People with creative ideas....and more</p>	<p>Humanization of knowledge. People are the common factor in the next sentences. People as a union, homogeneity. Finally heterogeneity is mentioned also, different people can share values, different people can share attitudes, and therefore, different people can share knowledge. All of us, all of them, different knowledge levels, different capabilities, different geographies. One world for us all. Equality implicit value.</p>
Messenger conversation being typed in real time / Typing sounds	<p>PEOPLE WITHOUT CELL PHONES</p> <p>John: Is possible to share knowledge with people who don't have cell phones? Peter: ☹ Paul: YES, it is possible!</p>	<p>TIME: PAST & PRESENT. We were those who had no cell phones at the time, there are still people today who have not got cell phones, should we exclude them? (NO) Story of inclusion of the marginal farmer.</p>
Cartoon of Don Pablo overflying with his plane saying in a speech globe, and then he flies away / Plane flying sounds	<p>“Of course it is”</p> <p>Shared knowledge AACREA Knowledge Management Finds the Home Page of AACREA</p>	<p>TIME: PAST Very graphic image of founder in a cartoon, with humor that “flies” in to assert the value of inclusion. Perhaps his image in the past was of elitism, of excluding some smaller “different” farmer. The discourse from the institution has changed. Don Pablo flies in to give his blessing to the new path (TIME: FUTURE) the organization is embarking in.</p>
Google search / typing sounds	<p>“Knowledge Management” Clicks on results</p>	<p>The name of the institution besides the “fashionable” term KM doesn't startle as much as before at this point in the clip. TIME: FUTURE.</p>
Real time typing in a white screen / Typing sounds	<p>Knowledge Management is an attitude Knowledge Management is a decision. is a behaviour. is our compromise.</p> <p>New tools, the same philosophy.</p>	<p>TIME: FUTURE TIME: PRESENT. A decision, a behaviour, a commitment. These strong definitions of KM call clearly to the consciousness of the CREA member to act. TIME: FUTURE (new tools) (New: future) (tools: common word) TIME: PAST (same philosophy)</p>

IMAGE AND SOUND	TEXT	MESSAGE OR STORY IMPLICIT
Bumper stick with the CREA logo. Typing in real time / Music	CREA. Sharing knowledge since 1957 before the Internet.	TIME: PRESENT. Identity. This bumper sticker has not changed for decades and is used today in member's cars and u-drives for identification. Strong logo and strong lemma "this is our thing", we are good at "sharing knowledge" TIME: FUTURE. TIME: PAST. Since 1957, Before the Internet (imagine living in a world where the net was possible without internet)
Bumper stick with the CREA logo. Typing in real time / Music	CREA. Sharing knowledge since 1957 before the Internet.	TIME: PRESENT. Identity. This bumper sticker has not changed for decades and is used today in member's cars and u-drives for identification. Strong logo and strong lemma "this is our thing", we are good at "sharing knowledge" TIME: FUTURE. TIME: PAST. Since 1957, Before the Internet (imagine living in a world where the net was possible without internet)

APPENDIX 10 - Publication

This Appendix contains a paper published in *Organization* journal which contains partial results of the thesis. It was presented on a call for papers for a Special Edition on stability and change.

Peirano-Vejo, M.E., & Stablein, R.S. (2009). Constituting change and stability: Sense making stories in a farming organization. *Organization*, 16(3), 443-462

Constituting Change & Stability: Sensemaking Stories In a Farming Organization

ABSTRACT

Recognizing the multiplicity of stories and possible interpretations in any narrative approach, we develop our “story” (i.e.: this journal article) within the emerging tradition of responsible writing. We conceptualise organizational change as the normal condition of organizing rather than as an episodic event. In these circumstances, sensegiving and sensemaking stories were found to be important in handling and creating instances of stability. Further, we attempt to show how old stories are told in new ways, while adapting to changing needs of its members created by contextual developments. We provide a discursive analysis of an institutional video on Knowledge Management, four in-depth interviews with members of the Argentine Association of Regional Consortiums of Agricultural Experimentation (AACREA), a rural farming association, and a set of 21 interview transcripts from the institution’s archives. An analysis of dualities present in the stories show how change is both managed (sensegiving) and understood (sensemaking). We refer to five of these dualities and show how the tension they carry is functional and productive to the growth and development of the organization.

Keywords: storytelling, sensemaking, sensegiving, change, reflexivity.

Our lens for studying change in organization is storytelling. “Stories”, as Gabriel (1991, p.858) defines, “are narratives through which events, at times major, at others trivial, become charged with symbolic significance”. We follow Rhodes & Brown (2005a, p.170) to clarify how we approach stories in this paper:

This wealth of work from those who collect stories told in organizations (Martin *et al.* 1983), tell stories about organizations (Van Maanen 1988), define organizations as storytelling systems (Boje 1991a; Currie and Brown 2003), and conceptualize organization studies as a set of storytelling practices (Clegg 1993; Czarniawska 1999; Hatch 1996) is both indicative and constitutive of narrative’s impact.

We treat the stories we collected as data about organization. However, with Gherardi & Poggio (2007), we treat storytelling as the *thing itself* of organizational life. Stories are not epiphenomenal tales told to reassure ourselves of our agency in a truly externally driven world. Rather, our oral and written stories initiate, build, reinforce, threaten and tear down the organizational worlds we live in. Thus, we also define organizations as storytelling systems. Finally, we are storytellers writing in the journal article genre as a vehicle for communicating with our scholarly community about organizational change and stability (Buchanan and Dawson 2007). With respect to this last point, we acknowledge that:

To author a story is always a creative act, and our story is just one of many that could be told about narrative research. Ours is not a quest for scientific truth, but a quest for meaning (Rhodes and Brown 2005a , p.167).

But not all stories are equal and not all meanings are equivalent. What story should we tell? Will any story do? In the course of a wide-ranging review, Buchanan & Dawson (2007) provide a thorough conceptual overview of the challenges facing the academic who acknowledges that there are always multiple stories and no settled place from which to tell the right story. The only way forward is to write responsibly, to accept the ethical responsibilities of authorship (Rhodes and Brown 2005b). We constitute ourselves as responsible authors in relationship to our Others: our informants, our readers and the authors we cite in this article and more broadly our mentors, colleagues, and students who train us and share their time and ideas with us (Stablein and Frost 2004). More broadly still, we acknowledge the taxpayers and students who provide the

resources to allow us an authorial voice. Our attempt to do so will involve occasionally drawing attention to our decisions as authors while trying to honour the stylistic expectations of our editors, reviewers and readers. Following the traditional structure of the journal article we now proceed to a literature review in which we define our understanding of organizational change and link storytelling with sensemaking and sensegiving.

Our conception of organizational change and stability is aligned with Tsoukas & Chia's (2002) who argue that change is the typical state of organised life. The perception of stability is the exception emergent from, and maintained by, continuing organizational change. Even seemingly stable practices, such as organizational routines, have been shown to vary in several ways including repairing in response to unintended outcomes and expanding the possibilities of action in an organization (Feldman 2000). The conceptualisation of organization change as ongoing rather than episodic has implications for how we study organizational change. Episodic notions of change invite linear theories that proceed from antecedents of the change (usually planned) to outcomes, to evaluation of the new state of the organization. In contrast, a focus on organizational becoming invites a close examination of the micro-processes of the ongoing emergence we call organization, a balancing act of stability-maintaining change.

Such a focus is sympathetic to the storytelling approach. Stories often provide the vehicle for stability construction and maintenance because they are flexible carriers of meaning. Storytellers integrate elements of time, sequence, plot, character and motivation in diverse ways. Since thought is reconstructed in narrative terms, storytelling can reveal how people endure through stability and change (Brown 2006, p.734). Stories can also serve a variety of purposes that have been well documented. We focus on the sensemaking and sensegiving functions of stories (Gioia and Chittipeddi 1991; Maitlis 2005; Rhodes and Brown 2005a) because the flux of organizational life that is central to an organizational becoming perspective on change provides a constant trigger for sensemaking (Weick et al. 2005).

Our theoretical approach shifts the nature of the questions we ask in two respects. First, episodic models of organizational change try to understand sensemaking and sensegiving stories as a mode of transition from one state to another (Dunford and Jones

2000; Rhodes and Brown 2005a, p.173). For us, the real challenge is to maintain any sense of continuity of meaning in an ever changing social reality. Adopting an organizational becoming perspective implies that sensemaking is pervasive and central, rather than an important but occasional activity triggered by discrete change events. Second, sensegiving is usually understood as an exogenous reframing of meaning for organizational participants. For example, in their classic article, Gioia & Chittipeddi (1991) describe the new president's sensegiving message as the decisive driver for that university's strategic repositioning. However, we believe sensegiving and sensemaking are better understood as recursive, reciprocal and interactive (Ashforth et al. 2008; Weick et al. 2005, p.416). Sensegiving also requires sensemaking by the sense giver. Sensegiving efforts tell us about sensemaking in the organization; or more exactly, about sense givers' presumptions about participants' sense. Sensegiving is an endogenous activity enmeshed in the ongoing sensemaking of both sense givers and receivers.

