

Vol. IV, Number 8, June 2015 • ISSN: 2007-6703



ESPACIO I+D

General translation Michael J. Greces



Digital Journal of the Universidad Autónoma de Chiapas
Indexed in the directory and catalog of **Latindex**,
BIBLAT and **CLASE**

ESPACIO I+D, *Innovación más Desarrollo*

Vol. IV, Num. 8, June 2015 — **English Version**

Indexed in the Directory and Catalog Latindex ,
BIBLAT and CLASE

It is a digital magazine of scientific and cultural
dissemination of multidisciplinary nature of the
Universidad Autónoma de Chiapas (UNACH).
Has a quarterly basis and record:

ISSN 2007-6703

Lucía G. León Brandi
Director

Silvia E. Álvarez Arana
Gabriel Velázquez Toledo
Editors Responsible

Wilber Oswaldo Nucamendi Madrigal
Web and Editorial Design

Diego Mendoza Vazquez
Web Master

Michael J. Greces
General Translation

University Campus, Building D,
Ejido Emiliano Zapata Highway, Kilometer 8
Tuxtla Gutierrez, Chiapas; Mexico. Zip Code 29000
Phone: 01 (961) 214 07 00 • 01 (961) 165 55 89
E-mail: espacioimasd@gmail.com,
espacioimasd@unach.mx

www.espacioimasd.unach.mx

This work is licensed under a
Creative Commons



INDEX

Articles

The corn tortilla: a national price increase and its symbolism in the context of social differentiation in urban area of San Cristobal de las Casas, Chiapas	7
Questions on the notion of inhabiting and its relationship with space: ontology and topology	44
Rural tourism and gender: the case of urbi3n model forest	62
An uncomfortable sub delegate: Jos3 Joaqu3n de Arriola (1801-1807)	96
From Indigenism to Indianism: a review of indigenous empowerment in cultural spaces and in education in the highlands of Chiapas	120
Tuberculosis, a non-reemerging disease in Chiapas: an analysis from the academy and social organizations	139
Perception of the use of videogames as a teaching resource. The case of students of education at the Autonomous University of Chiapas	153

Academic Papers

Database Administration PostgreSQL Laboratory 3. Storage and trigger procedures	172
Book review: competitiveness of tourism destinations. Cases of applied research in Mexico	188

ARTICLES



-Article by Invitation-

THE CORN TORTILLA:

a national price increase and its symbolism in the
context of social differentiation in urban area of San
Cristobal de las Casas, Chiapas

Jorge López Arévalo¹
jalachis@hotmail.com

Bruno Sovilla¹
brunosov@yahoo.it

Germán Martínez Velasco²
gmartine@ecosur.mx

Autonomous University of Chiapas¹, El Colegio de la Frontera Sur²



ABSTRACT

This article analyzes the impact of the rising price of tortillas in low to high income households in San Cristóbal de Las Casas, Chiapas. Based on field data, the study states that the tortilla is a Giffen good for poor urban households. A Giffen good is a characteristic of a product which states that as the price increases, demand does not diminish but rather increases. This contradicts the law of demand that states that the consumption of a product decreases relative to an increase in its price. In this sense, in the sociocultural context of a federal entity such as Chiapas, the process of growing indigenous urbanization has brought a separation from the primary means of food production, which is land. This study confirms that it is the poor and urban indigenous population which is greatly affected, since they have a higher Giffen behavior of a greater consumption of tortillas despite an increase in price due to the cultural character that the tortilla represents.

Keywords: *Tortillas, Giffen, Chiapas culture*

*There was a family that did not know how to plant a cornfield,
and at home there was corn.
I do not understand how you can live without a family cornfield,
I don't know what they did to get corn*
Ricardo Pozas, 1979

The study of maize in Mexico has been addressed both in from a technical perspective in relation to its origins, that establishes it to be a plant of Mesoamerican origin with special reference to Mexico and its primitive species called teosinte (Beadle, 1977) , as well as from its adaptive versatility - grown at both sea level and high altitude mountains.

In the field of social sciences maize has also drawn attention for study from various disciplinary perspectives such as the economy, with various analysis focusing on the economic effects in the Mexican population and maize production related to trade and tariff liberalization (Calva, 1993) as well as the effects from the use of this crop for energy generation purposes such as ethanol (SIAP, nd); There have also been important efforts related to food security risks for Mexican rural populations that have been identified to be contingent on the purchase of the staple grain and loss of quality of its consumption, due to the displacement of the native, better quality, seed. (Appendini, et al, 2003).

