THE BRAZILIAN PROGRAM FOR FAMILY FARMING ASSISTANCE AND THE DIFFUSION OF TECHNICAL PATTERNS: AN INSTITUTIONAL APPROACH

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ABSTRACT

This article discusses the diffusion process of technical practices in order to understand how PRONAF-Credit (National Program for Family Farming Assistance) impacted the institutionalization of new technological standards in family farms in the region of Maringá, PR, from 1997 to 2006. We aim to check the institutional assumption that proclaims itself in favor of coercion for institutionalization. Based on a cross-sectional research design with a longitudinal perspective analysis, interviewees were separated into two main groups representing different periods of involvement and types of relationship with the program. These procedures allowed comparing the interpretive schemes of farmers in different situations of dependency with the program. The premise is that dependence, as measured by whether or not the resources are used, implies stronger interpretive schemes in relation to the program and the techniques instructed. Comparison of the data allowed us to observe proximity between interpretive schemes of "quasi-experimental" and "control" groups, which reinforces evidence that there was internalization of the standards rather than just formal adoption. However, the results suggest that coercive diffusion in programs that aim to contribute perennially to their audiences should consider cultural background and relational aspects of people's context of reference. These aspects potentially can influence how coercion is interpreted, as they did in this case.

KEYWORDS: Institutionalization; Technological diffusion; Family farming; Brazilian government assistance program; PRONAF.

1. INTRODUCTION

The modernization of rural areas has been a target of government policies in Brazil since the early twentieth century. This kind of intervention initiated as an attempt to establish the standard of rationality that accompanies the progressive industrialization of the country. However, this process has resulted in questionable results regarding the beneficiaries, promoting the exclusion of thousands of small farmers. Unable to grow and even to keep up with new trends in the agribusiness industry, for many of these farmers there were no choices left but to cluster in large cities, what brings issues intrinsically related to urban structural conditions. Acting as a compensatory policy, Pronaf was developed specifically to target the poorest segment of family farmers. Aiming to raise the living conditions of this segment amid a fierce environment, the adoption of certain practices was established as a requirement for funding access. This fact characterizes, therefore, the transfer as essentially coercive.

This paper discusses the diffusion process of technical standards in order to assess: "How PRONAF impacted the institutionalization of new technological standards among family farms?" The time frame adopted covers the period from 1997 to 2006, consistent with the beginning of the activities from the program in the region and the approval of the law that created the National Policy for Family Farming in May 2006. This fact strengthens the demand of more academic initiatives that aim to evaluate its results and thus enable overcoming distortions that are present to the public of this intervention. We assess, therefore, the importance of analyzing the program from different perspectives, providing complementation and identification of elements that are not always perceptible by conventional approaches.

The empirical contribution of this study resides, therefore, on the assessment of PRONAF as a program for transferring resources, in which the observance of the quality of such transfer is taken in high consideration. In this sense, we emphasize the criterion of internalization in contrast to only the formal adoption of standards. As such, it is a proposal for the instrumental evaluation of public policies in general, where the subjective dimension of analysis stands out and the predominant focus becomes 'how coercion is perceived'. The relevance of this paper, furthermore, is in highlighting aspects that should be considered in diffusion processes, such as the

relational sphere and the modes of power used, episodic or systemic. These are important elements to include in the analysis since they can mitigate the negative effects of coercion and, as a result, bring more stability to the institutionalization of new standards. Moreover, the focus of this study lies on the mechanisms used by agents of dissemination, highlighting the importance of "supply side approaches" that, as noted by Scott (2008, p.146), are more valid in examining the instances of contemporary institutional diffusion.

The article is structured to provide, first, a brief introduction to the changes faced by farmers in relation to their living conditions and, in this sense, point out the empirical relevance of this study. In the second section, the outlines for the approaches providing theoretical and empirical support for the study are presented, starting with the perspective of technology adopted: technology as a structuring process. Following up, the discussion about organizational and institutional change is presented in which, as they are results of change processes, are also incentives for new changes in a continuum inherent to the institutionalization process. Amid this ongoing circle Diffusion is emphasized, stage in which, as explained in Greenwood, Suddaby and Hinings (2002), innovations would change from a phase of moral or practical legitimacy to one of cognitive legitimacy.

In this paper, we sought to engage in dialogue with the work of Tolbert and Zucker (1983), which gives bases to the institutionalist assumption that, even with the removal of the pressures, the results of coercive diffusion would linger, as an effect of the fixing of practices in the actors' cognitive system. In the study by Lawrence, Winn and Jennings (2001), different forms of power are available for agents to employ in transmission processes for the development and maintenance of social institutions. Attention is given to the peculiarities of the transferring mechanisms which are emphasized as determinants of the pace and stability of the institutionalization process. Another prominent issue in this essay is that the targeted actors' agency is assumed as a possibility dependent on the mechanism used by agents.

In turn, Kostova and Roth (2002) consider the actors' agency as intrinsic and detach the analysis of the diffusion of technical standards from any linear design. They propose two dimensions of adoption, implementation and internalization, as possible results. Associated with the conditions of either one, according to the authors, it is essential to think about the relational context of the parties involved in the diffusion process. This factor, varying in the combination of three features – identity, trust and dependence – has an important role in how individuals interpret their compliance to the techniques.