We acknowledge limitations in our approach. Stories are rarely just sensemaking efforts. Stories can also be persuasive attempts open to rhetorical analysis (Sillince and Suddaby 2008) or enmeshed in complex political processes (Buchanan and Dawson 2007) or hegemonic vehicles of the state apparatus (Brown 2004). Our focus on sensemaking and sensegiving will neglect some aspects of the stories we analyze. Further, not all sensemaking is narrative. Weick (1995) clearly identifies stories as an important but not the exclusive means of sensemaking. For example, we may miss out potentially significant sensemaking carried in argumentation (Weick, 1995, p.135). A key contribution of sensemaking theory to the analysis of stories is the criterion of plausibility, which provides an alternative to discredited criteria such as truth or validity. Reflexively, as authors of this sensegiving story, we explicitly make the claim that our position is plausible.

METHODS

Setting

The setting of our study is farming. There is a passion in farming that transcends the working scenario and forms part of the person's identity. These are not men working in farms, these *are* farmers. Like the "sailors in the sea" that Mack describes (cited in Gherardi et al. 2007, p.322), farming implies that nature is a protagonist. Farmer's

proximity to their source of production, their visceral relationship with their land, comes to influence their sense of being. Farmers have a special bonding with the place where they work (and live) -often given to them by previous generations. They are expected to pass it on as a legacy to their children. Tradition and heritage are important in this context.

Our conception of change is particularly suitable for the permanent state of change that farming activities entail. Berger described the Russian peasant experience. Although our farmers are commercial farmers, some commonalities in farming experiences apply.

Berger (1978, p.354) wrote:

[Farmers] live with change hourly, daily, yearly, from generation to generation. There is scarcely a constant given to their lives except the constant necessity of work. Around this work and its seasons they themselves create rituals, routines and habits in order to wrest some meaning and continuity from a cycle of remorseless change...

AACREA is a NGO that facilitates and overlooks the functioning of what are called CREA groups. A CREA group is normally composed by ten to thirteen farmers with similar farming and intellectual concerns who work with the guidance of a professional technician (called an *assessor*¹⁷). Every month, farmers take turns hosting the group on their farm, presenting information on its management, and asking for assistance with production, management or family business difficulties.

¹⁷ *Assessor* will be used as a term that means a facilitator role in the moderation of the group. Usually he is an agronomic engineer or a veterinarian, which provides the technical assessment, and plays a crucial role as a motivator and as a communication node with AACREA.

The CREA Movement was founded by Pablo Hary in 1959. Hary was inspired by the French CETA¹⁸ groups, and adapted the concept to the Argentinean reality. Today 1800 farmers are CREA members, organized in 190 groups, advised by 200 assessors, throughout 17 geographical Zones of the Argentinean countryside.

All governance positions in AACREA are rotational voluntary service roles. CREA members can get involved as much or as little as they like in their institution, for as long as they want to, with varying levels of commitment and time dedication. The ad honorem nature of involvement means that people can always very easily leave. When they do, their life stories and experiences leave with them. AACREA has dozens of non-written rules and its folklore, myths and traditions are maintained and recreated orally by its members. There is a common knowledge that is not articulated, but still shared; “non-verbal codes” one farmer called it. The sense of belonging to the organization runs through this familiarity of intangible things. Farmers do not sign any papers to belong to their CREA groups.

Data

Our data set is composed of three main sources (See Table 1). The first element is an institutional video on Knowledge Management in AACREA that promotes the launch of a new online database for its archive. The video lasts 4:43 minutes and is available to the reader in both Spanish and English at www.youtube.com/watch?v=JS6kFMcjjaE. Authorship of the video was traced back to a 15-member group, the KM commission of AACREA. Neither individual authorship nor intellectual property was claimed, a distinctive characteristic of the collective nature of AACREA’s work.

¹⁸ Centre d’Etudes de Techniques Agricoles

This audio visual material represents a consciously aware reflexive instance of storytelling, specifically designed as a public relations exercise in sensegiving to encourage the adoption of a specific innovation. The very existence of the video reveals that this change potentially disturbs the texture of ongoing relations. The audio visual text provides a rich example of how AACREA communicates the adoption of a new technology, deals with the past and faces the future.

To balance this publicly available, prospectively oriented and intendedly persuasive communication, we consulted another source of stories: private, retrospective sensemaking, reflective but not reflexive. We revisited four in-depth interviews done with CREA members who were close to AACREA's founder, Don¹⁹ Pablo Hary. The choice of these interviewees followed a theoretical sampling approach (Eisenhardt and Graebner 2007). Each interviewee witnessed the evolution and change of AACREA over more than twenty years. These interviews were conducted and translated by the first author prior to the analysis of the video.

The final source of data was reserved to allow us to test our interpretation of the sensegiving video and the sensemaking interviews. AACREA's archival material includes a set of twenty-one interview transcripts conducted by a staff member as part of a historical project, which resulted in a booklet titled *40 years in Movement* (AACREA 2001). Almost every president and key person who had been involved in the development of the organization was interviewed for this report.

¹⁹ "Don" is a Spanish expression used to call people indicating respect. When talking about Pablo Hary everybody called him "Don Pablo". If it needed to be translated I would translate it to "Sir Pablo" or "Mr. Pablo". We have decided to leave it in its original Spanish saying, Don Pablo.

Insert Table 1 around here

Data Analysis

Our analysis of the data is eclectically discursive. Following Prichard, Jones & Stablein (2004) our analysis fits within their narrative discourse analysis category, but we draw on elements of Foucauldian, linguistic and deconstructive analysis, as well. Thus we attend to the surface features of the stories told in the video and interviews, but we also attend to the issues that are foregrounded and silenced, presence and absence, the metaphors employed, etc. With respect to the interview data, we were guided by Alvesson (2003) and adopted his method of reflective pragmatism.

AACREA was studied intensively during 2006 by the first author as part of a larger project. She participated as an observer in the annual round of meetings of one CREA group. Data collection included note-taking at different CREA group's meetings, observation and participation in several of the organisation's events, such as technical meetings, congresses, field days and administrative gatherings. Furthermore, a thorough screening of AACREA's archives, press material, reports and various internal documents was undertaken. The first author's exposure to these additional materials and experiences has affected our analysis.

Farmer's practices and their personal involvements with their CREA group and AACREA became available to us mainly by observation and by hearing their stories. For purposes of analysis and communication with our academic community, we have isolated some of these stories and treat them as artefacts that can reveal some of the components of the texture of change.

Procedure

We transcribed the images and the audio and text that accompanied each image. We then interpreted what was the storyline behind that image and text. A preliminary exercise was to answer questions such as: "What is the message? Who is being addressed? What things are subtly being said here?" Our analysis was driven by an

understanding of the video as a conscious influence attempt that presupposes the video authors' awareness of how the target audience makes sense.

The analysis consisted of repeatedly watching the KM video and rereading the interview transcripts several times, taking notes, trying to group major notions into themes. Our process was iterative, going back and forth between the data and the proposed themes. We realized that although some issues seemed rather "technical" (i.e., the adoption of a no-till sowing system or not), they all connected to emerging broader issues (i.e., the notion of time, the resistance to innovation).

Comparing our analysis of the sensegiving narratives in the video to the interview sensemaking, we observed recurring conflicts and tensions. We drew on Martin et al's (1983) discussion of dualities in organizational stories to organise our analysis.

According to these authors:

A duality is an issue that cannot easily be resolved, because contradictory aspects of the issue are inevitably present and are simultaneously desirable and undesirable. Dualities cause tension. (p.447)

First, we identified broadly a series of dualities in the stories around organizational change in this organization. Then, we revisited the clip and the four interview transcripts to discover that they consistently came through as conflicting issues in most of the testimonies. Finally, we selected five sets of dualities (See Table 2) that reflect the organizations' interactive shifting between instances of stability (reproduction, consolidation, retention and security) and of change (variation, selection, growth, adaptation, and renewal).

Next, we turned to the archived transcripts of interviews with ACCREA leaders and administrators. We did not analyse these interview transcripts as intensely. We examined them to test the plausibility of our analysis. We found the same tensions present in the anecdotes they told. Thus, we suggest that the dualities we have identified are not implausible and may be broadly relevant for AACREA.

