

Local territorial insertion of cattle breeders and artificialization of production systems: logics of cattle feeding in the Southwest of argentine pampa

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Resume

This paper proposes to evidence relationships between artificialization (supply feeding) of cattle feeding and the local social capital. Local social capital is here reinterpreted, since Social Geography, through the concept of territorial insertion of farming activity. This local insertion develops in three dimensions of human activity: production (i.e. economic sphere), livelihood (private sphere) and participation (public sphere).

Presently the main process of cattle breeding transformation in the South West area of Buenos Aires Province is the artificialization and complexification of cattle feeding. Under the project network *Aide au Développement Durable (ADD) Transformations de l'Élevage et Dynamiques des Espaces (TRANS)*, ten cases studies of farms representing diverse combinations of artificialization and complexification are analyzed with the local territorial insertion concept. It shows us clearly that most locally inserted systems are not necessarily the less artificialized ones. Nevertheless the type of combination or contradictions between the three dimensions of local territorial insertion is strongly in relation with forms of artificialization and complexification of animal nutrition. This gives indications to assess the sustainability of production systems: artificialization should correspond to a form of strong local insertion in order to be sustainable.

Introduction

From the 1960s, there are systemic focuses that are developed to understand the operation of the Exploitation-Family Unity. This evolution allows the objectives and the purposes to be related to the family with the dynamics of the exploitation. More and more of these focuses approach the territorial insert of the producer in their different dimensions and of the local impact of their activity. There is not only the consideration for the simple producer, but also as a citizen that has a private life beyond their activity linked to the exploitation and a participation in public life.

The relationship between the activity and the importance agreed between ones private life, public life and labor activity and the nature of the relationship between those dimensions of the life of other people, varies in its history, inside ones own society, and between other societies.

An analysis by means of the rural pampean evolution, in Argentina, shows that the territorial changes, were always strongly related by three levels of the mentioned dimensions. These changes are verifiable very much in the operation of the rural societies at local level, such as the regimes of the Family Units internal organization (Albaladejo C., 2004, 2007).

Presently, work analyzes the relationship between the most important territorial mutations in the last decades of the pampean region, and its relationship with the levels of change in the productive practices of the bovine cattle raising. Then, we will analyze superficially the local impact of each "type" of unit producer-exploitation unit on the sustainable territorial development.

This research has been developed in the context of the project at network of Durable Developpement (ADD), Transformation de l'Elevage et Dynamique des Espaces (TRANS), financed by the National Agency of Research of France (ANR).

We consider the mutations of the bovine cattle raising especially at the beginning of the year 2000. The most important change observed in the pampean cattle raising in the period 2003-2006, was without doubt the implementation of supply in the administration of bovine nutrition. In the work hypotheses (in the year 2005), we denominated this process as an escalation in cattle production.

The analysis of the populational statistics show the stagnation of the cattle pampean herd, and of an important advance in the agricultural surface of strong changes in the agricultural practices from the middle of the 1990s.

With the objective of understanding the causes and the consequences better from these levels of cattle mutation and exploitations, we've analyzed ten agricultural exploitations (mixed cattle raising-agriculture), representative of the local diversity, from the Southwest of Buenos Aires. It has been selected by the local INTA-developer.

Firstly we analyzed the practical productive diversity and we related them with factors such as age of the producer, witnesses of the successor, size of the exploitation and of the rodeo, financial capacity and levels of extra-predial revenues (Champredonde M., et al, 2007). Secondly, we are looking to explain the changes of the cattle practices from a wider historical and territorial perspective, starting from a reinterpretation of the concept of social capital. This conceptual framework allows us to analyze the cattle practices such as the multiple components that interact in the breeders territorial embedding. This theoretical framework allows us, to sketch the impact of each type of territorial embedding on the sustainable development of the rural territories

I. Social mediations in the pampean territory construction

Social capital is a notion that exists since the 70' and which has been promoted by international development agencies since the '90. The notion has been first created for the study of the work market functioning (see for instance the well known paper of Granovetter, 1973). Only in the '80, Pierre Bourdieu (1980) developed a more conceptual and critical sense within a sociological theory of social fields and he differentiated it from other forms of capital: especially from economic and cultural capital. Nevertheless, the use of the notion developed by international agencies (Kliksberg & Tomassini, 2000) is much more utilitarian and tries to evaluate how the social network an actor are able to mobilize in its participation to a development project. It is only lately that intellectuals working within the development field have discovered the Bourdieu approach. As a consequence, they are mentioning him in their reference lists, but without discussing the differences and even the incompatibilities with their own concepts of social capital. Anyway in the hipersocial and microsocal sense the sociological economy gives the notion of social capital. This one is considered a sort of "resource" activable in the frame of a development project or any other figure of organised action. More recently some geographers (Fournier, 2001) wanted to apply the same approach to the object of their discipline, the geographical space, and began to

define “social capital” as all the places one actor is frequenting or knowing about – in the general social context of hyper mobility – and so that he is supposed to use as a resource.

But to see social networks or culture, or even the territory, as potential resources seems to us to difficult the development of a critical point of view. A vision of society as if it were a field of opportunities and restrictions offered to the deliberate strategies of a “free” actor may leave for instance to normative and even naïve conceptions viewing social capital as necessarily “good”... Nevertheless, other sociological visions (Bourdieu, 1980; 1994) demonstrate that social capital may be associated in some cases to vigorous domination and alienation modes. We should not forget that paternalist or clienteles networks are also part of it. Bourdieu reminds us of the younger brother of the Basque family that had to work hard for their older brothers and do not capitalize the benefits and cannot even marry. Even if these younger brothers will not describe this situation as an “explotation”, it is to notice that they weren’t the elder who emigrate to America...

In this paper we will try to give another theoretical interpretation of both the social and spatial capital from the social geography mobilization of Hannah Arendt conceptualization of human activity (Albaladejo, 2007; Albaladejo, 2008). This theory is trying to represent the insertion of an actor in the territory at a local scale from the display of his activity within three “spheres”: the public sphere, the economic sphere and the private sphere. This theory presents the advantage of allowing the evaluation of the emergence of a local development field: if the three spheres of activity gain autonomy and articulate at the local scale, then we can evaluate that a **local development** is possible. If one sphere is dominating the other two then we can only expect **development at a local scale** to emerge. Albaladejo (2008) explains that the difference is that in a development at a local sphere there is no public space emerge. The local public space is the scene where collective action is taking place.

The public sphere is the field of participation, and so of dialogue and language activity. This field is the one of the Greeks’ *Polis* or of the Romans’ *Res Public* i.e. where citizens are participating in order to regulate the common life. The economic sphere has over-developed in our societies: it is the field of the production activity, of the biological life reproduction, of the cycles and routines of the material life. The private sphere is the one of the realization of the personal work, of the creation of the intimate life. This is the field of the quotidian relationships with the relatives and the friends and of the hobby activity.

When in a given locality the economic sphere is dominating the social life, the values and rules governing the relationships between people are those of economic interest, of formal and functional relationships, of a cold rationalized world. Everything is valued in terms of “resource”, just as the narrow sense given to “social capital” (precisely not the sense used by Bourdieu). This is the world of an essentially economical local development just like a lot of so called “clusters” or Localized Production Systems.

When the private sphere is dominating, all the people of a locality are like a sort of enlarged family: everyone maintain personal and private relationship with others, the values are the ones of personal respect, private help and favours, discrete and discretionary treatment, personal attachment networks, clientelistic relationships and so on...

When the public sphere is dominating the two others, the engagement and political dimension of life is the only one able to furnish values and rules to be together in a locality. The dominant values are the ones of renunciation, total engagement, devotion to the collective dimension and this is the one of religious communities or of militant groups.