Therefore, in order to empirically verify these issues concerning the dissemination of technological standards in the Brazilian cultural setting of family farmers of the region of Maringá, specific methods were adopted. These are described in the section following the theoretical explanations. Subsequently, the results and some discussions are presented. Finally, the conclusions and suggestions for future research are integrated.

2. TECHNOLOGY AS STRUCTURING PROCESS

Noting that recent trends in the organizational environment, such as increased competition, changes in the expectations of organizations' stakeholders and recent technological and legal development, have the potential to bring about changes that require new organizational features, Mohrman and Mohrman Jr. (1989) attempt to clarify this process. For the present study, however, what matters is the argument about the technologies and the discussion about their involvement in organizational processes.

As described in Weick (1990), this topic is not simple in face of a dynamic context of organizational growth, a complex and turbulent environment demanding greater knowledge, in response to which the technological attributes expand. In this regard, stressing the need for a review of the technological knowledge, an increased focus concerning the relationship of cause and effect of human actions on the choice of different combinations of machinery, equipment and production methods is emphasized.

Exploring the processes that underlie the emergence of institutions, Garud, Jain and Kumuraswamy (2002) noted that a rich stream of research has been developed: the social construction of technology. Advocate of this perspective on the study of technology, Hatch (1997) points it as one of the most prominent in terms of bringing the interpretative symbolic elements within theories of social-technical systems and, for this, it is emphasized as superseding the modernist linear models of technological. From this point of view, the effects of cultural norms, social relations and power in knowledge on production practices would be seen as social frames of products and

their technologies. Therefore, embedded in this vision resides the contestation of single and unique optimal ways of designing artifacts and/or providing an arrangement for them. It is this flexibility that denotes the opportunity for choice based on non-technical criteria such as cultural values, social norms or power considerations (HATCH, 1997).

Supporters of structurationist models of technology agree with this reasoning as they are strongly influenced by the constructivist intellectual tradition. Roberts and Grabowski (2004) refer to structuration as being dynamic, in contrast to the structure – embedded with static components. Structuration, as Weick (1990) conceives, is a particularly useful construct for organizational and technological studies, because it provides the observer with the sensitivity to "seek the continuous redefinition of structure, action and technology" (p.18). This author describes structuration as the emergent property of progressive action, as production and reproduction of the social system through the use of rules and resources of interacting members. Therefore, technology and structure are both process and product of human action and interaction. In the face of this duality, according to Roberts and Grabowski (2004), technology is underway to becoming the structuring process by which tasks and people in organizations change in response to the demands of post-industrial society.

Backed by Giddens (1984), which considered the existence of structures only in virtual terms, Orlikowski (2000) presents her view stating that the structure gives form and mold to social life, but it's not the structure itself that forms or molds, nor should it be understood in an active sense. Structures only exist in the activities of human agents, and through them. Only when technological elements are mobilized routinely in use is that it becomes possible to say that they structure human action. Orlikowski (1992) argues that, through technology, the agents construct certain interpretive schemes (rules reflecting knowledge of the work that becomes usual), certain facilities (resources for performing this work) and norms (rules that define the organizationally sanctioned ways to perform this work), becoming rules and resources in building a recurrent social practice.

Orlikowski (2000) warns that the potential of the structurationist perspective for understanding the technical and social influences of technology should be confirmed only through the understanding of the recursive interaction between people, technologies and social action oriented by practice. Thus, it rectifies that, by engaging regularly with a particular technology, in ways and under specific conditions, users repeatedly elect an array of rules and resources that structure their continuous interactions with that technology. Therefore, as the interaction of users with technology is recursive, users shape the technological structure that, in turn, shapes its use.

In support of this, Machado-da-Silva, Fonseca and Crubellate (2005) argued that if the recursive condition in the process of institutionalization was considered, it could not be fully understood without analyzing the interpretation of the actors. However, their need of references to act cannot be neglected; nevertheless, this does not mean it should ever be attributed a direct reasoning in this process. The institutions that delineate the references are regarded as effective guidance for action only, through the actors' values, beliefs and interests, which in turn attribute meaning to the context in which the social practice or technique emerges. Therefore, it is implied by the authors that, from a cultural cognitive-nature, interpretation acts as the operational mechanism of recursivity and hence, denotes the dynamic character of institutionalization.

3. DIFFUSION OF PATTERNS AS AN INSTRUMENT OF CHANGE

Emphasizing the dynamic context and magnitude of changes needed today, the understanding of change management becomes essential. Among the different concepts of organizational change highlighted by Hinings and Greenwood (1988), this paper focuses on change as systemic or structural involving movement from one archetype to another, being best viewed in terms of a reorientation.

This view of organizational change through the movement of one archetype to another is shared by Cooper *et al.* (1996), who emphasize the importance of a common orientation or a basic interpretative scheme that provides coherence to the configuration. Therefore, an archetype change requires changes in interpretation and meaning, which in turn engenders reproduction and change in structures, processes and organizational practices. Given the above, the seizure of the aspects related to the management of change permeates the knowledge about the interpretive schemes, formed by beliefs and values, basic support component to organizational standards. According to these authors, belief systems and knowledge stocks, together with the evaluative systems of values

constitute the interpretive schemes. These enable organizational members to establish and understand the organizational world as meaningful, sustaining a sense of social structure by the course of changes of the social arrangements.