We now move from this methods section to presenting our results. The salience of our voice as authors will recede into the background. The voices of the organization's participants will be foregrounded, but the voices are foregrounded by the authors. We both bow to the traditions of the genre (illustrating with verbatim quotes) while

explicitly owning our participation in this convention and the manipulation this participation involves.

Insert Table 2 around here

FINDINGS

1) The Intrinsic Tension of Time: Past versus Future

Time of founding is bigger than other times; it is laden with positive values and works as a source of nourishment for identity and organizational culture. The richness of the data relies on how the adoption of technology is narrated in its relation to this past. The past is mentioned with a special sense of identity, values, and strongly rooted traditions. In the video, the introduction of KM is linked to this past. *A new paradigm does not mean new values*²⁰. Although this sentence may sound contradictory, the storyline behind it is that a new reality (paradigm) represents the future, but without discarding the past, the values.

Progress and the incursion into the future, fueled by technological innovations, are reflected in the stories as being in tension with stability. AACREA is known in the Argentinean agricultural sector for having a pioneering attitude towards the adoption of new technology (farm management, no till sowing, use of genetically modified soybean,

²⁰ Text extracted from the video and interviewees' direct quotes are presented in italics.

among others). However, farmers and especially those who belong to AACREA are very concerned with retaining their collective identity, enabled by their very particular history.

The future lies ahead; the challenge is to face it whilst maintaining connection with the roots of their identity, with their values and historical culture. This fear of losing oneself in the postmodernist whirlpool causes “information anxiety”(Wurman 2001), and is partially related to the great amount of available information. There has been a transition from the past when information was a scarce resource to the present, when information is everywhere and impossible to process. The new challenge seems to be whether AACREA that has so successfully provided scarce information in the past can protect farmers from the excess of information in the future. Identity and its relation to the past serve a very distinct function here; it is an anchor, a bridge to a safety Zone that provides steadiness in an ever changing environment. The connection to the past, to their truth, is used in the narratives as a resource to help face the uncertainty of change. The stories present the future as un-chartered territory; it lies there inevitable, yet scary to face alone. The future is where farmers are headed, with total uncertainty of what can be expected of it. Technology and innovations make it even harder to bear and provide a vertiginous pace for change. This tension is handled by the support of the collective; the story underlying the video is repeated after new concepts (like knowledge management) are introduced: “together we can do it”; “if we keep ourselves working in groups we can handle it”. The final closing of the video with the traditional bumper stick of the CREA logo carries a reassuring symbolism – “we have done it before, we can do it again”:

Since 1959. The unknown becomes bearable if we continue to stick together.

The video narration presents current times as an intersection of this duality of past and future. The present appears symbolized in those technologies already mastered (cell phones, chat messaging), and in those innovations which are already part of today’s running of farms (GPS, farm management, soybean cropping). These are not frightening to farmers, but rather familiar elements they feel comfortable with. Farmers feel secure because they know how these work; they use them every day; they have a sense of control around them. The intersection between past and future tense is used effectively as a transition mechanism in the stories in the video. To introduce the future, the present is shown as controllable, as a medium step that has already been taken successfully. Besides, today’s present was yesterday’s future, so in this interplay of tenses and

historical positioning, the stories are told and retold in ways that go back and forth communicating the message that stability and change can co-exist.

The sensegiving stories told in the video presume a narrator, an entity that does not have a body or a face (the video has no author or name behind it). It is the organization who is talking to its members. It is the voice of the institution that speaks and presents the scary future in an understandable way and soothes with a protective tone “together we can do it”. The way the story is told, the paternalistic figure of Don Pablo, and the values he promoted are recalled and redefined to suit current changing times.

2) Self-organized (Few) versus Organizational Form (Many)

Another duality found is the tension between being a self-managed, small group versus becoming an institution with an expanding membership. In a select group of close friends with whom everything is easily shared, trust is more likely to exist. However, this contrasts with the messianic vocation of the CREA Movement of “open doors”²¹, expanding its frontiers to many more.

In its origins, the CREA groups were mostly friends who shared socioeconomic conditions, culture, values, and geographical locale. Mainly based in the Pampas, the farmers’ main concerns for coming together were related to productive issues (the erosion of the soil) and to the isolated social condition in which they lived. These two causes came together as a reason to join forces back in 1959. Elderly farmers remember their life before they joined their CREA group:

²¹ The “open doors”, which in a farming context would be “open gates” (*tranqueras abiertas* in Spanish) is a common expression within the CREA Movement indicating a policy of openness to others in terms of sharing information through seminars, workshops, and field days.

“CREA for us meant a lot of exchange with others...It opened us to friends and to a network of people. We were very lonely, because of the distances, because of the roads, because of the type of cars in those days...”

As word of CREA got out, farmers from different geographical areas, which produced different crops, beef or milk, became involved. Growth was explosive at this stage, with some resistance on part of the founder to the relentlessly expanding number of groups. Size brought complexity and the need for organization. Soon productive and geographical differences started creating communication problems: “*it was like a dialogue of deaf people, we spoke different languages*”. The AACREA institutional structure followed the growth in the number of groups; regional Zones were created. The “zonification” addressed two main problems, one was to concentrate people with similar production and climatic conditions, and the other one was to establish a better communication system between the CREA groups and AACREA. A small cadre of officers followed this development, with a volunteer officer per Zone (called a vocal), later supported by a paid coordinator who mainly works with the assessors. A National Congress in 1970 was the milestone when AACREA introduced the geographical division of its groups. Zones were named according to their geographical location, the “West Zone”, “Southeast”, “Central Zone”, etc. Today there are eighteen regions. There are different levels of autonomy and institutionalization of Zones. Some publish their own internal magazine, hold their own Zonal congresses biannually, and such. More CREA groups pushed and fuelled the development of AACREA as an institution. However, what may seem today like a natural development into an organization envisioned by its founder only took place with considerable internal resistance and struggles. The following quote of a farmer who was a former AACREA president explains why and how the institution came to exist:

“First there was one group, and then.....when there were 20, or 30 they realized that the richness of the exchange among those 12 people had to be passed on between the groups. So it grew organically. ...Then they said ‘experiences have to be exchanged in a more structured way’...AACREA was created... and then the regions were born. And so as a fruit of growth, the structure was being formed, but the cell of all that is each group.”

The final sentence provides a hint on the underlying duality that is present between the CREA farmers and AACREA. Closely related to the representative nature of a democratic system, the interviewee insists that the essence of the Movement is the group; the “cell” of the organism is the CREA group. Further:

“The movement was developed through the years, but what we mustn’t forget is that the essence of it is the CREA group. The CREA groups are 12, 10, or 9 members, each with their monthly meeting, their assessor, and each group is a cell, and each cell is autonomous.”

What can be read as the formal history of the institution with accurate dates and facts is not representative of the deep problems that AACREA suffered to convince some of the farmers of the importance of its existence:

“The members of the CREA groups did not understand why this was necessary, they said it would only generate bureaucracy; it was something very very resisted. It was terrible, terrible. They said but why? Why create an association if we are fine the way we are? This took years, years to overcome... ” (Former General Coordinator of AACREA).

A very important distinction is made in this story: most people strongly identify with their CREA group, but often tend to resist AACREA, the organization. This resistance to bureaucracy and formality resonates with farmers’ identity, as self-organizers and resisters of paperwork. They do not feel comfortable around structures and formalities.

An institutional representative describes his experience from within:

“There were CREA members that used to travel very little. The man that imagined AACREA²² used to live in a selected neighborhood in Buenos Aires, and he traveled to the farm. But the farmer who lived in the farm, very very far away said: ‘AACREA for what?’ So it was very difficult...we were desperate by the miscommunication that existed between the CREA groups and AACREA”.

While AACREA has grown, it is not monolithic. The vast majority of Argentine farmers are not members. A former president explains how the nature of CREA limits massive expansion:

²² AACREA is located in an office in downtown, in the middle of the Capital Federal District, Buenos Aires.

“It is not easy to be a CREA member; that is the question. It is not easy...So, it is a wonderful idea, but one asks, so why it doesn't get spread massively? It doesn't spread massively because of the level of commitment you have to assume, the hard work, the transparency, the dedication...”

3) Group Composition: Different versus Alike

Related to the previous duality, a greater number of members bring to the organization the richness of differences and heightens the salience of identity issues, which are central to sensemaking (Ashforth et al. 2008; Weick et al. 2005). CREA started among a selected group of friends which were all wealthy countrymen of their time. Growth in numbers does not come without conflict, as smaller (different to the initial founding group) farmers became interested in participating in CREA groups.

Tension is generated by the diverse origins of people. Some farmers felt threatened by the incursion in CREA groups of what was politically correctly called a “different” type of farmer. The growth of the CREA groups among different production systems, different geographic locales, varied climatic conditions and diverse size farms caused tension, which was not existent in the beginning when members were more homogeneous in production and farm size.