So a local development is only possible when the three spheres are relatively autonomous “in tension” between each other (Albaladejo, 2008). This is a theoretical framework for **a human action theory**, not for an “actor theory”, so these spheres are not pointing out fields of action for some rough actors categories (the private firms encircled in the economic one, the local government in the participation one and at least the population in the private one...). Each “actor” is expected to act legitimately in each of the three spheres in order to a local development to be possible. That is why we propose here to analyse the contribution of local farmers to each of the three spheres in order to characterize their local territorial insertions. In this paper we will try to characterize the diversity of local territorial insertions of the farmers in relation to the extension services (INTA) of a typical district of south west area of the Buenos Aires province. Also we will try to analyse this diversity in terms of the local territorial insertion of productive practices of breeders. The aim is to understand the relationship between a social insertion and a biotechnical insertion in the local territory and so the possible strategies for extension work for territorial development.

II. The bovine cattle raising in the construction of the pampean territory

In the XVI century the installation of European communities begins in the territory that today denominates the pampean region. However the process of appropriation of that territory was developed for most of the XIX century. The frontier with the territories dominated by the aboriginal ones was moving gradually away from the city of Buenos Aires as it advanced the century. The appropriation of the new occupied territories was legalized within the breeding of the bovine livestock in a first stage and with the sheep breeding starting from the second half of the XIX century.

The coexistence of two cultures settled this way: on one hand the Creole culture embodied in the gaucho's figure was devoted exclusively under the care of the bovine livestock and to the training of their horse. On the other hand, the culture of the European immigrants, associated more to the sheep breeding and to the cultivation of the lands.

In the year 1879 when the "Campaign of the Desert" was denominated, the Argentinean State took control of the whole pampean territory and it stimulated the arrival of numerous contingents of immigrants, mainly from mediterranean Europe.

II-1. The agrarian pampas: the birth of the of bovine production system "local" (1879-1950)

The appropriate setting value of the lands won by the native knew two mechanisms: the installation of immigrants' colonies or the award of big properties like recognition of the debt contracted by the State in the financing of the "Campaign of the desert."

In the fractional areas offered to colonies of European immigrants' (who were called later as foreigners) the lands were split into plots from 100 to 500 or more hectares. These were sold, at a low contract, to pay for the first crops. Given their productive function of making *chacra* (a crop culture) as a result they were named *chacareros*. The

big properties awarded by the government, were named *Estancias*¹ (big Ranch) and their owners *Estancieros*.

In this world of *gauchos* and *chacareros* living together in one place (that is to say the public domain) was essentially regulated by norms of the private sphere. It was so Albaladejo (2004) it named this world the agrarian pampas. The local life was linked around the places and the small rural populations. The local population's territorial insert was based on the private sphere, that is to say, in an extension at local level of the grammar of the family relationships or of vicinity.

In this mediation form the economic sphere occupied a marginal place. This explains the scarce importance agreed by the Agricultural Engineer's professional dimension or of the veterinarian. They were recognized more for their capacity to be inserted in personal codes and to a local social life than for their title or their efficiency.

As much in the *Estancias* as in the area of colonies, the Creole culture and the foreign culture share daily life. But with values, habits, knowledge and Ranch: the etymology of the word comes from being. During the XIX century, this term evoked the place where you remained. In the place where there was fertile earth and water, the European and the Creole settled, near the estancia. Actually it is called a Ranch if the property exceeds 1.000 hectares.

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As much in the *Estancias* as in the area of colonies, the Creole culture and the foreign culture share daily life. But with values, habits, knowledge and representations of a very different world. It is for that reason that in the classic political literature (Sarmiento, 1845), on one hand the foreigners represent the strength and the ideal of a western cultural development. This was always presented as a model to reach in the political, economic and social organization in the pampean territory. This "superior" culture should domesticate the Creole culture.

The gaucho culture represents all the "anti-values" inherited of a part of its ancestors: the native population. This feature could be exacerbated, according to the writer Martínez Estrada (1991), for their territorial insert in a flat and vast landscape. A desert that they were put in soul and in houses.

In the first stage of the agrarian pampas, the rural tasks developed by foreigners and Creole, were very different. From the middle of the XIX century, most of the *gauchos* was employees in the *Estancias* (they were then called *paisano*)². There, the *gauchos* were in charge of the care of the bovine livestock and of training horses. Through the day they traveled the country property by horse (the plots have between 50 and 600

¹ *Estancia*: this word came from the word *estar* (to stay)

² Muñiz, R. mentions three types of "elements of the countryside: *paisano* is a work man. He has a stable home and has respect toward the authority. *Campero*: is a mobile man who hunts for the Nandú and for the accompaniment in the voyages of the Pampas. *Gaucho*: is a nomad but audacious, unbroken, he/she doesn't undergo any discipline"... 1966, p42 et 43. In our work we generalize in gaucho's name to point out the rural residents of the XIX century, of mestizo (of mixed race) origin and that possesses the abilities bad behavior.

hectares) to control the state of the rodeo. A cow is helped to give birth to, a "acollarar"³ a calf "aguachado"⁴. The tasks of *yerra*⁵ and of *descorne* (to cut the horn) allows the gaucho to show their ability to connect. All these activities are developed on horseback. From then on, the image of the cattle raising pampean bovine and of the gaucho on horseback, remain inseparable.

The foreigners, were devoted for the most part, to the sheep breeding or the installation of cultivations. In the areas of *Estancia*, and before the lack of readiness of lands, these farmers should work in partnership for the farmers. "It is the agriculture to the service of the cattle raising" (Gaignard R., 1979). Other, for the most part Basque, they were employees of the *Estancias* for the care of the sheep. For the gaucho, to work with sheep was dishonoring.

In the colony areas, the immigrants develop agricultural activities in their own lands, also the cattlemen. In this case they develop activities of more manpower like the sheep breeding, accompanied by a few bovine. With time, many of the Creoles were the immigrants' employees once they consolidated their economic position.

In the agrarian pampas, the systems of production of bovine meats are characterized by their extensivity. The animal nutrition is based fundamentally on the direct shepherding of natural pastures. Their efficient use is not an object of great attention for the amount of animals per hectare is low. When the forage is scarce in a plot, the animals are passed onto another contiguous one. Before natural catastrophes such as the droughts, the consequences are death on behalf of the rodeo or a low fertility in the procreation. Anyway it is difficult to estimate since the bull is with the cows the whole year and the birth of the calves is distributed in that whole year.

The bovine races are more diffused in the agrarian pampas than they are of Scottish origin and denominate the "British", such as the Shorthorn, Hereford and Abereen Angus. These races were introduced in the decade of 1870 and they spread quickly. Toward 1910, those prevailed the "British" including the Creole race.

At the end of the first half of the XX century, some *chacareros* made bundle of hay to meet the demands in times of shortage, especially in winter. The low intervention on the grass production contrasts with a bigger intervention on the animal. But based fundamentally on empiric knowledge: for example, it is the castrated animal that in times of cold weather to avoid that the calves are infected by blowfly maggot (*agusane*) and when the moon is waning it doesn't bleed.

In the agrarian pampas, the Creole culture contributes more to the local system a generation of bovine production. This is characterized by the extensive conditions of breeding and for the presence of located practices. Within the century, the Creole cultures and the foreigners got together. The pampean bovine cattle raising was the activity that was undertaken, inclusive of all the contradictions and particularities that

³ To tie for the neck a calf that lost their mother to the neck of other whose mother is able to breastfeed both

⁴ means has lost their mother

⁵ *Yerra*: Castration has been a common practice in Pampean beef production since the XIX century. Castration takes place at the start of the autumn and is *yerra*. Traditionally, *yerra* occurs on weekends, when neighbours and friends get together. It is a tradition that the owner offers his guests a barbecue with the extirpated testicles. The rotation practice of the *yerra* in each zone make it last over a month. Producers get together periodically and show off their *gaucho* skills in performing such tasks as roping a calf.

generated the coexistence and the progressive approach of both cultures. This fusion of both cultures was accompanied by mutations in the territorial inclusion of the inhabitants of the pampas and in the agricultural-cattle production systems.