Emphasizing interpretive premises, Bartunek (1984) argues that the institutional requirements, in addition to situational circumstances in vogue, probably precipitate the process of change in the structural arrangement of organizations; however, the way these pressures are perceived by agents is the conditioning factor of the type of change. Thus, in diffusion processes aiming perennial results, it is essential to set goals that consider the formation of meanings by individuals. As the experience with the patterns is eminently different among individuals and distinct depending on time or circumstance, once more the rejection of a linear orientation is recalled.

At this point, it is possible to consider a dialogue with the institutionalist assumption, as supported by Tolbert and Zucker (1983). The authors found support for the argument that the adoption of a procedure for an organization is largely determined by the extent to which the measure is institutionalized. In addition, this paper indicates that the institutionalization of practices is strengthened by coercion, which determines the adoption of them more quickly. Therefore, what arises from the findings is that the processes coercively placed, or relying upon utilitarian reasons only, would endure independently from pressure, being evoked, at a second moment, by the legitimate aspect that was acquired. It is worth mentioning that when studying the institutionalization of civil service practices, these authors assume the 'adoption' as if indeed the practices were rooted in the actors' cognitive system. However, according to the arguments placed in the present study, this result is due more to the peculiarities contained in the diffusion process than indeed to coercion *per se*.

Examining the temporal dimensions of institutionalization, Lawrence, Winn and Jennings (2001) focus on the impacts of different mechanisms to support the development and maintenance of institutions. In formulating their typology, these authors' focus rests on the belief that the central feature in the institutionalization of an innovation is in power relations that agents can use to support the process. Thus, the rate and stability of institutionalization are linked to different attributes of the mechanisms of diffusion in two dimensions: 'power mode' and 'Relationship with the target audience'.

Regarding the first dimension, this may vary in terms of the power being exerted in an episodic or systemic way. The episodic form of power affects target individuals as relatively discontinuous strategic acts of mobilization, started by self-interested actors. These acts, since they need to be repeatedly activated, relate to less stable institutions. On the other hand, lasting institutions with high levels of stability are more likely to be obtained with systemic forms of power (LAWRENCE; WINN; JENNINGS, 2001).

The second dimension of this typology concerning the relationship with the audience is more likely to impact the pace of institutionalization. Interventions that aim to provide commitment and enhance actor's capacity of choice in the process of adopting an innovation are relatively slow, requiring some form of negotiation. On the other hand, the institutionalization mechanisms that adopt an objectified relationship with the actors will result in a significantly higher speed of diffusion and faster production of effects with the new practice or technology. Thus, the model described by Lawrence, Winn and Jennings (2001) consists of four elements which support the above dimensions: Influence, Force, Discipline and Domination. Each of these elements has advantages and disadvantages in relation to the stability and pace of institutionalization that, when combined, can be leveraged in accordance with the goals of the intervention.

Bringing contributions to the analysis of this process, Kostova and Roth (2002) are partially in line with findings on the diffusion of practices by Tolbert and Zucker (1983), arguing that coercion emanating from the transferring organization to the target audience determines a larger implementation, the greater the situation of dependency. However, they argue that a high dependency has a negative relation towards the verification of adoption in terms of internalization. This fact is explained based on the tilt of the dependent part of interpreting the compliance to the impositions as coercive even believing in the effectiveness of practices. Usually, the belief on practices' effectiveness would lead the target audience to visualize the adoption as mimetic.

Adoption is understood in this work as a behavioral and attitudinal component referring, respectively, to the implementation of the practice and the internalization of the belief in the practices' value. Thus, the two components are reinforced as separate dimensions that do not necessarily occur together. By providing an

understanding of these instances as distinct, the study of Kostova and Roth (2002) represents a contribution to the analysis of the institutionalization of practices, highlighting within the diffusion process the general level or 'depth' of adoption reflected by it. It considers a qualitative variation in response to agents imposition.

The adoption model proclaimed suggests that audience responses to adoption are influenced by perceptions and interpretations of the standards imposed, which, in turn, are conditioned by the effects of the external institutional environment and the internal relationship between the parties involved in the diffusion. In the case of the relational context, the authors define it in terms of three characteristics: dependency, trust and identity that affect the level of adoption of a practice. Exemplifying how these factors interact in the process, Kostova and Roth (2002) explain that the internal pressures for acquiescence are likely to be felt even stronger when the target audience is highly dependent on the diffusive organization and, at the same time, it does not trust or identify itself with it.

The authors note that dependence, as a characteristic the relation between parts of a diffusion process, is a strong indicator for ceremonial adoption. If the target organization is highly dependent on the transmitting organization and if, in parallel, farmers (research participants in the present paper) do not trust or identify with it, this process would result only in the superficial adoption of practices. This would be the case since the lack of trust would lead farmers to question the efficiency of practices and to doubt the agents' reasons for transferring. Negative identification can lead to disbelief and rejection of the values and goals of the transferring organization, while, at the other hand, if identification is positive, would favor a better understanding of the meaning of practices (KOSTOVA; ROTH, 2002).