Class, in particular, presented a challenge to the expansion of the movement. The 60`s and 70`s were years of difficult political transitions for Argentina including outbreaks of class-related violence and military fighting of guerrillas, which had an impact on the agricultural sector as the following quote reflects:

“We were in a very difficult national context in those years, and there were tensions within the CREA Movement, with people of a more humanist orientation. But everything went settling down in time, and eventually, AACREA was opened to a new type of farmer”. (Former General Coordinator of AACREA)

The tension of opening up the entry of the association to a different, smaller farmer is described. It was with an important degree of internal conflict and power struggles that the institution survived. Once these years of conflict were overcome, AACREA learned how to embrace heterogeneity among its members. The phrase “*things went settling down as time passed by*” reflects a sensegiving scheme, looking at the conflict retrospectively. In the choice of plot and words many of the difficulties suffered become erased. The “new” type of farmer concept is explained. It is called “diverse” when compared with the initial profile of the CREA farmer:

“Until the year 1966 CREA was formed by large farm owners (estancieros). We started to work with small farmers who were wary of the farmers with large ranches. It was an extraordinary experience, because at the table of AACREA, farmers with the fat fingers started to be seated. Farmers who had the white forehead and fat, big fingers²³...It was a hard transition for AACREA ...but we overcame it, we became the only movement in Argentina where large scale farmers, small businessmen and small farmers sat down at the same table. It was unique”.

Another important factor used to manage and successfully coexist with this duality was the introduction of consensus as a decision-making strategy:

“How to reach consensus in a decision is not easy. I always say that decisions have to fall by their own weight, because it is not easy for a group of people to agree on everything...The decision process becomes slower, but is very important to reach such agreement.” (Former AACREA President, CREA member).

The institution has developed this process of consensus, incorporating it as part of its culture. Consensus has become essential in the CREA working methodology. It is the preferred way of making decisions, rather than voting. This major importance given to consensus guarantees a common agreement on some fronts. Consensus is stressed in the video too, mentioned as a *philosophy*, as an *attitude* that has to *emerge from the differences*, and finally, is given the utmost significance: *consensus legitimates knowledge*. Knowledge for CREA exists and is validated through the consensus reached amongst its members. The importance given to consensus as a philosophy is a narrative strategy to counterbalance the tension created by the heterogeneity given by different people. If momentarily everybody agrees at least on one decision at a particular time,

²³ The white forehead is a signal among countrymen of people who work in the sun. The use of hats for protection causes their faces to be really dark from sunburn, whilst their foreheads remain of a contrasting white colour. Fat, big fingers are also a symptom of manual, hard labour.

homogeneity is achieved on that decision and difference is -at least momentarily- conquered. If consensus continues to be promoted as its distinctive characteristic, the organization is in a way guaranteeing its own continuity, its own survival. There is room for difference, as long as consensus exists among those who are different.

Heterogeneity is the frame. That which had been perceived as a menace in past times of AACREA has been redefined in the video as a *source of richness*, as a *frame for action*. The stories that stress the message, “we accept the different”, “it is ok to be different”; reflect an ongoing tension around difference. Although the content of such difference remains unspoken, AACREA is no longer presenting itself as homogeneous (although its barriers of entry may still seem high to outsiders); it claims to value difference. The duality described implies that acceptance of difference is not yet a taken-for-granted.

4) Technology: Man versus Machine

Yet another tension is the duality of man versus machine. The premise behind this duality is that technology can get out of control and be dehumanizing. There is a fear of technology taking over, instead of the other way around. This duality is related to the tension around time and incursion into the future. The way humanity is presented in the stories is through the defense of values, of rescuing that which is characteristically human: will feelings, sentiments, and thoughts. These elements are contrasted with the coldness of machinery.

The video refers first to those technologies which have helped farmers improve their everyday life. Farmers have been receptive to technologies that improve their communications. A recount of their technological history is introduced: *knowledge was shared with the spoken word; handmade signs were used to call a meeting*. That was as close as they were. Technology has changed the communication habits of farmers improving greatly their quality of life, as it helped overcome their isolation. The testimony of the wife of one of the interviewees (who was present during the interview) describes difficulties they endured in the past:

There was a train that left 1 am in the morning, and for us, 40 kms in dirt roads at night, it was impossible to travel... We used to come to Buenos Aires twice a year, till I moved there permanently. Enrique [her husband] did not have telephone in the farm, it did not exist yet. He had to go to Daireaux to speak, and he had to wait for hours. So, instead, we would ask the waiter of the train... to take our letters back and forth from the farm to the city (Wife of one of CREA founders).

This openness to communication technologies does not mean that farmers quickly embrace any innovation. The duality of man versus machine is caused mainly by a tension endured between farmers and their assessors, the rural professional technicians who were many times guides in the path through technology adoption:

“We tried to make progress without creating any financial disturbance to the farmer, because normally the producer has always been short of money...So the technician had to have in mind what we called empathy with the farmer. The assessors...with great initiative, they tried to get the information out of the farmers, which was not an easy thing to do...” (Former CREA Assessor).

The story is told as if assessors shepherd farmers into the adoption of new and convenient technologies for their production. Nevertheless the distinction between farmer²⁴/assessor existed subtly and surely affected the groups' interactions.

Technology is also introduced in the “way” the narration is presented, by using a chat conversation or a live search in Wikipedia. Further, AACREA is redefined with novel, “futuristic” terms; we are an *agriculture Wikipedia*. The interpretation behinds this is “we found a novel term to define what we have been doing for decades”. *Open doors*, almost an axiom of the CREA philosophy, can be almost considered synonyms with “open source” knowledge development. The video bluntly reaches the duality's climax by expressing an important “BUT”: *But people are ANALOG*. There is a difference from the digital virtual world. People are concrete, flesh and blood and feelings, and cannot be reduced to numbers or bits. There is a close up in the video to the face of a CREA member. Each individual matters. Technology should not be about erasing individuality. The balancing negotiation between technology and humanity, between

²⁴ CREA members were at first farm owners, or family related to owners. In time, administrators or managers who had full trust from the owner where allowed to participate in CREA meetings.

progress and past, works effectively as a rhythmic tune in the general narration of the video.

The story on technology is told carefully and shows that not all farmers are on the same level of innovation adoption: *Can we still share knowledge with those that do not have cell phones? Yes we can!* In flies an animated cartoon of Don Pablo, agreeing, promoting the inclusion of the more marginal member. The institution presents itself as prepared to reach out to everyone, including those who have not adopted technology. Technology and the future in the narration of the video follow a rhythm, negotiating constantly with reassuring messages that go back to the history and values of AACREA. KM is introduced cautiously in the beginning and explained through a series of associations with things that members feel more comfortable with.

5) Knowledge: Personal Interest (Loss) versus Collective Learning (Gain)

The knowledge created within CREA groups, by CREA farmers is of a collective nature. The institutional video on KM tells stories that run through the dualities, juggling tensions that need to be sorted for knowledge to be created. We discovered that the knowledge AACREA handles has very precise characteristics which are closely watched over and need to be made available for all members.

“My source of technical actualization and training was the CREA group. ...So there it is the importance of the exchange of information, of giving and receiving, of being transparent, of reaching consensus, of friendship,... of doing things right. So there you start generating a connection between members that if an adversity comes we won't break apart, we face adversities together.” (CREA member, Former AACREA President).

The excerpt starts with technical information and ends talking about a group's commitment to stick together facing adversities (which they have, like flooding of farms or long droughts, among others).

Several definitions and metaphors of knowledge are provided in the video clip: *Shared knowledge* is equal to *shared words*; *knowledge means interpreted information*. And then, a step further, the notion of *Knowledge Management* is introduced as *standardized information*. “We already do that”, “we are used to having that”, the message is sent. A past known technique is presented alongside the KM concept.

Knowledge Management is then defined as the creation of a *common language*; later as an *attitude* and finally it is redefined with three words: *as a decision* (an internal disposition), *as behaviour* (an external conduct), and *as commitment* (an external

conduct related to others). The construct of what management of CREA knowledge means is presented in a progressive definition towards commitment with the collective group. The tension this duality represents relates to the sharing that is needed in order for learning to occur among more people. If anybody keeps their own information, they are in a way compromising the benefit for all. They are also losing the benefit of the collective, virtuous cycle that CREA groups have generated.