II-2. The modern times coming to the pampas "agricultural" (1950-1990)

Starting in the 1950s, initially, the Argentinean pampas denominated the process of "agricultural modernization". At local level, this process was characterized by the predominance of the economic sphere and of its values. In this type of world, the human activity is essentially evaluated in function of the values of the work and it is the world of the work that prevails in common in the norms of life. The private sphere is reduced to the most intimate circle in the family and there are no longer values of those that are mobilized in the regulation of the local social life.

The relationships with other people and with other parts of the sector resume their objective reality and largely what matters is that they have work relationships, transactions or oral contracts and written research. That is to say that the economic sphere, of the work, is able to govern the public life: coming together with different cultures thus able to live as one (Albaladejo, 2006). The predominance of the economic sphere of social life can be reflected, for example, in the word used to designate the farmers. In the modern period, the *chacarero* and the *Estanciero* are denominated as *productores* (producers).

In the rural territory the modernization process is manifested in the tentative of organization of the agricultural activity as a "sector" (*sectorización*). At national level and with special importance on the pampean region, State and Mixed Institutions emerge as the National Meetings of Grains (JNG) for the agriculture and the National Meeting of Meats (JNC) and the Corporation Argentina of Producing of Meat (CAP).

II-2.1. The method of agricultural production

The reorientation of the national politicians contributes in a first place to an important growth of the agricultural production. In the first place, the new laws allow a great quantity of farmers to work on acquired rented land. On the other hand, the politicians price is free for meat and a minimum price for cereals, and the available credits allow an important mechanization of the agriculture and the purchase of automobiles and vans for the producers (Sili M., 2000, p 17 at 22).

They also register, important investments in infrastructure, multiplying the extension of the asphalted routes. This process contributes to many small and medium producers multiplied by the daily displacements to the most important urban centers in the district. It allows them to settle in those towns.

Many places and small towns become mere localizations for some housing or for some commercial operations, there is no longer much human activity (this economy, of residence or of participation in the collective life). This re-territorialisation process indicates that the regulation of the socio-economic processes is developed at a level of the head of the District or of an important city.

The "*sectorización*" of the agricultural activity in a wider process of reorganization of the territory exceeds completely to the rural areas (Albaladejo 2004). Indeed, with different levels of intensity, the mass consumption and the temptation were developed by joining the increase of productivity earnings and the improvement of wages. Parallel to that, the forms of life and particularly the domestic life, they incorporate more and

more products and services acquired in the market. The urbanization and the industrialization were developed and, simultaneously, a rural exodus took place.

This process induces a growing demand of meats on the part of the internal market displacing the export markets. The search of smaller animals that are dedicated to the export, stimulates the development of bovine genetics characterized by animals of various sizes adapted to the pastoral production.

Although the pampean bovine herd continues to increase, in this period, the productive practices in the bovine cattle raising remain practically unaffected. The base of the production is highly pastoral and the alimentary practices of supplements are very limited.

II-2.2. An intense shyness of the bovine cattle raising (1970-1991)

The pattern of "fordism" development entered a crisis starting in 1970. The fall of international prices of the agricultural products, and the lack of local credits to appropriate rates, caused a stagnation of the agricultural surface. The same luck was met by the bovine cattle raising, which added some difficulty that didn't meet a review of the tendency just as it happened later to the grain production.

The difficulty of foreign cultural integration and the Creole became more evident when analyzing the territorial insertion of the southwestern Russian-German colonies from Buenos Aires. These immigrants arrived in Argentina at the end of the XIX century and they were organized in colonies with a high grade of autonomy. The lack of integration with the rest of society, was evident because of the different languages, this made the insert of descendants, in the society, limited to working as domestic employees or rural employees. The cultural distance between these and the Creoles or the gringos (descendants of European immigrants) *acriollados* (became Creole), were worth a pejorative treatment, until the end of 1980. Working with the cattle, the "Russians" demonstrated a great ignorance of the *gaucho* traditions for example, the typical clothes, the use of farm tools and the form of saddling the horse, the abilities to tame a horse, to connect, to castrate a calf, etc.

In the colonial areas, this process was accompanied by a generation change. The same as in the Estancias, the children and the foreigners' grandsons, adopted the activity of bovine cattle breeding in substitution of the sheep breeding. This determines, from the middle of the 1960s, the growth of the bovine herd and the loss of the sheep sheepfolds. The gaucho culture finished this way "hibridization" with the foreign culture. Although, the heirs of the gauchos continue being prioritarly the pawns, the cattle producers are identified more and more as compatriots.

In 1970 the agricultural pampas, the cattle raising conserves its extensive character. However, the beginning of the complex process of raising the bovine cattle was observed, mainly within the scarce groups of producers that united around the advice of an Agricultural Engineer. These producers introduced all year round pastures and they improved the technology in green sowing, with the purpose of improving the fodder offered.

The use of electricity by the middle of the 1980s, made administration of the available foliage better. Thus it allowed an increase in the load a little, especially an increase of the agricultural surface. In that same time, it spread the making of a roll of hay. In comparison with the bale, it could be stored outdoors and demanded little manpower as the tractor was able to do the work of lifting and distributing and storing.

The biggest influence in the technical advice is given by massive diffusion of veterinary doctor's in problems like the control of parasites, the prevention of illnesses and the attendance in animal births.

Initially we can denominate an escalation in the process of cattle production, in that the administration of the productive process was characterized by a bigger complexity in the administration of the production of forage resources and in its use.

On the other hand, being mobile in the use of pick ups exploited the use of the one wired electrician and lead to a reduced use of the horse for the work of the bovine cattle raising. The abilities of the gauchos became limited and some peons continued to tame horses and cultivate the dexterity of the knot. However, until the end of this stage, the entirety of the bovine ones was produced in closed systems thus reducing the work of the "*gauchos*".

II-3. The hiper-modern pampas: the escalation of complexibility and artificialización (1991-2007)

At the start of the 1990s, the modernization process was exacerbated, given the absolute predominance of the economic sphere on the public and private sphere. The spacial size of the economic regulation and social life of the rural communities exceeded the district or the agricultural area.

The "hiper-modern pampas" (Albaladejo, 2006) was the product of an initiated process at the end of 1991, when the national government implemented the "plan of convertibility". From the institutional point of view, this plan proposed the destructure of a great part of the organisms of State, mainly those guided to regulate the economic activity. Based on the parity 1 weight = 1 dollar, and in the privatization of a great part of the public services, a was implanted "deregulation" of the economic life when promoting the total liberalization of prices of inputs and products.

The process of hiper-modernization, impacted the different form of agriculture and in the pampean cattle raising, so much for the chronological point of view as in the same nature of the process.

II-3.1. The escalation in the agricultural production (1991-2007)

At the level of the agricultural production, the new game rules caused an immediate and exponential increase of cereal production and oleaginous. This increased the conjunction of two phenomena:

- The increase of the surface area dedicated to agriculture. The balance represents an increase of 24% of the surface area dedicated to agriculture. The cultivation of soya by itself represents 10,4% of the increase of the sowed area (Slutzky D., 2003, p78). This increase would be to expensive in the decrease of the cattle surface area, dedicated to the installation of annual species and perennial grass.
- The increase of grain productivity per hectare, is explained fundamentally to the growing of agriculture inputs. In the period 1993, 1999, they tripled the use of herbicides and insecticides⁶. The surface implanted by means of the "no till"

⁶ An element to keep in mind when analyzing the growing use of pesticides, is that of the intensity of use for the surface unit continues being low regarding the denominated developed countries. In that sense, the author W. Pengue [2000, p 4] mentions that the use of insecticides in Argentina is four times less than in the United States and 10 times less than in France. However, the current use of herbicides, referred to by the surface unit, would come closer to that of the farmers from the United States and it would represent half of that used by the French producers.

multiplies by 7 in a 6 year period and the use of seeds transgénicos knew an exponential curve (thus reaching a total of 6 million hectares in a three year period ('96 - '99) (www.sagpya.mecon.gov.ar).