The contributions of Tolbert and Zucker (1983), Lawrence; Winn; Jennings (2001) and Kostova and Roth (2002) were combined to form a model of the diffusion process to assist in this study. It should be noted that it does not emphasize a linear idea of the process, assuming various responses within a continuum whose extremes are the fully decoupled adoption and complete internalization. Amidst these, the loosely coupled responses are at a greater or lesser degree.

4. METHODOLOGICAL PROCEDURES

The methodological procedures for conducting the investigation involved a cross-sectional research format, longitudinal perspective, and 'quasi-experimental' method with regression discontinuity design analysis. A field and documental research of qualitative nature took place in order to allow considerations on the impact of PRONAF in terms of the attachment of values relative to the production techniques along time and its institutionalization in midst of the family farmers targeted. The choice of focusing the research in the surroundings of the city of Maringá relates to the importance of Paraná to the Brazilian agriculture income. Paraná state has the third largest participation on the Brazilian agribusiness GDP and, in terms of family farming economy, Paraná state has the second most important family farming GDP among all Brazilian states (GUILHOTO et al., 2007). Furthermore, Maringá, besides being one of Paraná's cities with the biggest agriculture participation, has farmers of a variety of crops representative of those from all state.

To gather information relevant to the study, an exploratory research was carried out at units of EMATER and of the Bank of Brazil in Maringá, PR, which resulted in obtaining textbooks, informative manuals and information on the operation of the program. In the follow-up, EMATER was contacted to give secondary data. Several meetings were necessary so that more specific data about the family farmers, their address, phone numbers, periods and frequency of the financing contracts could be accessed. At this point, the participants pertinent to the study could be determined and separated into two groups, according to research purposes:

- G1 – family farmers who had hired loans from Pronaf at a more distant time and, at some point, cut bonds with the program (quasi-experimental group).
- G2 – family farmers who recently hired and/or are currently using the resources from Pronaf (non-treatment group).

The research participants from each of these two groups were distributed in three subgroups: A, B, C, observing the orientation from Selltiz, Wrightsman and Cook (1987), which warn against the risks on the study's validity. The quasi-experiment research model was adopted observing delimitations of the Regression Discontinuity

Design Analysis. This research method is appropriate in situations where there is no random selection nor experimental control possible. This, according to Bruyne, Herman & Schoutheete (1982), characterizes a more suitable form in the "field", since they represent what usually occurs in real situations, given the nature of social phenomena. According to these authors, this method helps address problems of internal validity. The sub-groups allow the researcher to detect differences that occur naturally among them and increase control over rival threats which can produce effects that overlap with those of the experimental variable and confuse the researcher. This procedure follows the logic illustrated in Figure 1.

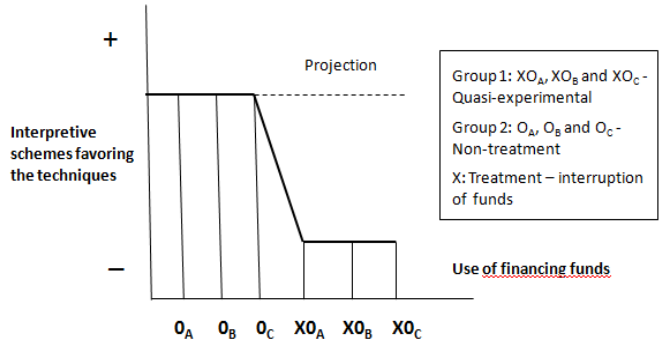

FIGURE1: Research model.
Source: Based on Selltiz, Wrightsman and Cook (1987).

The field research was performed through semi-structured interviews with 25 small farmers registered in EMATER documents, included in samples from G1 and G2 subgroups. This procedure aimed to collect information about their interpretive schemes through a script or guide of themes. With this resource, it was possible to perceive their opinions of Pronaf, their values and beliefs in favor or not of the techniques recommended to the farm properties, along with the concerns included in its use. Thus, in accordance with the model basing the investigation, by comparing findings from the interviews for both groups, it was possible to make assumptions about the internalization of the patterns transferred by technical assistance.

Prior to this comparative analysis, the data had been submitted to Content Analysis based on the assumptions of Bardin (1977). Therefore, the material collected in the field research underwent a preliminary reading to identify, amid the reports, references to the analytical categories proposed by the Theory: values, beliefs and interests, and, secondly: confidence, identity and dependence. These are the codes used as reference in the subsequent steps suggested by the author, where the collected material undergoes a systematic examination.

According to the purpose of this research, previously mentioned, content analysis targeted farmers' perceptions and feelings that could represent the analytical categories. The division of farmers into two groups sought to separate them so that their interpretation schemes were presented according to the situation in which they are regarding the program and techniques. The interpretive schemes for farmers from Group 2, which recently contracted loans, served to draw an estimate assuming they express stronger interpretive schemes due to the fact that they are still making use of the financial resources. Through the results obtained with the other groups, who received a resource withdrawal "treatment", it was possible to understand whether there was a significant difference in relation to the projection or not. In other words, if their interpretative schemes remain strong even with the removal of pressure, represented by the concession of funds, or, if they have weakened. In either case, there will be evidence of the effect of the treatment.