The key focal point is placed on the sharing of knowledge. The knowledge CREA talks about “has” to be shared. It then fuels, as portrayed in the typing in real time on-screen, *shared knowledge fuels the development of nets*, which can only exist if there is *trust*; if we trust each other we have *support* for everybody. Finally, the video closes with the CREA bumper stickers farmers’ use, and their motto “sharing knowledge”. The storyline behind this concluding image is: “This is what defines us”; “this is what we do”; “this is what we are good at”. The storyline is clear, the institution is saying to its members: “this new database comes only to reaffirm who we are, because it will help us at what we do best, and what we have been doing before technology caught up with us”.

The following quote sums up the key issue for CREA assessors, it is not about technology, but rather the process behind the creation of knowledge:

“I think that CREA managed to create a space which was favorable for the rural professional to have contact with the farmer, because the farmer was afraid that the technician would come and complicate his life. In those days, technology was related to uncomfortableness, that’s why I have insisted so much in the distinction of technology of inputs and technology of processes. The technology of process is the technology of the CREA work...the technology of knowing, of knowing how to do things. For example, herd management, pasture management, feeding ...”
(Former CREA Assessor).

In explaining what KM is, the narratives in the video identify why knowledge and learning is CREA’s core element. However, the values and the definitions provided behind their notion of knowledge are quite unusual. Knowledge is legitimated by consensus, a radically practice-based notion.

DISCUSSION

In this paper, we focus on the enduring and central problem of organizational change – the tension between stability and adaptation. Our analysis of organizational and individual artefacts suggest that there is some credence to the Weick et al.’s (2005)

claim that sensemaking analysis may provide a micro-mechanism for linking individuals and institutionalization and the need for institutional change. We are tempted to speculate that those instances where sensegiving and sensemaking converge are moments or occasions for stability. Sensegivers probably have more leverage in directing change via the ways they deal with time, identity issues and knowledge flows because these can provide the story elements from which others can make sense of who they are, or what is happening in their worlds. Some will have more access to sensegiving positions and resources providing the opportunities to develop a hegemonic discourse. The interaction of sensegiving and sensemaking may provide one lens for analysing the micro-processes of power dynamics.

We acknowledge that the site of our study is atypical from the normal sites of organization study in, at least, two important respects. First, we study an organization of farmers, a group long considered to be locked into a pre-modern, pre organized mode of production (Stinchcombe 1965). Second, we study an organization in Argentina, an emerging developing country with a volatile economic and political development, which places this organization in a quite unstable and changing context, showing its remarkable resilience. However, the main issues we have explored may be common to other organizations as they cope with finding instances of stability and assurance for their members amidst ever present change.

Time has played an important role in our analysis of stories and change. Time is central to narrative (Rhodes & Brown, 2005a, p. 177). AACREA's strategy of introducing a new technology to its members has been fruitful in capturing stories that go back to its foundational roots. History and the past have an important function in the life of the organization; it is where CREA farmers find answers to who they are and what defines and constitutes them. The interplay between past and future, change and stability, showed a particular relationship of the organization with its earlier period, actively and consciously enabling it as a resource to validate change and progress. The organization managed to adapt to the environment (absorbing technology, changing its leadership structure, growing in number) while maintaining and feeding a strong cultural identity. The past is a resource to support innovation rather than a barrier to change and a source of resistance. This will not be true for all organizations. For other organizations the past may be a resource for resistance to change, or the past may be forgotten, or the past may be irrelevant. A contribution which may be generalisable to other cases is a detailed

attention to how time is constructed – which times are considered, which times are forgotten or silenced, which times are significant or insignificant.

CONCLUSION

Not all stories are equal and not all meanings are equivalent. What story should we tell? Will any story do? We have attempted to constitute ourselves as responsible authors in relationship to our Others in writing this journal article. We note one aspect of our experience that may help to develop the notion of responsible writing in the journal article genre. We found that in the literature review section we focussed on our ethical responsibilities to the authors we relied on in our theory development. In the methods section we were more aware of our readers and their expectations regarding transparency and rigour. In the report of our findings the use of verbatim quotes focussed us on our relationships with the informants.

We used a case study approach “to explore a significant phenomenon under rare circumstances” (Eisenhardt and Graebner 2007). The variety of sources, the longitudinal nature of data collection and the depth of exposure provided multiple opportunities for triangulation, which prevented early closure and has informed our interpretations. We have provided an empirical application using the sensemaking approach to explore stories as a mechanism of organizational change. We emphasise how change can be consistent with the emergence of stability and ongoing connectedness in action, the maintenance of texture (Gherardi 2006).

Our primary contribution in this article is an exercise in theory application to a compelling set of empirical resources. Our theoretical development revolves around the implications for organizational becoming of sensegiving and sensemaking in narrative approaches to organizational change. Our analysis reveals the utility of the theoretical frame and the potential for understanding unique organizational situations in their own right, as well as suggesting sensitivity to key dualities that may assist understanding in other organizations. In particular, the way that time is deployed appears to be very powerful in the Foucauldian productive sense of the term. Finally, we have attempted to extend the work on ethically responsible writing in organizational scholarship by experimenting with the visibility of authorial voice in a mode that we hope more thoroughly contextualizes the nature of our research, while still honouring the main features of the journal article genre and its writing tradition.

TABLE 1
SOURCES OF DATA

Type	Description	Date	Authorship
Audio visual Material	Video on Knowledge Management in AACREA. Duration: 4:43”	2007	Knowledge Management division in AACREA
Audio and Written Material	4 in-depth interviews with CREA members who were close to AACREA’s founder	2006	First author (collected as part of a larger project)
Archival Material	21 Interview transcripts	2001	Staff member of AACREA

TABLE 2
DUALITIES PRESENT IN THE STORIES

	STABILITY	CHANGE
Time wise	Past	Future
Organizational wise	self-organized (few)	formally organized (many)
Group Composition	homogeneous	Heterogeneous
Technology wise	Man	Machine
Knowledge wise	personal interest (loss)	collective learning (gain)

REFERENCES

- AACREA. 2001. 40 Años en movimiento. AACREA., Buenos Aires.
- Alvesson, M. 2003. Beyond neopositivists, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy Of Management Review* **28**(1) 13-33.
- Ashforth, B.E., S.H. Harrison, K.G. Corley. 2008. Identification in Organizations: An Examination of Four Fundamental Questions. *Journal of Management* **34**(3) 325-374.
- Berger, J. 1978. Towards understanding peasant experience *Race & Class*, 345-359.

- Brown, A.D. 2004. Authoritative Sensemaking in a Public Inquiry Report. *Organization Studies* (01708406) **25**(1) 95-112.
- Brown, A.D. 2006. A narrative approach to collective identities. *Journal of Management Studies* **43**(4) 731-753.
- Buchanan, D., P. Dawson. 2007. Discourse and audience: Organizational change as multi-story process. *Journal of Management Studies* **44**(5) 669-686.
- Dunford, R., D. Jones. 2000. Narrative in strategic change. *Human Relations* **53**(9) 1207-1226.
- Eisenhardt, K.M., M.E. Graebner. 2007. Theory building from cases: Opportunities and challenges. *Academy of Management Journal* **50**(1) 25.
- Feldman, M.S. 2000. Organizational routines as a source of continuous change. *Organ Sci.* **11**(6) 611-629.
- Gabriel, Y. 1991. Turning facts into stories and stories into facts: A hermeneutic exploration of organizational folklore. *Human Relations* **44**(8) 857.
- Gherardi, S. 2006. Organizational knowledge: the texture of workplace learning. Blackwell Pub., Malden, MA.
- Gherardi, S., D. Nicolini, A. Strati. 2007. The Passion for knowing. *Organization* **14**(3) 315.
- Gherardi, S., B. Poggio. 2007. *Gendertelling in organisations: Narratives from male-dominated environments*. Copenhagen Business School Press, Denmark
- Gioia, D.A., K. Chittipeddi. 1991. Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal* **12**(6) 433.
- Maitlis, S. 2005. The social processes of organizational sensemaking. *Academy of Management Journal* **48**(1) 21.
- Martin, J., M.S. Feldman, M.J. Hatch, S.B. Sitkin. 1983. The Uniqueness Paradox in Organizational Stories. *Administrative Science Quarterly* **28**(3) 438.
- Prichard, C., D. Jones, R.E. Stablein. 2004. Doing research on organizational discourse: the importance of researcher context. D. Grant, C. Hardy, C. Osrick, L. Putnam, eds. *The Sage handbook of organizational discourse* Sage Publications, London, 213-236.
- Rhodes, C., A.D. Brown. 2005a. Narrative, organizations and research. *Int. J. Manag. Rev.* **7**(3) 167-188.