In a five year term, the total production of grains passed was about 38 million tons in the year 1991 to 62 million tons in 1997 and around 67 millions in the campaign 2002/2003⁷.

The property and the use of the earth concentrated on a strong decrease of the exploited hectares by their proprietors and for the growth of the exploited surface area under different types of contracts. This phenomenon is strongly associated by the presence of numerous sowing pools⁸ and by the expansion of small and medium exploitations by means of leases to neighbors. A phenomenon generalized in the whole pampean region, is that numerous managers and professionals are benefited by the plan of convertibility, investing their earnings in the purchase of fields

Some of the consequences of these phenomena are enumerated by Giberti H. The presence of the pools "it replaces rural families... harms the local economy because it participates little: it makes their main purchases and sales go through their main house, located outside of the area where they also transfer their earnings. On the other hand, the investment funds avoid investments: they lease for a crop, contractors use, they do without fixed personnel, and they don't worry about the conservation of the natural resources" (2003).

It is observed then that this mechanism is highly capitalist of exploitation of the land, delocalizing the decisions that have a great impact at local level. They are the big pools (that cultivate thousands of hectares in the different areas of the pampas) who fix the amount of rents from the fields to local level.

The cattle raising suffers direct consequences of these processes. The medium and big producers of the more productive agricultural areas, avoid selling their rodeos and they rent cattle fields in less productive areas. This increases the value of the rents in the marginal areas. This limits the possibilities of the local producers to rent shepherding for their animals. This phenomenon affects those producers of our study area.

II-3.2. The artificialización of the pampean cattle raising: a delocalized process? (2003-2007)

The hiper-modernization process is associated to strong mutations in the systems of bovine production. A generalization of **artificialization**⁹ processes is verified, especially in the activities of weight gain. The artificialización process, concerns mainly the administration of animal nutrition, that is, the increase in the diet supplements accompanied, in certain cases by the confinement of animals in corrals to put on weight. In this last case, they are called locally as Feed Lot¹⁰.

⁷ This represents an increase of 63 and 75% respectively.

⁸ Sowing pool: Company that captures investors and that it invests in the cultivation of parcels distributed in different regions of a country and in neighboring countries. They can sow between 10.000 and 300.000 hectares

⁹ Artificial: Made by hand or man's art. Not natural (Dictionary Marred, p 87). The system concept "artificializado" opposes itself here to system "natural", that is to say the one that the bovine feed exclusively on spontaneous grasses.

¹⁰ Champredonde M. (in press) awards this artificialización phenomenon to the factors like: a) The agriculturización b) The evolution of the genetics toward biotypes fewer adapted to the pastoral production, c) The growing importance of the supermarkets in the meat distribution to the urban

However, the current use of herbicides, referred to by the surface unit, would come closer to that of the farmers from the United States and it would represent half of that used by the French producers.

The incorporation of materials and of knowledge generated in other territories, necessarily understood in the process of artificialización of the bovine cattle raising, drives us to qualify the terms of **delocalization** of the systems of bovine production and of the produced qualities.

The delocalization of the production systems is the consequence of the practices removal from the *Savoir Faire Collectif Localisé*¹¹ and who hold them (the compatriots). The administration of cattle practices, especially those of putting on of weight, is based more and more on technician-scientific knowledge, in tasks like the estimate of forage quality, or the calculation of diet composition in the function of requirements of each category.

In numerous cases, it also requires the participation in partner-technical nets of information in which information circulates of technical topics or on the evolution of the input markets: rate and readiness of cereals, rate and localization of animal categories to put on weight. It also requires a bigger sophistication of the accounting system, given the administration of the biggest incidence in aspects of tax with regard to the processes of input purchases.

This is equal to the mobilization of knowledge "deslocalizados" that circulate in professional nets related with the centers of technician-scientific innovation. In this type of production systems, the mobilization of Knowledge Empiric Located Communities is relegated (SECL).

The interaction among the means agricultural pampean, the "British" breeds (Aberdeen Angus and Hereford) and the knowledge (especially those related to the cattle production) contributed to the obtaining of a product that we qualify as typical and emblematic of the Pampas: the pampean bovine meat (Champredonde M, 2007). These bovine meats present a defined profile: cut kids, of clear rosy color to clear red, well marbled and with a marked tender taste. Among the chemical characteristics, the meats taken place in pastoral systems present a good profile of unsaturated fatty acids (Quoted by García P., 1996, Latimori N.y Kloster A. 2003).

The delocalization of the produced qualities moves away from the specifics that characterize the pampean meats. With the intensive practices of artificialización bovine meats are obtained with equivalent qualities of those that are achieved with the same races in the Feed Lots of countries like the United States, Canada or Australia.

However, the impact of the process of **artificialization/delocalization** of the production systems (and of the produced qualities) doesn't present a homogeneous distribution among the pampean meat producing. In fact, a fan of production systems of cattlemen exists that go from the most extensive, only based on the direct shepherding, to the more artificial like the corral where the bovine are there to put on weight (feed lot).

consumers, d) In the study area, starting from the year 2003, the incidence of repeated seasonal droughts with low forage production.

¹¹ Knowledge Empiric Local Communities (Bouche and Bordeaux, 2006, p. 13). These evolve locally for the interaction among: the natural means, the cultural and social means, the genetics of the species involved in the process and the knowledge system

III- The diversity of territorial insertions and of technical local nature of the production systems in a South West Pampean district.

The processes of mutation and transformation of the surrounding territories of the Pampa have not occurred homogeneously within its population. On the contrary, “the different territories (each one functioning archipelago-like) can coexist, juxtapose, and articulate, at least during long periods that should not be considered only as periods of transition from one order to the other” (Albaladejo C. 2004, p32).

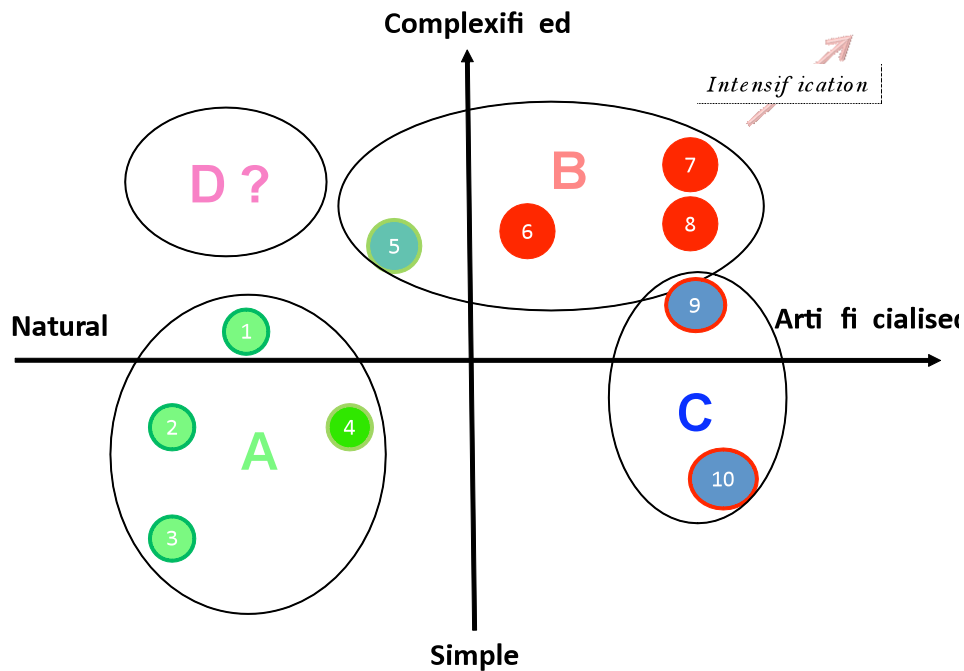
In fact, our work seeks to understand the relation among the different territorial insertions of the breeders and the animal farming systems they create and recreate continually. To that extent, we selected ten farmers of the district of Saavedra, in the South West of the Province of Buenos Aires. The selection was performed using the knowledge of the productive strategies provided by the local Agent of Extension of INTA.