5. RESULTS AND DISCUSSIONS

The reports chosen to illustrate this section are intended to demonstrate how the analytical categories are portrayed by respondents and bring the reader closer to their way of thinking and expressing. To identify the farmers while preserving their anonymity, a code was adopted at the end of each section. Part of this code is the indication of the group to which the farmer belongs, 1 or 2, which is discriminated at the end. This segregated assessment aims to facilitate monitoring the strategy employed for the analysis, leading the reader to the results.

Some of the tables presented in this section show the numeric results found. However, to strengthen the analysis, it was found to be relevant to include new criteria: intensity (High, Medium and Low) and positioning (positive and negative) of the reports expressed by the farmers. These two aspects, in many cases, were decisive in the conclusions about the internalization of standards, as can be seen for some of the perceived values listed in Table 1.

The value for the 'Acquiescence' to PRONAF was expressed in both groups with a high representation, with the vast majority of reports with positive positioning.

Table 1: Comparison of results for values.

Values	**G1**	**G2**
Acquiescence	12	13
Technical Guidance	12	09
Security/ Stability/ Predictability	09	10
Updating/ Technical upgrading	06	10
Dynamism in the release of funds	08	05
Regularization of agricultural activities	02	06

Source: Primary data collected.

Present in all of the interviews, the homogeneity was perceived even in the intensity of the claims. A significant amount of acquiescence references can be associated with expressions that reveal the dependency felt by the farmers regarding the program's funding, as shown below:

> "Ahmm… We had to do it. For the financing you have to do all of this. We had to put lots of stuff in the soil; the fertilizer also had to be applied; potassium... you had to put it. Then, you have to do it, you were funded and therefore you have to do it […] there's no other way, you have to do it anyway. (A12 -1)
>
> Yes, I trusted. Although, these guidelines were sent to us before we received the financial benefits from PRONAF. So, I mean: or you do it or you won't have it. So you have to follow... (Laughs) (M5 -1)."

The farmers' dependency of the financing funds represents an important factor in the transferring of standards, for it strengthens the adoption of techniques, as illustrated in both cases above. This characteristic of the relation between PRONAF and the farmer from Group 2 is expressed, below, when fear of not being able to pay for the financing for having neglected the techniques is manifested. The acquiescence is strongly portrayed.

From the moment the farmer gets access to the fund - from PRONAF or whatever - he has to know that he has to handle his crop directly and specifically right, because if he doesn't, in the end he won't be able to pay. Because the farmer... I remember when farmers were in crisis, bankrupt... but there are no deadbeat farmers. They try to do everything in their hands to make the business succeed. Because when I am with PRONAF, I have to seek to do everything right as for not risking that, at the end, I won't be able to afford it. So, the farmer has that concern of doing what is asked of him. To succeed and be sure he will, at the end, not be in debt (E2, L2 and R2 -2).

Highlighting some points that depict the characteristics of the relationship between the farmers and the transmission agents, it was common for farmers to refer positively to the value of 'technical advice' linking this reference with the confidence they feel in the EMATER technicians.

Put it this way, if a disease appears in your crop and we don't know what disease that is, there has to be a technician because he knows what it is, right? [...] We take care of the crop and they take care of us giving the advice of what we have to do, you know? That's the agronomist, the guy who has experience in… lets say, soil been. (M10 -2).

It is emphasized that, although the 'Technical orientation' value appears more in reports from Group 1, the intensity of these, in this case, indicates the difference between the segments of farmers. In the second group,

the intensity of the favorable opinions mentioned towards the program stands out as compared with the observed in Group 1; the former significantly stronger, as shown in Table 2 of intensity and direction.

With respect to the value of 'Security, Stability and Predictability', despite the apparent numerical similarity between groups, positioning and intensity of the reports were presented inversely in groups. In Group 2, with higher incidences of positive positioning passages in relation to PRONAF, a higher intensity of assertions was found as well. On the other hand, in Group 1 more statements with negative positioning were verified, as can be seen in Table 2. That is, the farmers of the first group emphasized the importance for them of more security, stability and/or predictability, while farmers of the second attribute the improvement of these items to the program. The statement from the farmer coded as A10-2 serves as an example of how this value is manifested.

Since the farmer doesn't have much legal knowledge, he is always worried about fulfilling the payments commitments. He goes there and tries to see if he can pay. Some farmers aren't seeking for this aid, maybe, because they are afraid of losing their rural properties, as has happened before. So, they are still considering whether they should. Perhaps there's a lack of information, or if there's not, they're quite fearful (A10 -2)

Table 2: Comparison of positioning (positive/negative) and intensity (High, Medium and Low) of reports

Reference Value	**Technical Guidance**		**Stability/ Security/ Predictability**	
Groups	**G1**	**G2**	**G1**	**G2**
Number of reports with the same intensity and positioning	1H+	4H+		1H+
	3M/H+	3M/H+		1M/H+
	3M+		3M+	3M+
	3L+		1M-	1M-
	2M-	2M-	2M/H-	
Total	12	09	3H-	3H-
			09	10

Source: Data collected

Regarding technical Upgrade/Modernization, one can see that this value is more common in Group 2. This could be an important demonstration of the non perennial effect of the program's coercive pressure. However, when observing position and intensity of the pronouncements, if the numerical weight that tilts more in favor of Group 2 is disregarded, there is a slight resemblance between the groups. The following passage exemplifies how a farmer representing Group 1 strongly maintains values of modernization.