As part of the studies of maize in Mexico, this contribution is presented of which the main objective is to test the concept of a *Giffen good* against a situation in which there is a price increase of a substantial dietary product for thousands of Mexicans, especially in the broad population bases of rural and urban areas. Under this statement, some research questions were raised: With the increase in the price of tortillas in Mexico, what is the response from the poorest sector? Do they react by reducing the

consumption of tortillas? Or conversely, Do they increase consumption while decreasing the consumption of other foodstuffs?

Thus, this paper presents the results of a study on the differentiated impacts of tortilla consumption due to price increases. The effects can be seen according to the different social strata in an urban area in which there coexists indigenous and mestizo populations. In the first section, the raising of the price of corn tortillas is contextualized in an environment such as found in Mexico, where the tortilla is conceived not only as a food product, but amounts to a symbol and part of national identity in which converge the different layers and cultures of Mexican society. In the second section, the question of corn under the North American Free Trade Agreement (NAFTA) falls; In a third section, the *ad hoc* theoretical assumptions of an economic nature are presented, which shall be contrasted with the findings of the field work and the results that are presented in the fourth section.

CORN: SYMBOLISM AND NATIONAL IDENTITY

The writer Jorge Ibargüengoitia said that the tortilla for Mexicans is “food, plate, utensil and stability.” The four references refer to the various simultaneous uses of tortilla: as its own proper food; in its capacity as a taco (plate); as a table utensil and serving spoon to eat other products, and of course that it becomes emotional stability and provides food security for its cultural representation that goes beyond its nutritional character. Corn tortillas, due to their widespread use unlike other Mexican food products, constitute the cultural artifact that cuts through and unites the concepts of class, ethnicity and race, and this quality becomes a symbol of national identity whose significance is elevated to the realm of the sacred. Hence it is said that Mexico is “a community of corn.” Undoubtedly, the origins of this myth is found in the indigenous component that now is formed from the ethnic mixing and the same Mexican nation. In the *Popol Vuh*, the

Quiche story, it is said that the origin of human beings starts from that seed. Also, on the stone sarcophagus of King Pakal found in Palenque, Chiapas, the King is reborn and transformed into the maize god as a sign of his immortality (Fazio, 2007) is displayed. All indigenous myths of Chiapas refer to corn as sacred food and even as the physical-spiritual creation. In the *Chilam Balam*, it states that the Maya were born from corn, they are men of corn. It is equivalent to the mud of the Christian creation. The Huichol people, for example, have stated that “our food is corn, corn is sacred. We do not know how to speak Spanish well, but we know how to talk to the corn.” (Quoted by Silvia Ribeiro, *La Jornada*, 11/02/2006).

These references suggest the idea that corn and tortillas in Mexico emerged as an ethnic product. However, in its historical trajectory to the extent that that product was also assimilated by the different social classes, over the passage of time it has gone on to be an exclusively ethnic product to a multicultural product. Along with Mexican migrants, it has transcended borders to position itself as a transnational device that endorses, in the distance, trans-territoriality of Mexicans. In two studies conducted in the United States in the late 90s, the tortilla industry was one of the fastest growing segments of the baking industry (Cornell, 1998, quoted in Lind & Barham, 2004); Bacon also noted in 1996 that more than 25,000 thousand workers, mostly immigrants in the United States, produced tortillas with a value of 2.5 billion dollars. (Bacon, 1996, quoted in Lind & Barham, 2004)¹

Among the politically left leaning social segments in Mexico and before the foreseeable effects of the free trade agreement with North America and its imminent impact on agricultural production of the country, the slogan “Without corn there is no country” was coined and was repeated again and again in marches and

¹ The previous does not deny that in some families on the border states of the United States tortillas have been consumed before

rallies that surplus, subsistence and infra-subsistence farmers cried to government institutions dedicated to the economy of the Mexican countryside. This slogan has been held not only as a metaphor, but as a sociological truth, which has us recall that this ancient grain is one of “the three friends of the poor: corn, beans and chile” (Guillermo Prieto, said Cepeda, 2007).

Before the structural adjustment of prices, Mexican society had already experienced the great changes brought by the agro-industrial processes that people had showcased as signs of modernity. In its production, tortillas went from hand-molded and deposited individually for cooking on the legendary *comal*, to be homogeneous, industrially stamped, through the tortilla machine that cooks and drives its wholesaling. Corn rose from initially being an input as *nixtamal* and *masa*, to becoming cornmeal. By modifying its consistency and texture and ceasing to be dough (*masa*) and becoming an industrialized powder (flour) its consumption as an ancestral drink, called *pozol* by the indigenous population, came to an end. Given these historical events, today the consumer population of Mexican tortillas is divided into two social groups in relation to the type of tortillas consumed: the demographically dispersed indigenous rural population that still consumes the ancient *criollo* (native) corn that is transformed into *nixtamal* and *masa* as the ingredient for making tortillas the traditional way, and urban residents of varying incomes, mestizos and indigenous people who are consumers of urban industrial tortillas, whose primary ingredient tends to increasingly be genetically modified hybrid maize, or what is commonly called “yielding varieties” that prior to being a tortilla was turned into cornmeal. Within this large population, urban poor are composed of mestizos and indigenous people who purchase tortillas and who constitutes the vast majority of Mexicans who are exposed to price increases. They are the most vulnerable and live in extreme poverty.