The ten breeders were interviewed, individually and in semi-structured ways, and their exploitations were visited. A classification was made according to the information obtained in these interviews. On the one hand were all the productive practices, and on the other were the type of territorial insertion of each breeder.

First, a typology of the breeders was drawn, according to the particularities of the production practices (Champredonde M. et al. 2007b). Then they were qualified in terms of artificialization and intensification levels. In order to perform this task, the following components of the production system were taken into account: a) composition of bovine rodeo, b) productive activity (breeding, rebreeding, fattening), c) manpower organization, d) strategies for the production of fodder (natural resources, pluriannual crops, annual crops), e) organization of fodder exploitation (number of plots, organization of the lots of animals in a year, chaining in fodder exploitation). Also the following components, specific to the supplementation: f) confection of hay reserves and hay level supplementation (rolls/animals/years units), g) confection of silos, h) organization of animal provision, i) type of resource for the implementation of grains or industrial concentrates, j) level of supplementation with grains or concentrates over the total diet (% of daily consumption during supplementation time), k) duration of the supplementation (in days) and stage in the productive cycle (growing, termination), l) in confinement vs. grazing.

One thing to be taken into account is the fact that the sampling was performed on farming exploitations in which the animals perform any of the breeding stages on direct grazing. That is to say, enterprises that exclusively make fattening in feed lots were excluded.

The analysis of the ten exploitations produced the identification of three large groups of breeder units – systems of productions. This is shown in a biaxial chart (Chart N°1)



The vertical axis represents the degree of complexity of the animal nutrition management (combination of the above described factors) in the different exploitations. The ones at the bottom are the more simple systems: minimization of daily tasks, short level of detail in the programming and management (day to day) of the complementation between nutritional demand/fodder offers, animals grouped in one or two lots.

The more complex systems require an annual planning of this complementation. These two factors are adjusted daily, in order to ensure the optimization of the animal growth. In grazing exploitations, the use of electrical wiring increases the requirement of manpower. In these systems, animals are generally supplemented with silo's food, cereals or industrial food.

The horizontal axis shows the degree of "artificialization" of the bovine diet. On the left there is the "natural" system, based only on direct grazing of natural resources and eventually the provision of hay. The complementation between the production system and the natural conditions of production are maximized. On the opposite far, the more "artificialized" systems uncomplementate the production of the natural fattening resources. That is to say, food can come from anywhere, even places hundreds of kilometers away.

After locating each exploitation in the chart, they were grouped according their particularities as regards territorial insertion. The characteristics of the territorial insertions of the breeders and their systems of production were divided in three subgroups.

III- 1. Inhabitants doing breeding activities in a private sphere

In a first type we aggregate four breeders who articulate with local social life essentially from their private worlds. Three of them are rather old (between 55 and 65 years) and have no children (for one of them) or their children are studying at the university or working in another part.

At this stage of their lives, they no more want to develop a "professional profile": they don't have any dept and more want to contract new ones, they don't want to intensify

their systems, have few extensions of crops and are reluctant to do any change. Until some years ago they participated in local breeders organizations just like the *Sociedad Rural de Saavedra* or in the Steering Committee of the local cooperative. But they didn't continue their mandates and they don't have any other participation in the local associative world.

Two of them are living on the farm at more or less 10 km from the little town of Pigüé. The other people they daily meet for developing their farming activities are mainly relatives. One of them is managing the farm, located beside his own farm, which belongs to a cousin. The property of own land is for the three ones an undivided family land until now. The farm is also the place of regular meetings of the family about every week-end and the opportunity to meet with their children living far away. So the space of the farm is fulfilling an important private function.

The fourth one is a young breeder of 31 years working 500 ha. He is living on the farm at almost 10 km from Pigüé. He is participating in none local institutions, professional or not. He has no family and "employs" informally an old worker who "is helping him".

That means that the way these breeders are articulated with the local society is more since the private sphere than since the two other ones. It is difficult to call them "producers" in a professional sense, even if two of them have been clearly in other stage of their lives professionalized. Today they are more "inhabitants doing the breeding activity".

Their breeding practices are relatively seeking the simplicity: the systems are trying to fit to natural conditions and management is characterized by simplicity. This is very coherent with a way of life, for which breeding has to fit to a way of life strongly oriented towards private aims and values. Concretely it means that this technical orientation is not a professional choice, i.e. a choice done in regards with professional values and project.

From the productive point of view, these systems are mainly grazing systems. They are characterized by a medium fodder offer. The efficiency of the harvest is frequently low since the plotting of the fodder resources is not made intensively (except in the case of breeder n° 1). This is mainly because in the four cases the manpower is made up of family members only, and the increase of daily tasks is avoided in order not to hire external manpower.

In the case of the exploitation n°1, a higher level of plotting is possible because the breeder lives in the farm and he is helped by his wife and daughters when the latter visit him on the weekends. In the majority of the systems, bovines are provided with some rolls of hay during the winter months, in order to compensate the low fodder offer.

So, these are production systems of low complexity in the management of the animal nutrition (except for breeder n°1, which is of medium complexity), and with a low level of artificialization in the production. This type of management has the advantage of being of low-risk, due to the low level of investment¹².

The low level of artificialization allows us to consider the meats produced under these systems as **natural products**. Because of the territorial nature of these products, both

¹² This type of system is similar to those described by Morales H., as managers under low budgets (2001). The author acknowledges other two types of breeders: those who seek to optimize the economical results, near the breeders comprehended in group B, and the breeders who seek commercial opportunities.

from the agronomic and cultural point of view, we can qualify them also as **local or typical products**. (Champredonde M., 2007). On the consideration of the contribution of these systems to the durable development of the territories, another consideration arises: that of the local impact they may produce, and of their own capacity.

The economical impact of these systems, locally, is low. They do not demand manpower nor generate a demand of supplies or services. All the supplies are bought locally. Besides, the gross product for exploitation is low, reason why they do not generate incomes for the commercialization of the products. From a different point of view, these are systems that offer products than can be qualified as natural or typical. They also contribute to the preservation of local knowledge and present a low environmental impact.

The major disadvantage of these systems is that, in essence, they do not present a strategy reproducible in time. This is determined by the lack of a successor and by the low incomes they represent, a factor that might become negative under policies based on an increasing taxation.

III- 2. Breeders strongly articulated with a local professional sphere.

In this type we classified four breeders: numbers 5, 6, 7 and 8. They participate for 3 of them in local professional groups just like ACER (Acción Cooperativa en Extensión Rural, the professional groups of the cooperative) for two of them or CREA (Consortios Regionales de Experimentación Agropecuaria, which are co-active professional groups associated in a movement that started in 1958) for the third one. All of them have introduced technical innovations as recommended by the local extension workers from INTA: intensive rotation in of herd on pastures, fattening in enclosures, direct sowing, corn silage, etc. They have employees not always declared but always working in a relatively formal relation with them. Even if they realize a lot of administrative work in their office, each of them is giving a great importance of direct and daily supervision of breeding and agricultural work in the farm.