So you have to obey. Not because he (EMATER technician) is there watching you, but because you need to trust them, they know the techniques, they are studying for this. There's no good in doing things like we did in the 1960s-70s, right? (...) Usually there are some meetings that, for people like us who don't know, are important. So, the farmer who doesn't participate has difficulties (J5 -1).

In the passage from farmer "J5", the value of technical modernization is reinforced when he intensely argues that it is necessary to follow up the changes, accepting the recommendations of the Emater to be consistent with the latest techniques brought by studies and research. In this case, the farmer expresses that he meets the recommendations, not because he is being monitored, but for believing in 'Technical upgrading' values and relying on the role of this organization for bringing updates.

Table 3: Comparison of positioning (+ and -) and intensity (A, M and B) of the reports

Reference Value	**Updating/ Technical upgrading**	
Groups	**G1**	**G2**
Number of reports with the same intensity and positioning	3H+	3H+
	2M/H+	3M/H+
	1M+	3M+
		1L-
Total	06	10

Source: Data collected

The analysis of the intensity used by the farmers to express their views also contributes to reinforce the proximity of both groups for the value of more dynamic resource releasing processes. Regarding the value of 'Regularity of crop activities', it is clear that most of the reports appear in the second group, which reinforces the emphasis of this value for farmers who are still under financial coercion.

Table 4: Comparison of results for beliefs.

Beliefs	**G1**	**G2**
Technical assistance is enough	09	06
Coercion is applied	08	08
Value is sufficient	07	07
Monitoring	07	06
Vulnerability of small farmers	04	07

Source: Data collected.

Regarding the analytical category of beliefs, references to the availability of technical assistance and on the amount of assistance were more present in Group 1. In both groups the farmers portrayed their belief on this issue mostly with a negative positioning, with more emphasis on the first which had more representation of opinions with high intensity. The fragment below illustrates the situation in which the farmer expresses negatively in this regard; in other words, he believes that there isn't enough assistance from the organization of technical assistance.

EMATER, I think they barely visited. In most cases they didn't visit at all. We even tried on occasions to go and ask them something and they didn't assist, very rarely. They would come, at most, once, twice a year (…) We would go there and they would do the project, give all the information and… Usually it was only this, they didn't follow up on us, almost nothing. […] The truth is that, on most of it, we did it our own way because there wasn't much technical assistance. It's very seldom that assistance is offered. (E2, L2 and R2 -2)

The view from another farmer adds to this belief that technical assistance is lacking:

> "Those who give assistance are the agronomists from the cooperatives, not the ones from Emater. It was only in the first year, you know? In Maringá, I think there are only 3 (agronomists) in Emater, now. For this reason, they can't cover the total area, so it always falls upon the cooperatives agronomists. [...]
> (Wife): normally when you plant, the agronomist visits your property 3, 4 times during the harvest. But, they didn't have the time, so, for instance: you plant, they came to take a look but then it was sent to the cooperative's agronomists. They don't have time, so they just walk around, visit us and look at the real needs of the crops. (A6 -1)"

When one considers the positioning of the reports and focus on the intensity of negative expressions for the belief that technical assistance would suffice, one can conclude that it is Group 1 that prominently presents the highest tone, as is shown in Table 5. Coherent with the research assumptions, this signs, although not definitely, that the interpretative schemes of farmers that stopped receiving the coercive stimulus tend not to be as strong.

Table 5 Comparison of positioning (+ and -) and intensity (A, M and B) of reports

Belief reference	**Technical assistance is enough**		**Coercion is exerted by PRONAF**	
Groups	**G1**	**G2**	**G1**	**G2**
Number of reports with the same intensity and positioning	5H-	3H-	3H+	2H+
	2M/H-		2M/H+	2M/H+
		2M-	1M+	2M+
	1M+		1L/M+	1L/M+
	1H+	1H+	1L-	
				1M-
Total	09	06	08	08

Source: Research data

The belief that coercion is exerted by PRONAF on small farmers is balanced when analyzing the representation of occurrences in groups. This equilibrium is maintained even when the examination shifts to the dimension of analysis of intensity and position of the reports, as shown in Table 5. In the parallel between G1 and G2, the belief that the inspection role falls among the functions of technical assistance, likewise, is balanced, with a slight trend to be stronger in intensity in the positive claims of Group 2. This makes sense since these farmers are the ones, in fact, who should receive pressure. The following citation informs about the farmer's awareness of some degree of inspection.

> "I don't know (about inspection) because we always do what's right. But some people burned straw when this zero tillage thing was being advised. There was a time when you got a fine for burning the straw! (J20, J1 and P2 -2)."

Other view is presented when the farmer is asked what would happen if EMATER found out that the recommended fertilizer wasn't applied.