- Rhodes, C., A.D. Brown. 2005b. Writing responsibly: Narrative fiction and organization studies. *Organization* **12**(4) 467-491.
- Sillince, J.A.A., R. Suddaby. 2008. Organizational rhetoric - Bridging management and communication scholarship. *Management Communication Quarterly* **22**(1) 5-12.
- Stablein, R.E., P.J. Frost, eds. 2004. *Renewing research practice* Sage Publications, Thousand Oaks.
- Stinchcombe, A. 1965. Structure and organizations. J.G. March, ed. *Handbook of organizations*. Rand McNally, Chicago, xvi, 1247 p. 1225 cm.
- Tsoukas, H., R. Chia. 2002. On organizational becoming: Rethinking organizational change. *Organ Sci.* **13**(5) 567-582.
- Weick, K.E. 1995. *Sensemaking in organizations* Stanford Business Books, Stanford, Calif.
- Weick, K.E., K.M. Sutcliffe, D. Obstfeld. 2005. Organizing and the process of sensemaking. *Organ Sci.* **16**(4) 409-421.
- Wurman, R.S. 2001. *Information anxiety 2* Que, Indianapolis.

BIBLIOGRAPHY

- AACREA (1957) Acta de fundación y estatuto de CREA Henderson-Daireaux. Buenos Aires, Argentina: Author.
- AACREA (1982) La zona. Buenos Aires: Author.
- AACREA (1986, September, 18th) Buscando una salida para el sector agropecuario. *El Cronista Comercial*, p. 5.
- AACREA (1995a). *Informe Pereda*. Buenos Aires: Author.
- AACREA (1995b). *Pablo Hary: Pensamiento y obra*. Buenos Aires: Author.
- AACREA. (2001). *40 Años en movimiento*. Buenos Aires: Author.
- AACREA. (2007a). *Anuario estadístico 05/06*. Buenos Aires: Author.
- AACREA (2007b). *Gestión del conocimiento en AACREA. Video 1*. [Video file]. Argentina: Author. Retrieved from: <http://www.youtube.com/watch?v=JS6kFMcjjaE&feature=fvst>
- AACREA. (2008). Memoria institucional AACREA 2007/2008. Buenos Aires, Argentina: Author.
- AACREA. (2009). *Presentación Institucional*. Buenos Aires, Argentina: Author.
- AACREA. (2010a). Todo empieza por el grupo. Retrieved from: <http://www.crea.org.ar/index.php/todo-empieza-por-el-grupo>.
- AACREA. (2010). *La asociación*. Retrieved from: <http://www.crea.org.ar/index.php/la-asociacion>.
- AACREA (2010b). *Revista CREA*. [Brochure]. Argentina: Author.
- Adobor, H. (2005). Trust as sensemaking: The microdynamics of trust in interfirm alliances. *Journal of Business Research*, 58(3), 330-337.
- Alvesson, M. (1993). Organizations as rhetoric: Knowledge-intensive firms and the struggle with ambiguity. *Journal of Management Studies*, 30(6), 997-1016.
- Alvesson, M. (2003). Beyond neopositivists, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy of Management Review*, 28(1), 13-33.
- Alvesson, M., & Karreman, D. (2001). Odd couple: Making sense of the curious concept of knowledge management. *Journal of Management Studies*, 38(7), 995-1018.
- Alvesson, M., & Skoldberg, K. (2000). *Reflexive methodology: New vistas for qualitative research*. London: SAGE.
- Anderson, M. (2006). How can we know what we think until we see what we said? A citation and citation context analysis of Karl Weick's 'The Social Psychology of Organizing'. *Organization Studies*, 27(X), 1675-1692.
- Argote, L., McEvily, B., & Reagans, R. (2003). Introduction to the special issue on managing knowledge in organizations: Creating, retaining, and transferring knowledge.

- Management Science*, 49(4), v-viii.
- Armenakis, A., Brown, S., & Mehta, A. (2010). The assessment and transformation of an organizational culture. *Paper presented at the Academy of Management Conference, Montreal.*
- Bala, V., & Goyal, S. (1998). Learning from neighbours. *The Review of Economic Studies*, 65(3), 595-621.
- Basbøll, T. (2010). Softly constrained imagination: Plagiarism and misprision in the theory of organizational sensemaking. *Culture and Organization*, 16(2), 163-178.
- Berger, J. (1978). Towards understanding peasant experience. *Race & Class*, XIX (4), 345-359.
- Bitektine, A. (2008). Prospective case study design: Qualitative method for *deductive* theory testing. *Organizational Research Methods*, 11(1), 160-180.
- Blackler, F. (1995). Knowledge, knowledge work and organizations: An overview and interpretation. *Organization Studies*, 16(6), 1021-1046.
- Boal, K.B., & Schultz, P.L. (2007). Storytelling, time and evolution: The role of strategic leadership in complex adaptive systems. *The Leadership Quarterly*, 18(4), 411-428.
- Bogenrieder, I., & Nootboom, B. (2004). Learning groups: What types are there? A theoretical analysis and an empirical study in a consultancy firm. *Organization Studies*, 25(2), 287- 313.
- Boje, D. M. (1995). Stories of the storytelling organization: A postmodern analysis of Disney as "Tamara-Land". *Academy of Management Journal*, 38(4), 997-1035.
- Bouthillier, F. and Shearer, K. (2002). Understanding knowledge management and information management: The need for an empirical perspective. *Information Research*, 8(1), [Available at <http://InformationR.net/ir/8-1/paper141.html>]
- Brown, A. D. (2004). Authoritative sensemaking in a public inquiry report. *Organization Studies*, 25(1), 95-112.
- Brown, A. D. (2006). A narrative approach to collective identities. *Journal of Management Studies*, 43(4), 731-753.
- Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovating. *Organization Science*, 2(1), 40-57.
- Brown, J. S., & Duguid, P. (2000). *The social life of information*. Boston: Harvard Business School; McGraw-Hill.
- Buchanan, D., & Dawson, P. (2007). Discourse and audience: Organizational change as multi-story process. *Journal of Management Studies*, 44(5), 669-686.
- Bultena, G. L., & Hoiberg, E. O. (1983). Factors affecting farmers' adoption of conservation tillage. *Journal of Soil and Water Conservation*, 38(3), 281-284.

- Burgess, J., Clark, J., & Harrison, C.M. (2000). Knowledge in action: Actor network analysis of a wetland agri-environment scheme. *Ecological Economics*, 35(1), 119-132.
- Byerlee, D., & Hesse de Polanco, E. (1986). Farmer's stepwise adoption of technological packages: Evidence from the Mexican Altiplano. *Journal of Agricultural Economics*, 68(3), 519-527.
- Censo Nacional Agropecuario. (2002). INDEC Instituto Nacional de Estadísticas y Censos.
- Chambers, Robert (1994a). Participatory Rural Appraisal (PRA): Analysis of experience. *World Development*, (22)9, 1253-1268.
- Chambers, Robert (1994b). Participatory Rural Appraisal (PRA): Challenges, potentials and paradigm. *World Development*, (22)10, 1437-1454.
- Chaparro, F. (2000). La investigación agrícola internacional en un mundo globalizado, *II Reunión de Foragro Agricultura con Conocimiento*. Mexico D.F.: Global Forum of Agricultural Research (FGIA/GFAR).
- Chaskielberg, H. (2010). *Aprendizaje en redes de práctica: Tres casos de grupos CREA*. Unpublished thesis. Department of Management. Universidad de San Andres. Buenos Aires.
- Choo, C. W. (1998). *The knowing organization*. New York: Oxford University Press.
- Cohen, A. (2006). Libraries, knowledge management and communities of practice. *Information Outlook*, 10(1), 34-37.
- Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128-152.
- Crucini, C. (2002). Knowledge management at the country level: A large consulting firm in Italy. In M. Kipping & L. Engwall (Eds.), *Management consulting: Emergence and dynamics of a knowledge industry* (pp. 109-128). Oxford: Oxford University Press.
- Culver, D., & Seecharan, R. (1986). Factors that influence the adoption of soil conservation technique. *Canadian Farm Economics*, 20(2), 9-13.
- Darke, P., Shanks, G., & Broadbent, M. (1998). Successfully completing case study research: Combining rigour, relevance and pragmatism. *Information Systems Journal*, 8(4), 273-289.
- de Bary, E. (2009). *Un modelo en la gestión del conocimiento*. Unpublished thesis. Department of Management. Universidad de San Andres, Buenos Aires.
- Donaldson, A., Lank, E., & Maher, J. (2005). Making the invisible visible: How a voluntary organization is learning from its work with groups and communities. *Journal of Change Management*, 5(2), 191-206.
- Dougill, A.J., Fraser, E.D.G., Holden, J., Hubacek, K., Prell, C., Reed, M.S., Stagl, S., & Stringer, L.C. (2006) Learning from doing participatory rural research: Lessons from the Peak District National Park. *Journal of*