They are all of them living in the city of Pigüé except n°5 we will more deeply comment then after. It exists a rather clear frontier between their private life (their family and even their friends) and they professional life. These breeders are frequently going to the local “Agronomy” or meeting with the local agronomists or breeding technicians. One of them has been the president of the local agricultural cooperative; another has been during many years a member of the steering committee. So they are actively participating in the local society, but always from the professional sphere. Their world is clearly professional, but it is strongly locally constituted at the district level. Other professional connexions at levels above the district are less frequent and not have a strong meaning for them. Professional values even if not produced are practised at the district scale. They all have about between 35 to 45 years and have some sons that can be a successor.

These breeders are developing complex and artificialized systems. Each of them are developing a managerial vision of their farms, and they are seeking technical advices either from extension workers of INTA and the cooperative, from sellers of the *agronomías* or both. Systems developed - combining extensive pastures, crops, several forage crops, silage – are demanding an intense supervision. They do not dispose of large superficies (between 400 and 1300 ha) and a large portion is of their own (more than 50%). Recently, since 5 or 6 years, they have been intensifying the forage and feed

system, they even began to park the herd during part of the year (without really reaching the characteristics of “feed lots”).

These breeders are important actors of a small professional farming world at the district level. They are identified with complexification of their farming systems.

Some special mention should be done about n°5. This breeder is working on a much narrow superficie (370 ha from which only 80 ha are rented). He is 72 years old but his two sons (45 and 43 years old) are working with him. None of them have studied and now one grandson of him (17 years old) wants to work in the farm too. This young man is now working as tractor conductor but he left the secondary school to work with his grandfather in the farm. All the family has been since ever strongly linked with the cooperative. This is an interesting case because it is intermediate between the two types we have described. In this type the private sphere is important and strongly related with a professional project.

The predominance of the economical sphere in the territorial insertion of these breeders does not coincide with the strategies of benefits optimization. Their production systems are managed under the search for high incomes, reason why they have turned towards an increasing artificialization of said systems, especially as regards animal nutrition. The phenomenon can be seen mainly in the last stages of the fattening of the animals destined to labor.

The necessary information and knowledge for this quest for economical optimization are in the professional nets, whose epicenters are the most important cities of the region. In these cities, information and experience are interchanged, and also the model of technical and economical innovation and development is legitimized.

This nets form, in time, local “nodes” of larger nets that embrace the country, and maintain constant interchange with different regions of the world. These nets are conformed by Technical Institutes, Universities, Associations of Breeders, Associations of Cooperatives, etc.

In some cases, these nets are institutionalized, such are the cases of the Feed Lots, that are grouped in the Cámara Argentina de Engordadores de Carnes Vacunas [Argentinean House of Bovine Fatteners] (www.feedlot.com.ar). This association tries to generate a positive image of its products, and to allow the interchange of experiences and knowledge among its members. Nevertheless, among the most important actions these associations have performed, is the negotiation with the national government of special conditions that stabilize their business. For example, they have been granted subsidies for the purchase of corn destined to these systems.

This net strategy brings to light the nature of the risks associated to the more artificialized systems. If, in the most natural systems, climatic variations have a high impact, the increasing artificialization tends to attenuate these effects. However, these strategies can only change the nature of the factors that affect their stability. In the more artificialized systems, the higher level of investment for installations, and above all, the variations of the relation of prices of supplies and products, turn these systems highly unstable. That is to say, these are systems sensible to the variations of national economical politics, and to the variations of the national and international markets of supplies and products.

From the organizational point of view, a regional net of services is required. That is the case of the breeders that have specialized in the building of silos for crops or grazing, and that make hundreds of kilometers to meet the different exploitations they have as

costumers. Also, the commercial nets that supply these breeders of cereal, industrial sub products and balanced food.

As regards manpower, the observation of the ten analyzed systems shows an increase in the routine tasks (Routine tasks, Dedieu 1993) the more artificialized the system is. This type of manpower is characterized by the skills such as use of tools, like tractors and supplies dosifiers. These skills are similar among the employees of artificialized systems around the world. That is to say, the required skills for these systems are not “local”.

That is why we have classified the systems with a high degree of artificialization as “not local” systems. That is to say, they combine manpower classified as not local in the productive process and in its management, supplies and knowledge.

As a consequence of the nature of not local of the production factors, the quality of the more artificialized systems can also be qualified as not local. In fact, meats produced in intensive systems, that use similar breed biotypes of animals, in different regions of the world, can present similar characteristics.

In the case of the four studied systems, the degree of artificialization and thus the degree of “not local” quality of the meats can be characterized as medium and medium to high. This degree varies between exploitations (and sometimes, between lots of animals of a same exploitation).

According to the studies of INTA, grazing meats could be considered as those that do not surpass 0,7% of the complementation of the total diet (Irurueta et al., 2007). In theory, it could be said that over half of the meats produced under these systems can be considered as from grazing systems.

The major artificialization of the productive processes, as opposed the purely extensive systems, turns into more stability for the productive results, a fact that tends to stabilize the local production of meats.

These systems bring dynamism to the local economy due to a higher demand of supplies from the local stores (generally located at the economic centers of the districts) and of services (for example, the building of silos) and for the high volume of bovines commercialized by means of local intermediaries. Besides, these systems demand local manpower, among the workers whose skills enables them to work for said systems.

As regards environmental impact, a deep study has not been performed yet in terms of the threats the more artificialized systems represent. In theory, the most dangerous systems would be those that perform temporary closures, located near superficial waterways or in permeable soils near freatic water tables. The highest risk is the lack of relevant rules and the presence of organizations that control its implementation.

From the cultural point of view, these type of systems and territorial insertions of the breeders are a symbol of progress, frequently associated to development. Nevertheless, these processes deepen the values symbolized by the gaucho and the “cultura ciolla” [creole culture]. The local know-how has a very limited space in the modern to hyper-modern systems.

III- 3. Breeders with local insertion in a professional sphere but out of the livestock sector

Two breeders constitute another group, because they are not rooted in the local sociability but have a farm they bought in this district. One of them is a politician of

high range in the province of Buenos Aires. His farm is administrated by “Lalo”, an ex employee of the senate who is native of the Pigüé district. *Lalo* is 42 years old have two sons and a spouse working as house worker. His sister has been the secretary of a hight politic, so private sphere is in fact intimately related with this important personage. But the owner of the farm has no daily life in the district and never had meanwhile *Lalo* is a “son of Pigüé”. Of course his special link with an important political man made him a simultaneously a booded and flattered man... If you want some favour, if your son needs a job, the link with Lalo is not to be neglected. He like *criolla* culture and is a member of a traditionalist local association.

The other personage is a druggist of Pigüé. An employee of him is living in his farm and every Monday and Saturday, when the drugstore is closed, he goes there to supervise the work. Even if he is the son of La Pampa farmers, it is with the incomes of his drugstore he bought this farm. His wife and his daughter have also studied pharmacology. All the family goes on Sundays to the farm to rest and receive friends or family visits.

In this case the private sphere is dominating but the different from the first type is that this private sphere is not connected with a sociability lined with farming activity and less with farming activity at a local scale. None of this two “farmers” is participating in local institutions en less in professional institutions. The systems that is promoted is a simple one, but rather artificialized.

Both systems of animal farming production as opposed, especially as regards the degree of complexity. Breeder n°9 planned a scheme of production based on the information collected at the courses given at INTA. He combines grazing production with silo’s complementation. Breeder n°10 does not make big investments in knowledge and in supplies in order to achieve a high grass production. He compensates the lack of fodder by locking the animals in the final stage and offering them balanced food *ad vivitum*. In this case, he tries to simplify the manpower hiring and the development of systems technically improved. The farming activity is conceived by the proprietor as a capitalization (Champredonde M. et al, 2007b). The kind of goal aimed and the availability of out of exploitation financial resources explain the search for simplification at high economical cost.