In short, the above illustrates that corn and tortillas were essential Mexican food since time immemorial -regarded as of divine origin, and that with the passage of time they took on symbolic national benchmarks for quality that the Mexican population would confer upon them. However, in the scenario of a market economy, which in the past they were simply constituted a value of intra-household use where they were produced, processed and consumed, it is now revealed as a true commodity circulating in a stock market exchange in which tortilla flour sellers and buyers dispute prices, breaching not only the economic conditions of its poorest consumers, but also its inherent sacredness.

MAIZE AND NORTH AMERICAN FREE TRADE AGREEMENT (NAFTA)

The NAFTA has converted Mexico as a major player in the globalization process, participating in the new international division of labor, both from the world industrialization through the export and import of manufactured goods and participation in the export and import of agricultural products and labor, mainly to the United States (López, Martínez and Pelaez, 2011).

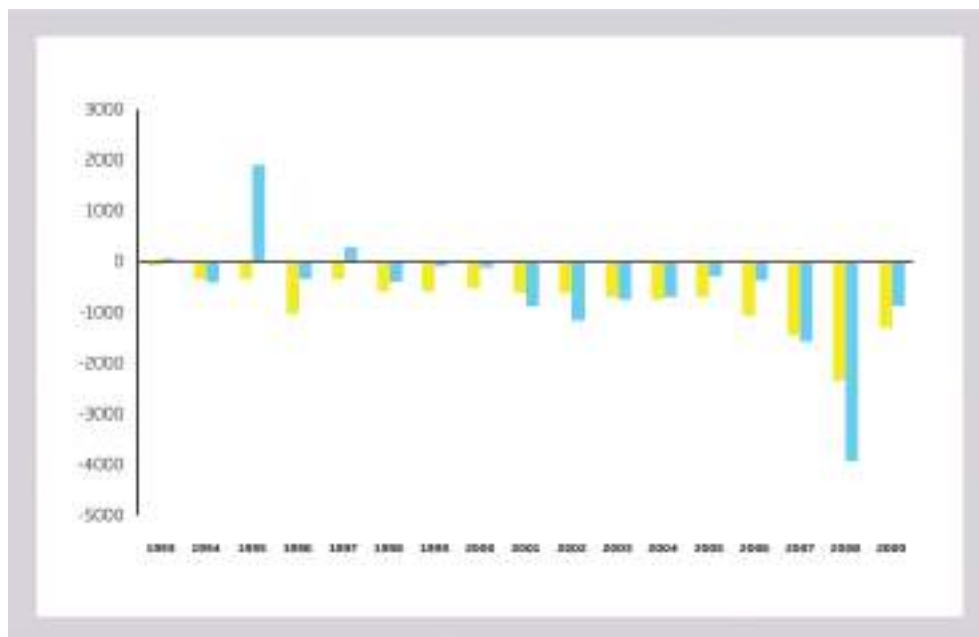
However the effects of NAFTA and globalization are not homogeneous either for countries, regions or sectors. Moreover, in the same industry there coexist different impacts because of structural heterogeneity². The Mexican agricultural sector is no exception. These subsectors have benefited from the opening of the markets and others have been harmed. In the case of Indigenous agriculture,

²The heterogeneous structure can be defined by considering the productive structure or the occupational structure. The productive structure is heterogeneous when there coexists sectors, branches or activities where the work productivity is high or normal (that is, it reaches the levels that allow for the available technologies), with others in which productivity is much lower. This productive structure corresponds to a certain type of occupational structure. (Pinto, 1976)

which is largely devoted to consumption, consequences are indirectly perceived (Minutti, 2007). As their staple food, maize imports somehow affected their domestic production because with the low prices, at first it was more profitable to buy than to produce corn.

With NAFTA, the trade deficit in the agricultural sector became the norm. According to Figure 1, in the span of 17 years (1993-2009) relating to the balance of trade surplus in the agricultural sector, surplus was observed only in 3 years: 1993, 1995 and 1997, while through the behavior of corn in Mexico was revealed as a net importer throughout the period, with a significant increase in imports in the last three years³.