- Agricultural Economics*, 57(2), 259–275.
- Drucker, P. F. (1993). *Post-capitalist society* (1st Ed.). New York, NY: HarperBusiness.
- Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532-550.
- Eisenhardt, K. M. (2000). Paradox, spirals, ambivalence: The new language of change and pluralism. *Academy of Management Review*, 25(4), 703-705.
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25-32.
- Engel, P.G.H.(1990). Knowledge management in agriculture: Building upon diversity. *Knowledge in Society*, 3(3), 28-35.
- Ervin, C. A., & Ervin, D. E. (1982). Factors affecting the use of soil conservation practices: Hypotheses, evidence, and policy implications. *Land Economics*, 58(3), 277-292.
- F.A.C.R.E.A. (1963). *¿Qué es un C.R.E.A.?* Unpublished manuscript, Buenos Aires: Author.
- Feder, G., & Slade, R. (1984). The acquisition of information and the adoption of new technology. *American Journal of Agricultural Economics*, 66, 312-320.
- Fukuyama, F. (1995). Trust: The social virtues and the creation of prosperity. New York: Free Press.
- Gabriel, Y. (1991). Turning facts into stories and stories into facts: A hermeneutic exploration of organizational folklore. *Human Relations*, 44(8), 857-875.
- Gherardi, S. (2000). Practice-based theorizing on learning and knowing in organizations. *Organization*, 7(2), 211-223.
- Gherardi, S. (2001). From organizational learning to practice-based knowing. *Human Relations*, 54(1), 131-139.
- Gherardi, S. (2006). Organizational knowledge: The texture of workplace learning. Malden, MA: Blackwell Pub.
- Gherardi S. (2009). Practice? It's a matter of taste! *Management Learning*, 40(5), 535-550.
- Gherardi S. (2010). Telemedicine: A practice-based approach to technology. *Human Relations*, 63(4), 501-524.
- Gherardi, S., & Nicolini, D. (2000). To transfer is to transform: The circulation of safety knowledge. *Organization*, 7(2), 329-348.
- Gherardi, S., Nicolini, D., & Strati, A. (2007). The passion for knowing. *Organization*, 14(3), 315-329.
- Gherardi, S., & Poggio, B. (2007). *Gendertelling in organisations: Narratives from male-dominated environments*. Denmark: Copenhagen Business School Press.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P., & Trow, M. (1994). *The new production of knowledge: The dynamics of science and*

- research in contemporary societies*. London: SAGE Publications.
- Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12(6), 433-448.
- Goffman, E. (1959). *The presentation of self in everyday life*. Garden City, N.Y.: Doubleday.
- Golden-Biddle, K., & Locke, K. (2007) *Composing Qualitative Research*. London: SAGE Publications. 2nd edition.
- Granovetter, M.S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360-1380.
- Gourlay, S. (2004). On organizational learning and knowledge management. *British Journal of Management*, 15(S1), S96-S99.
- Hagerstrand, T. (1967). *Innovation diffusion as a spatial process*. Chicago: University of Chicago Press.
- Harmer, B.M. (2009) Teaching in a contextual vacuum: Lack of prior workplace knowledge as a barrier to sensemaking in the learning and teaching business courses. *Innovations in Education & Teaching International*, 46(1), 41-50
- Huff, A. S. (1999). *Writing for scholarly publication*. Thousand Oaks; London: Sage.
- Ibarguren, M. (2006). Análisis de la regionalización propuesta por AACREA y desarrollo de criterios que atiendan las necesidades actuales de sus grupos. Unpublished thesis. Universidad de Buenos Aires, Buenos Aires.
- Ingram, J. (2008). Agronomist–farmer knowledge encounters: An analysis of knowledge exchange in the context of best management practices in England. *Agriculture and Human Values*, 25(3), 405-418.
- Ison, R., & Russell, D. (2000). *Agricultural extension and rural development*. Cambridge: Cambridge University Press.
- Jiggins, J. (2008). Comment: We must bridge the divide between scientists and poor farmers. *The New Scientist*, 198(2650), 16-17.
- Journeaux, P. (1998). The evolution of agricultural extension services in New Zealand. *Primary Industry Management*, 1(2), 4-10.
- Knorr-Cetina, K. (1999). *Epistemic cultures: How the sciences make knowledge*. Cambridge, Ma: Harvard University Press.
- Koohang, A., Plessis, J. D., & Britz, J. (2006). Learning objects in learning organisations: A knowledge management perspective. *International Journal of Management & Decision Making*, 7(1), 58-70.
- Kuhn, T., & Jackson, M. H. (2008). Accomplishing knowledge: A framework for investigating knowing in organizations. *Management Communication Quarterly*, 21(4), 454-485.
- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.
- Leana, C. R., & Barry, B. (2000). Stability and change as simultaneous experiences in organizational life. *Academy of Management Review*, 25(4), 753-759.

- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, Calif.: Sage Publications.
- Lorimer, H. (2003). Telling small stories: Spaces of knowledge and the practice of geography. *Transactions of the Institute of British Geographers*, 28(2), 197-217.
- Los CREA, 25 años después. (1985, 3rd March). *Diario La Nación*, p. 7.
- Luscher, L. S., & Lewis, M. W. (2008). Organizational change and managerial sensemaking: Working through paradox. *Academy of Management Journal*, 51(2), 221-240.
- MacLean, J., Penno, J., & Howse, S. (1997). Current information and technology priorities of dairy farmers - A challenge for agricultural researchers. *Paper presented at the New Zealand Grassland Association Conference*.
- Maitlis, S. (2005). The social processes of organizational sensemaking. *Academy of Management Journal*, 48(1), 21-49.
- Maitlis, S., & Sonenshein, S. (2010). Sensemaking in crisis and change: Inspiration and insights from Weick (1988). *Journal of Management Studies*, 47(3), 551-580.
- Manchon, R. M., & de Haan, P. (2008). Writing in foreign language contexts: An introduction. *Journal of Second Language Writing*, 17(1), 1-6.
- Manzetti, L. (1992). The evolution of agricultural interest groups in Argentina. *Journal of Latin American Studies*, 24(3), 585-616.
- Marshall, N., & Rollinson, J. (2004). Maybe Bacon had a point: The politics of interpretation in collective sensemaking. *British Journal of Management*, 15(S1), S71-S86.
- Martin, J., Feldman, M. S., Hatch, M. J., & Sitkin, S. B. (1983). The uniqueness paradox in organizational stories. *Administrative Science Quarterly*, 28(3), 438-456.
- Martin, A. and J. Sherrington (1997). Participatory research methods: Implementation, effectiveness and institutional context. *Agricultural Systems*, 55(2), 195-216.
- Martinez Nogueira, R. (1984). Los Consorcios Rurales de Experimentación Agrícola: Evolución e impacto. In P. O. d. I. I. Agropecuaria (Ed.) (Vol. 6): Centro de Investigaciones Sociales sobre el Estado y la Administración.
- Martinez Nogueira, R. (1985). *Las organizaciones corporativas del sector agropecuario*. Buenos Aires: Centro de Investigaciones Sociales sobre el Estado y la Administración.
- Massey, C., Morriss, S., Alpass, F., & Flett, R. (2002). Farmers as technological learners: An investigation in the context of the New Zealand dairy industry. New Zealand: Massey University.
- Mora y Araujo, Nogueira & Asociados. (1996) *Imagen institucional de AACREA. Informe Analítico*. Buenos Aires.
- Morris, A., & Ubici, S. (1996) Range management and production on the fringe: The Caldenal,