The local economical impact of this type of exploitations varies according to the geographical location of the proprietor, his main activity and the type of organization implemented in the site of the production. In the case of local entrepreneurs and professionals not related to the sector, the impact depends on their own territorial insertion of that of the manager of the exploitation. In the case of investors not from the territory, local economy tends to be resented: some supplies are bought in the territory and others out of it. They also tend to sell through agents located in big urban centers.

The environmental impact depends on the type of system developed by each exploitation. In this sense, we observe a great heterogeneity in the degree of artificialization. Breeder n°10 normally performs the locking of several lots of animals during about three months and near a stream. Breeder n°9, on the contrary, only complements animals in grazing. In the same sense, the produced qualities are also heterogeneous.

III- 4. Product of a local territorial insertion and of a response to economical incitement: organic productions and Geographical Indications

The major presence of the breeders in three of the four quadrants in Chart n°1 brought about the question of which types of production systems and territorial insertions would be included in a hypothetical group D. These systems should be characterized by a high complexity in the management and a low degree of artificialization.

A priori, the definition of this type of system matches the organic productions. In our work, we have not interviewed these type of breeders, since they do not exist in the sampling area.

In theory, the organic productions are based on the local natural resources or the introduced species, but without the use of agrochemicals. The practices are always objects of protocol and certifications. Thus, they mean a complex administrative and technical management, in which the degree of artificialization is minimal.

The type of management required for the organic productions matches the insertion of the breeder in specific socio-technical nets, in which experiences and know-how and interchanged. These nets generally exceed the territorial dimensions of the district or group of districts.

For this type of breeders, the economical sphere occupies a preponderant place. It is about a professionalization of product that would otherwise be not professional. Besides, in order for the organic activity to develop, there must be an economical benefit that justifies it. Nevertheless, the knowledge of regional organic systems teaches us that for the system to be reproducible in time, said system must be strongly locally based, both in the technical and the private spheres. According to the experts on this type of production, “the organic production is more a vocation than a business”.

Another type of certification that matches the definition of natural production (localized) and of complex management are the Geographical Indications. Our works show the possibility of communicating a Geographical Indication for the Pampean bovine meats (Champredonde M., 2007). According to the conclusions of our works, this type of projects should be regionally coordinated, for the Pampean region. The production protocols could comprehend breeders such as n°1 to n°6. In this case, the requirements for such a certification call for the presence of a developed economical sphere. Furthermore, this type of project should promote a strong local insertion in the social and private sphere.

In conclusion

The analysis in terms of social capital allows us to consider the productive practices as a part of the territorial insertion of the persons. The social capital is characterized, according to Hannah Arendt, by three articulated spheres: public, private and economical.

The diversity of territorial insertions among people is characterized by the different importance each sphere acquires, and their particularities. Our work is to consider which are the spheres related to the livestock activities and how they relate.

The historical analysis of the mutations of the Pampean rural society, and of the relations between the main cultures that make them up, set the ground for understanding the territorial context in which the territorial insertion of the breeders evolved, together with the livestock production.

Therefore, we understand that the phenomenon of supplementation on bovines does not constitute solely the response to an economical conjuncture. It is the result of the

evolution of the social mixture of the breeders and their practices in the territorial insertions.

If we observe the actual diversity of breeders as regards their social capital, we find that some of them match the forms of the territorial insertions that occurred at historical stages of the XX century. For example, group A breeder are similar to those of the animal farming Pampa. However, those territorial insertions and productive practices have changed with the passing of time. Both are rebuilt and readapted in the new territorial context.

For the group A breeders, we observe that the territorial insertion occurs mainly in the local social roots. In this context, farming activity is considered a way of life. The economical sphere is less important and is include in the private sphere. The production system values the local fodder resources, or those with a low level of artificialization. Some of the production practices can be considered traditional.

Nevertheless, the European origin of the parents and grandparents of these breeders evidence a cultural evolution in which only some the creole know-how and practices were assimilated. These breeders are the far heirs of the culture of the gaucho, although it may contextualized in hybrid formed by the creole culture and the American en European culture, rebuilt in the context of modernity.

The quality of the offered meats matches the image of the natural product, raised by grazing. However, the buyers tend to settle lower prices for these animals than for those supplemented. This is due to a different definition of quality: they look for a major homogeneity in bovine age a fattening degree.

Another conclusion that arises y characterizing the territorial insertion of group A breeders is that this insertion alters through time. In fact, two of the three elder breeders of this group took part in the process of modernization of 1960-1990. Nevertheless, the lack of a successor, the growing of age, and the reduced size of the exploitation strongly contributed to a change in the territorial insertion and thus in the productive practices.

Breeders of group B correspond to the territorial mutation in the stage of hyper modernity. In the modernity and hyper modernity, the economical sphere occupies a relevant place. For the breeders of group B, within the economical sphere, the productive system occupies the central place.

A notorious thing is that hyper modernity implies a process o growing des-localization of the productive practices, since it is based upon progressive artificialization. However, in the case of the breeders of group B, this des-localization does not oppose the local insertion of the public spheres. They participate as leaders of local organizations, related or not to the livestock farming activity. Besides, their sociability nets are centered in the most important urban population of the district, and are strongly related to the farming activity. They also participate actively in football clubs commissions or other kind of local associations.

This is evidence that the process of artificialization of the grazing systems in the hyper modernity does not necessary contribute neither to the des-localization of the breeders, nor the weakening of the local social nets.

Nevertheless, we need to take into account that the actual context of communications and the local socio-technical nets these breeders belong to make up a node of broader regional and even international nets. Besides, some practices, like the utilization of silos, nourish from service nets that exceed the district area.

Another important conclusion is that the intensification process is not necessary a synonym of artificialization. In the case of breeder n°5 and the organic productions, intensification is associated to, above all, the complexity of the system. Therefore, intensification is not always a synonym of des-localization of the practices or the quality of the products.

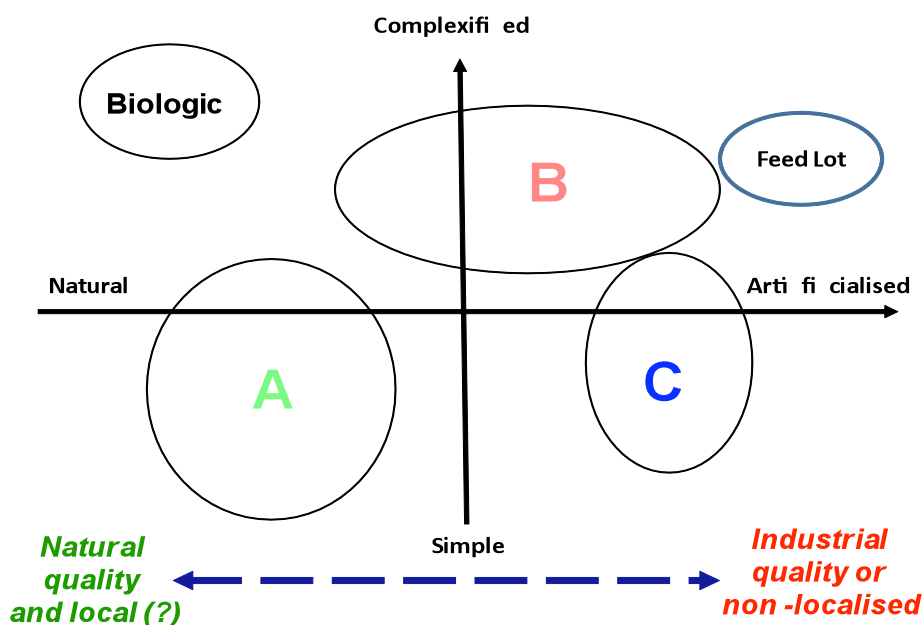
In the opposite sense, we observe that in some cases, artificialization is not always a synonym of more complexity. In fact, for breeder n°10, artificialization turns into a simplification of the manpower organization and also serves to compensate the low fodder production. In this case, simplicity in the management does not mean localization either.