> "There's a law, right? They take your ID and, if there is a problem, they take your credit away. I've been having credit from PRONAF for... I think 10 years now. Then, [if I don't do what is asked] they cut it and it's over. I'll stop getting money, I'll stop producing, having a beautiful crop handled with care, [...].
> Yes, they (EMATER) have knowledge; they give a hand and help out. I am obliged to go through it. We have to. We learn this (V1 -2)."

With regard to the belief on the vulnerability of small farmers, it was found more representative in Group 2. However, although significant, this representation does not overlap the emphasis in Group 1, consistent with the value of Security/ Stability and Predictability. This is due to the intensity of reports that still confirm a higher degree of statements in the first segment. The following example expresses one of the ways that the small producer feels vulnerable.

We know that there is no way of growing more, because the small (farmer) is always small! (...) That one [bigger farmer] who plants 50 wants to take from you who plants 10, so you are squeezed up. You won't expand, you understand? There's no way. (...) The other guy, who is big - this happened more than once: it is the same as throwing a cow inside a river full of piranha fish to be eaten, you know? It's the same thing, the small farmer today, the trend for him is: he stays put or he doesn't move. There is no point, because he won't move forward. (G2 -1)

The main concerns of farmers are related to the decrease in Interest Rates, Greater support for small farmers, increased assistance provided by Technical Service, Dynamism in the release of funds and bigger coverage of agricultural insurance. Table 6 indicates comparatively how the farmers from both groups manifested these interests.

Table 6: Comparison of the results for interests.

Interests	**G1**	**G2**
Lower interest rates	07	03
Greater support	03	06
Greater availability of Technical Assistance	04	04
More flexibility in the release of funds	03	03
Insurance/ Greater insurance coverage	01	04

Source: Research data.

Regarding the first concern, we can justify the disparity in the amount of reports in the groups based on the experience of some farmers from Group 1 (in which the majority of statements were). This can be attributed, we believe, to the fact that these farmers had been disconnected from Pronaf and started to resort to other regular financial operations with higher interest rates and therefore felt strongly this impact. Confirming this occurrence, the intensity of the reports on this issue was also higher in references of the farmers from Group 1, as can be seen in the statements below.

> "PRONAF? Yes, it helped a lot. Now, it would be great if it kept going, if PRONAF was always there with low-interests, right? Because the banks these days have very strong interest rates, high interest. The farming now a day's has become a problem to maintain (M1 -1).
>
> I stayed with it (PRONAF) because it provided a good help, right? Because it helps and they charge a good interest rate. An interest that does not harm us, like these other types of financing that are around, which are very expensive, so maybe you'll get it and it turns more expensive and then you can't pay (M10 -1)."

The concern or interest for greater government support, whether in the form of subsidies or crop insurance, or more broadly as policies directed to the rural sector, had a higher expressivity in Group 2, both in terms of numbers and intensity of the reports.

Table 7 Comparison of positioning (+ and -) and intensity (A, M and B) of the reports

Interest reference	**Greater support**		**Greater availability of technical assistance**	
Groups	**G1**	**G2**	**G1**	**G2**
Number of reports with the same intensity and positioning	2H-	2H-	2H-	1H-
		1M/H-	2M/H-	1M/H-
	1M-	3M-		2M-
Total	03	06	04	04

Source: Data collected

The following text, extracted from one of interviews, shows how farmers refer to the concern of greater availability of technical assistance. This case is illustrative of the appeal to farmers' honesty attributes and to the vulnerability issue to make the argument.

> "Because, really, 99% of the farmers are honest, you know? You'll hardly see a deadbeat farmer. If you pay attention to all the data in Parana and other states, out of 99, maybe just one is deadbeat. So, I think they deserve more respect... a greater attention. [...]
> PRONAF was good, its mistake was only what I said before: the lack of a little more support, a little more care. (...) PRONAF needs to be a little more careful with us in the crop insurance because we are already small, really small (J20, J1 and P2 -2)."

As demonstrated in the tables above and according to the adopted research model, in general terms, internalization could be inferred based on the approximation of the interpretive schemes of farmers that comprise G1 and G2. Therefore, one can infer a trend towards the institutionalization of the techniques. The analysis of the interpretive schemes manifested by farmers, in general terms, allows making such a claim. However, the investigation also points that there is room for improvement especially on values regarding Technical guidance and Regularization of agricultural activities, the belief that The technical assistance provided is sufficient and the concern for Greater flexibility in funding release that proved positively more relevant for Group 2.

Regarding the belief about the adequacy of the amount of technical assistance to the needs of farmers and the concerns for greater flexibility in the release of funds, a strong negative intensity portrayed in Group 1 was shown, thus also giving greater weight to Interpretive Schemes from Group 2. As is advocated in theory, this fact could indicate that farmers did not internalize the new standards and that, at least in these respects, those farmers who stop receiving resources from PRONAF, after a while cease to believe in the value and efficiency of the practices as much as the farmers that still maintain ties with the program.

6. FINAL REMARKS

Giving emphasis to interpretive and symbolic aspects in the investigation, this paper explores the relationship between structural properties and agency of those people responding to the coercive transferring of patterns. Therefore, through the comparative analysis of interpretive schemes of both groups of farmers, the results showed similarity between them. In line with the research strategy adopted, this fact is credited to the internalization of the patterns or, at least, to a strong inclination for this, which indicates a parallel with the institutional presupposition.