- Argentina. *Journal of Rural Studies*, 12(4), 413-425.
- Morris, C., & Evans, M.J. (1999) Research on the geography of agricultural change: Redundant or revitalized? *Area*, 31(4), 349-358.
- Morris, C & Evans, N.J. (2004) Agricultural turns: Retrospect and prospect. *Journal of Rural Studies*, 20(1), 95-111.
- Nahapiet, J., Gratton, L., & Rocha, H. O. (2005). Knowledge and relationships: When cooperation is the norm. *European Management Review*, 2(1), 3-14.
- Newell, S., & Swan, J. (2000). Trust and inter-organizational networking. *Human Relations*, 53(10), 1287-1328.
- Newell, S., Robertson, M., Scarborough, H., & Swan, J. (2002). *Managing knowledge work*. Great Britain: Palgrave.
- Nicolini, D; Gherardi, S., & Yanow, D. (2003). *Knowing in organization. A practice-based approach*. M.E. Sharpe, Inc.
- Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-38.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press.
- Nooteboom, B. (2002). *Trust: Forms, foundations, functions, failures and figures*. Northampton: Edward Elgar Publishers.
- Nowotny, H., Scott, P., & Gibbons, M. (2001). Re-thinking science: Knowledge and the public in an age of uncertainty. Cambridge: Blackwell.
- Oreszczyn, S.; Lane, A., & Carr, S. (2010) The role of networks of practice and webs of influencers on farmers' engagement with and learning about agricultural innovations. *Journal of Rural Studies*, 26(4), 404-417.
- Orr, J. E. (1996). Talking about machines: An ethnography of a modern job. Ithaca, N.Y.: ILR Press.
- Orr, J. E. (2006). Ten Years of Talking About Machines. *Organization Studies*, 27(12), 1805-1820.
- Osterlund, C., & Carlile, P. (2005). Relations in Practice: Sorting through practice theories on knowledge sharing in complex organizations. *Information Society*, 21(2), 91-107.
- Parker, W. J. (1994). Farm management research: Adapting to the twenty-first century. *Paper presented at the National Seminar, Flock House Country Estate*.
- Patriotta, G. (2003). Sensemaking on the Shop Floor: Narratives of Knowledge in Organizations. *Journal of Management Studies*, 40(2), 349-375.
- Pearce, J. L. (2004). What do we know and how do we really know it? *Academy of Management Review*, 29(2), 175-179.
- Peirano-Vejo, M.E., & Stablein, R.S. (2009). Constituting change and stability: Sense making stories in a farming organization. *Organization*, 16(3), 443-462.
- Pettigrew, P. (2004). *Evolución del pensamiento administrativo: Los grupos CREA*. Unpublished

- thesis. Universidad del CEMA, Buenos Aires.
- Porrás Martínez, J. I. (2001). Cambio tecnológico y cambio organizacional. La organización en red. *Polis Revista Académica Universidad Bolivariana*, 1, 1-9.
- Postrel, S. (2002). Islands of shared knowledge: Specialization and mutual understanding in problem-solving teams. *Organization Science*, 13(3), 303-320.
- Rhodes, C., & Brown, A. D. (2005a). Narrative, organizations and research. *International Journal of Management Reviews*, 7(3), 167-188.
- Rhodes, C., & Brown, A. D. (2005b). Writing responsibly: Narrative fiction and organization studies. *Organization*, 12(4), 467-491.
- Riley, M., & Harvey, D. (2007a). Talking geography: On oral history and the practice of geography. *Social & Cultural Geography*, 8(3), 345-351.
- Riley, M., & Harvey, D. (2007b). Oral histories, farm practice and uncovering meaning in the countryside. *Social & Cultural Geography*, 8(3), 391-415.
- Robertson, M., Scarborough, H., & Swan, J. (2003). Knowledge creation in professional service firms: Institutional effects. *Organization Studies*, 24(6), 831-857.
- Rogers, E. M. (1983). *Diffusion of innovations* (3rd ed.). New York: London: Free Press; Collier Macmillan.
- Rubinzal, Diego (2010). *Historia económica Argentina (1880-2009)*. Buenos Aires: Centro Cultural de la Cooperación.
- Ryan, B., & Gross, N. (1943). The diffusion of hybrid seed corn in two Iowa communities. *Rural Sociology*, 8(1), 15-24.
- Schultze, U., & Stabell, C. (2004). Knowing what you don't know? Discourses and contradictions in knowledge management research. *Journal of Management Studies*, 41(4), 549-573.
- Schwandt, D. R. (2005). When managers become philosophers: Integrating learning with sensemaking. *Academy of Management Learning & Education*, 4(2), 176-192.
- Scott, J., & Marshall, G. (2005). *A Dictionary of Sociology*: Oxford University Press.
- Senge, P. M. (1990). *The fifth discipline: The art and practice of the learning organization* (1st ed.). New York: Doubleday/Currency.
- Setten, G. (2005) Farming the heritage: On the production and construction of a personal and practised landscape heritage, *International Journal of Heritage Studies*, 11(1), 67-79.
- Sillince, J. A. A., & Suddaby, R. (2008). Organizational rhetoric: Bridging management and communication scholarship. *Management Communication Quarterly*, 22(1), 5-12.
- Starbuck, W. H. (1992). Learning by knowledge-intensive firms. *Journal of Management Studies*, 29(6), 713-740.
- Starbuck, W. H. (1993). Keeping a butterfly and an elephant in a house of cards: The elements of exceptional success. *Journal of*

- Management Studies*, 30(6), 885-921.
- Starbuck, W. H. (2006). The production of knowledge: The challenge of social science research. Oxford: Oxford University Press.
- Stinchcombe, A. (1965). Structure and organizations. In J. G. March (Ed.), *Handbook of organizations*. (pp.1247-1225). Chicago: Rand McNally.
- Suddaby, R. (2006). From the editors: What grounded theory is not. *Academy of Management Journal*, 49(4), 633-642.
- Styhre, A., Josephson, P.E., & Knauseder, I. (2006). Organization learning in non-writing communities. *Management Learning*, 37(1), 83-100.
- Tagliaventi, M. R., & Mattarelli, E. (2006). The role of networks of practice, value sharing, and operational proximity in knowledge flows between professional groups. *Human Relations*, 59(3), 291-319.
- Tell, F. (2004). What do organizations know? Dynamics of justification contexts in R&D activities. *Organization*, 11(4), 443-471.
- Tsoukas, H., & Chia, R. (2002). On organizational becoming: Rethinking organizational change. *Organization Science*, 13(5), 567-582.
- Tsoukas, H., & Mylonopoulos, N. (2004). Introduction: Knowledge construction and creation in organizations. *British Journal of Management*, 15(S1), S1-S8.
- Un, C. A., & Cuervo-Cazurra, A. (2004). Strategies for knowledge creation in firms. *British Journal of Management*, 15(1), 27-41.
- Van Baalen, P., Bloemhof-Ruwaard, J., & Van Heck, E. (2005). Knowledge sharing in an emerging network of practice: The role of a knowledge portal. *European Management Journal*, 23(3), 300-314.
- Von Krogh, G., & Grand, S. (2000). Justification in knowledge creation: Dominant logic in management discourses. In G. von Krogh, I. Nonaka & T. Nishiguchi (Eds.), *Knowledge creation: A source of value* (pp. 13-35). New York: MacMillan Press, Inc.
- Weick, K. E. (1969). *The social psychology of organizing*. Reading, Mass.: Addison-Wesley Pub. Co.
- Weick, K. E. (1974). Amendments to Organizational Theorizing. *Academy of Management Journal*, 17(3), 487-502.
- Weick, K. E. (1989). Mental models of high reliability systems. *Organization Environment*, 3(2), 127-142.
- Weick, K.E. (1990). The vulnerable system: An analysis of the Tenerife air disaster. *Journal of Management*, 16(3), 571-593.
- Weick, K. E. (1993). The collapse of sensemaking in organizations: The Mann Gulch disaster. *Administrative Science Quarterly*, 38(4), 628-652.
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks: Sage Publications.
- Weick, K. E. (1998). Improvisation as a mindset for organizational analysis. *Organization Science*, 9(5), 543-555.
- Weick, K. E., & Roberts, K.H. (1993). Collective mind in

- organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*, 38(4), 357-381.
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. *Organization Science*, 16(4), 409-422.
- Wenger, E. (2000) Communities of practice and social learning systems. *Organization*, 7(2) 225-246.
- Werr, A. (2002). The internal creation of consulting knowledge: A question of structuring experience. In M. Kipping & L. Engwall (Eds.), *Management consulting: Emergence and dynamics of a knowledge industry* (pp. 92-108). Oxford: Oxford University Press.
- Willock, J., Deary, I. J., McGregor, M. M., Sutherland, A., Edwards-Jones, G., Morgan, O., et al. (1999). Farmers' attitudes, objectives, behaviours, and personality traits: The Edinburgh study of decision making on farms. *Journal of Vocational Behavior*, 54(1), 5-36.
- Woodall, B. R. (2002). Language-switching: Using the first language while writing in a second language. *Journal of Second Language Writing*, 11(1), 7-28.
- Woods, M. (2010). Performing rurality and practising rural geography. *Progress in Human Geography*, 34(6), 835-846.
- Wurman, R. S. (2001). *Information anxiety 2*. Indianapolis: Que.
- Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Los Angeles, Calif.: Sage Publications.
- Zona Oeste CREA (2006, March). Entrevista a Nestor Marangon. *Revista Zona Oeste*, 208, pp.13-21.
- Zona Oeste CREA (2006, May). Entrevista a Pablo Uribelarrea. *Revista Zona Oeste*, 211, pp.15-27.
- Zona Oeste CREA (2007, December). Entrevista a Marcelo Foulon. *Revista Zona Oeste*, 227, pp.17-21.
- Zona Oeste CREA (2008, December). Entrevista a Jorge Lastra. *Revista Zona Oeste*, 233, pp.25-30.

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