The territorial insertion of breeders of group C let us conclude the search for the preservation of the patrimony or the investments made by the entrepreneurs or politicians can correspond to the different productive practices. They vary with the territorial insertion of the proprietor and of the manager of the exploitation.

As regards the quality of the meats, those produced in pure grazing system can be qualified as naturals. This implies the use of spontaneous or domesticated species, adapted to the local conditions of production. When considering the cultural weight of the production practices, we could also consider them as local.

In opposition, extreme artificialization, as in the case of the Feed Lot, can be classified as industrialized or des-localized. That is to say, they are similar to those breed under the same system and are of the same breeds as the ones of regions such as the United States of America, Canada or Australia.

Chart n°2: Qualification and degree of localization of the meats offered by the different production systems



One characteristic of the hyper modern systems is the offering of meats with a high degree of fat, and a high percentage of products of high tenderness. In this sense, we consider that the search for hyper tender meats is one of the factors that promote the hyper modernization of the production systems.

And a final question arises: what are the implications of the territorial insertions identified in the district of Saavedra, over a process of sustainable development?

First, we must underline that the levels of artificialization identified among the breeders of group B are medium; therefore, the sustainability of the environment does not seem to be jeopardized. Besides, they present a highly developed insertion in the local social sphere, and thus this type of territorial insertion appears as highly compatible with the process of territorial development.

The kind of productive practices implemented will tend to the search for the viability of the exploitations in the current economical context. It is, in fact, a system that allows the producers to continue to live and work in the place without their social rooting being questioned. These systems are considered positive from a social point of view, as an attempt to obtain an acceptable profitability by the generation of sustainable mixed production systems.

The territorial particularities in the district of Saavedra have made modernization get a limited scope. The artificialization of the practices seems to be limited in the supplementation of grazing bovines. There are few cases in which the animals are locked in the last two or three months of fattening.

The type of goals and the medium level of artificialization make these processes not to be seen as potential threats for the environment by the locals. That is to say, local society seems only to condemn the surrounding feed lots. In these cases, the possible pollution of the water tables and the proliferation of insects like flies are questioned.

From the economical point of view, the increase of supplementation in the grazing systems provides stability to the production, by lessening the weather incidence. Besides, it homogenizes the quality of the livestock, although there might exist a possible quality loss in the impact on the human health. It also generates an increase in the demand of supplies, manpower and services, which contribute to bring the local economy more dynamic.

The impact of the hypermodernity, which contributes to the des-localization of bovine meats, can compromise the insertion of the Pampean meats in the international markets. In fact, in markets such as the European, Pampean bovine meats are a synonym of natural products.

From the cultural point of view, these practices tend to exclude localized collective empiric know-how related to the bovine breeding, and those who possess it: the local countrymen. Can it be imagined a sustainable development based on systems that exclude an important component of the symbols associated to the territory?

Références

ALBALADEJO C. 2008. *Los aportes de la sociología para una geografía de la acción local (conferencia invitada)*. X Jornadas Cuyanas de Geografía, Mendoza, 28 al 31 de mayo de 2008, Instituto de Geografía, Departamento de Geografía, Facultad de Filosofía y Letras, Universidad Nacional de Cuyo, Mendoza, -19 p.

ALBALADEJO C. 2007. *De la pampa agraria a la pampa rural: la desconstrucción de las "localidades" y la invención del "desarrollo rural local"*. Párrafos Geográficos, Trelew, Argentina, VI, 1 ALBALADEJO C, 2006, De la pampa agraria a la pampa rural: la desconstrucción de las "localidades" y la invención del "desarrollo rural

- local”. En VI jornadas Patagónicas de Geografía “Sociedad y Territorio en el siglo XXI”, 23, 24 y 25 de Agosto de 2006, Trelew, Argentina, p 18 a 31
- Albaladejo C. 2004. *Innovaciones discretas y reterritorialización de la actividad agropecuaria en Argentina, Brasil y Francia* (trad. Isabelle Garma-Berman). In: Albaladejo C. et Bustos Cara R. (eds.), *Desarrollo local y nuevas ruralidades en Argentina / Développement local et multifonctionnalité des territoires ruraux en Argentine*. UNS Departamento de Geografía / IRD UR102 / INRA SAD / Univ. Toulouse Le Mirail UMR Dynamiques Rurales, coll. Bahía Blanca, Argentina, p. 369-412.
- BOUCHE R, BORDEAUX C., 2006, *Savoir-faire fromagers de Corse: patrimoine complexe à formaliser entre technique et culture pastorale*. En III Congreso Internacional de la Red SIAL “Alimentación y Territorios” Baeza, España, 18 p.
- BOURDIEU P., 1980, *Le sens pratique*. Paris, Editions de Minuit, Le sens commun, 475 p.
- BOURDIEU P. 1994. *Raisons pratiques. Sur la théorie de l'action*. Paris, Seuil, 251 p.
- CHAMPREDONDE M., 2007, *The source and market development of a premium product – beef from the Argentine Pampas*, *Meat Science* (2007), doi:10.1016/j.meatsci.2007.10.021, 10 pages
- CHAMPREDONDE M. BUSTOS CARA R., , 2007 (a), *Culturas migratorias y valores territoriales localizados en la ruralidad y el desarrollo del sudoeste de la Provincia de Buenos Aires. Procesos de patrimonialización de platos típicos mallorquines*. In V Jornadas Interdisciplinarias de Estudios Agrarios y Agroindustriales, 7 -9/11/2007, Buenos Aires, Argentine, 22 p.
- CHAMPREDONDE M. COUDERC J. TOURRAND J-F., 2007 (b), *Factores explicativos de la implementación de la suplementación y sus modalidades en bsheep*. In acts of 30° Congreso Argentino de Producción Animal, 3 -5/10/2007, Santiago de Estero, Argentine
- DEDIEU B. 1993. *Organisation du travail et fonctionnement d'exploitations d'élevage extensif du Massif Central*. In : *Pratiques d'élevage extensif. Identifier, modéliser, évaluer*. Etudes et Recherches sur les Systèmes Agraires et le Développement. 27 ; 303-320
- GIBERTI H., 2003, *Modernizado e insatisfactorio sector agropecuario*. En *Realidad Económica*, Editada por el Instituto Argentino por el Desarrollo Económico (IADE) N 200, p 103 a 128.
- GRANOVETTER M. 1973. *The strength of weak ties*. *American Journal of Sociology*, 78, 6, 1360-1380.
- IRURUETA M., PORDOMINGO A., GRIGIONI G., CARDUZA F., PORDOMINGO A.B., G. VOLPI LAGRECA. T, 2007, *Effects of Pasture Grazing vs Feedlot Feeding on Meat Quality of Young Steers*. *Icoms China*
- KLIKSBERG B., TOMASSINI L. (éds.) 2000. *Capital social y cultura: claves estratégicas para el desarrollo*. Buenos Aires, Fondo de Cultura Económica de Argentina y BID, 398 p.
- MARTÍNEZ ESTRADA E., 1991, *Radiografía de la Pampa*. 13 éd. Buenos Aires, Losada, 317 p.

- MORALES H., CORREA P, SALVARREY L., Noboa A., 2006, *Knowing the Strategies of Livestock Farmers in the N.W. of Uruguay. A field survey*, 4 p.
- MUÑIZ Rómulo, *Los Indios Pampas*, Ediciones Bragado, Buenos Aires, 1966, 230 p.
- SARMIENTO D.F. 1845. *Facundo*. Buenos Aires, Leer y Crear Colihue, 322 p.
- SILI M., 2000, *Los espacios de la crisis rural. Geografía de una Pampa olvidada*, Colección Sociedad y Territorio, Ed. Universidad Nacional del Sur, 179 p