It is noteworthy here that Brazil is a compelling environment for this research. Distinguishing culturally from contexts where the foundation studies on the issue of coercive diffusion have taken place, the implementation of the investigation in this context represents a challenge to the propositions based on previous findings. This assertion is based on what has been called in institutional theory as the operational mechanism of recursiveness, inherent to institutionalization, which is, interpretation (Machado-Da-Silva, Fonseca & Crubellate, 2005).

It has been observed that coercion, as it is interpreted by the farmers from this specific rural context, led to internalization of patterns. If we consider that historically in Brazil, in general, farmers have always related in a dependent way with the State, we can perhaps better understand the conditions which affect this result. It is assumed that the State's coercion has become so legitimate in this empirical context that it may even work as a stability element by which the farmers see more clearly the benefits and the sanctions consequent to adapting their actions. Therefore, it can be argued that, in spite of the coherence of the findings with the institutionalist assumption defended in Tolbert and Zucker (1983), such assertiveness only becomes possible with a situated analysis on how the farmers interpret the phenomenon. In doing so, cultural and symbolic aspects implied by the context were taken into account.

Moreover, it can be noted that Pronaf's program for diffusion of technological standards is underpinned by the four mechanisms of institutionalization identified by Lawrence, Winn and Jennings (2001). Through inspection from the technicians of Emater, Pronaf makes use of the mechanism of 'influence', so that the farmers adopt the techniques recommended. However, since it requires continuous repetition, through this form of power, the institutionalization of new agricultural patterns would be effective only while the inspection or expectation of its occurrence would last.

The mechanism of 'force' is also employed to support the institutionalization of new techniques, which confers a higher speed given to the objectified form of relationship established. In this sense, to deal with the farmers, certain measures are taken to prevent the renewal of the funding contract for a period and to restrict their right for free technical assistance while adopting the inappropriate farming practice. Even mechanisms that evoke the removal of possessions for the payment of debts (only in extreme cases) are used. In this way it is intended to discourage farmers from failing to follow the procedures suggested. However, this instrument is applied episodically, resulting in the same effect of 'influence' when the mechanism is interrupted, which confirms an unstable character to the institutions supported by this mechanism.

PRONAF, acting collectively within disciplinary forms of power, by means of technical assistance, would be launching to the attainment of the educational objectives of family farmers. It is believed that the disciplinary mechanisms might have contributed in verifying internalization by the research, given that the external demands for adopting the standards have been absorbed. This is due to the effect on the farmers' identity which confers a high level of stability to the institutionalization process.

Rounding out the support for the three aforementioned mechanisms, domination is also directed to farmers who turn to Pronaf's resources. Farmers linked to the program would be constantly under pressure to conform to the standards, what characterizes this type of power as systemic. Even after quitting the program, farmers appear to remain subject to threats, not anymore of not being able to renew their contracts or having his possessions confiscated, but threatened of weakening the relationship with the Technical Assistance and Rural Extension Company (EMATER), which will remain important for those living in rural areas regardless of the use of resources from governmental programs.

By acting as an intermediary between government programs and farmers, through trainings, lectures, actions of rural development assistance and funding and investment projects - necessary for applying to any bank financing

– EMATER plays a very important role for all farmers, but mainly for small ones. Therefore, these facts express reason enough so that rupture in the relations with this entity would represent factually a threat to the farmers. Which explains, in part, why, even if the pressure ceases, the farmers aimed by this policy continues to reinforce the standards, by presenting interpretative schemes as if they were under coercion: because, in a way, they are under domination.

Such a conclusion could only be glimpsed after the analysis of the characteristics of the relationship between farmers and Emater, the technical assistance agency. The question refers to how coercion is perceived and, thus, these traits – trust, identity and dependence – play an essential role in the diffusion of technological standards, acting as buffers, mitigating the negative interference of coercion in this process. Given the recognized legitimacy of Emater in some regions of Brazil and especially in the region studied, this fact was highlighted in the research when observing such acquiescence from the farmers, even those who no longer have ties to the program.

Therefore, one can extract from these statements that PRONAF, favoring the incorporation of new values, beliefs and interests to those farmers in the region of Maringá, tends to be effective as an institutionalizing policy. As a result of what was demonstrated above, it is possible to infer that in Maringá the program is achieving its objective of enabling organizational change and perhaps contributing to rural modernization in the region. However, as has been shown in Teixeira and Crubellate (2011) improvements are still necessary. These relate directly to the continuity of the program's benefits, that is, the quality of the transfer of financial resources.

More studies are recommended in the future, given the possibility of adopting the present study as an estimation of perceived changes concerning the relation of the program with its audience. Providing an extension to the period of Pronaf's implementation, the studies should establish subsidies that could be compared with the ones found here and therefore produce a higher number of inputs and determine an improved quality of information. This could bring more timely contributions for improvements in the program.

We stimulate new studies to seek to understand diffusion processes fostered by government programs in other countries. Thus, other contributions can be made in order to elucidate how the elements listed in this survey can affect the stability and/or change of existing standards. Moreover, one can contribute to pointing other mechanisms that might be behind the results of diffusion processes.

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