Figure 1. Trade balance of maize and total agriculture of Mexico, 1993-2009 (millions of dollars)



Source: Prepared based BIE-INEGI.
<http://dgcnesyp.inegi.org.mx/cgi-win/bdieintsi.exe/NIVR55#ARBOL>

³ It should be noted that this surplus is connected to the devaluation of the peso that occurred in 1995 and 1997, which demonstrated a high sensitivity of the agricultural sector before the variation of the type of true exchange (Puyana and Romero, 2009).

In Figure 1 it can be seen that the maize deficit can largely be explained by the deficit of the balance of agricultural trade. Moreover, in several years (1996, 1998, 1999, 2000, 2004, 2005, 2006 and 2009) the trade deficit of maize even exceeded the total of the agricultural sector. It appears that the demand for corn shows lower sensitivity to the exchange rate, because even with the strong devaluation in 1995 and 1997 it continued to be imported⁴.

Following the stagnation of domestic production and low grain prices in the international market, an increase in maize imports was recorded. The crop was affected not only by the North American Free Trade Agreement (NAFTA), but also by internal structural factors such as lack of access to credit for producers of this crop, limited irrigation infrastructure to raise yields, market concentration in a few private companies, limited scientific research in this field and limited subsidies granted by the Government in this agricultural sector compared to those who are given to producers in other countries (CEFP, 2007).

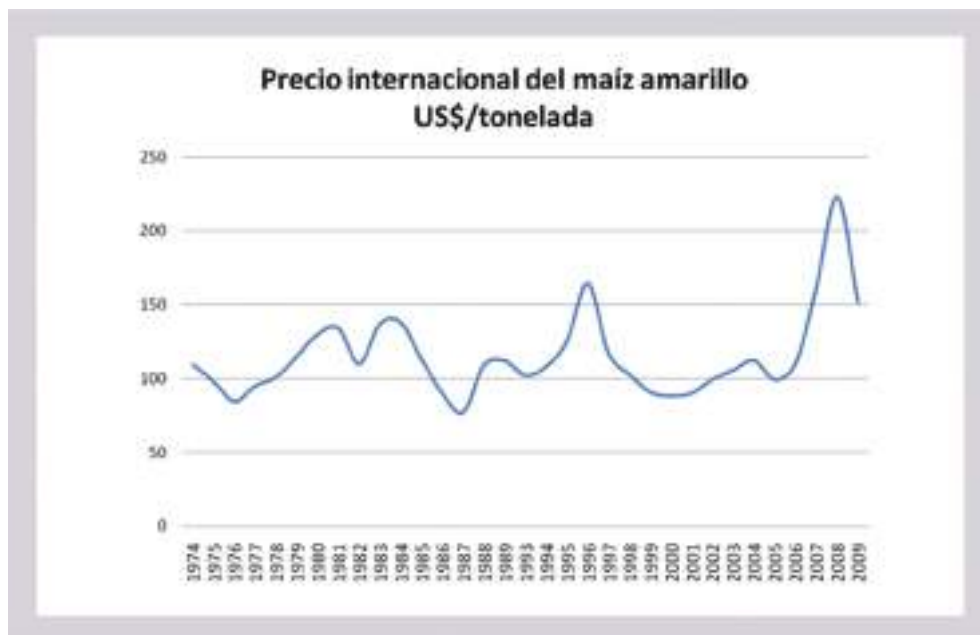
By 2006 the price of imported maize was low, however, from that year onwards it increased significantly due to increasing demand for grain ethanol production in the United States. Hence, in early 2007 the problem of the maize market in Mexico sharply increased because on the one hand there had been a fall in domestic production, and on the other, decreased imports. Coupled with hoarding by only three companies (Maseca, Cargill and MoH), upward pressure was generated on the price of the product and consequently an increase in the price of tortillas- the final product of the chain (CEFP, 2007).

With NAFTA, Mexican farmers first had to cope with cheap corn from the United States, and because of its low price there was

⁴ In 1996 maize imports increased atypically in the first years of NAFTA due to that the government of the United States gave a billion dollar loan through the Commodity Credit Corporation (CCC) to buy the surplus of corn in the United States. Starting in 1997 and until 2002, the CCC provided financing through the GSM-102 program, which among food grain included exports of maize. Between 1997 and 2002 ASERCA reported an accumulated financing of total food grains of 1,439,000,000 dollars (from Ita and Lopez, 2003, p. 25)

in increase in imports that covered the consumption needs that domestic production did not satisfy. Farmland was abandoned, and the planting of corn was substituted by other products. In many cases farmers were migrants to the United States. Later, when prices rose, imports were revealed inelastic and corn producers were unable to increase their production of maize because of the aforementioned problems. In the case of indigenous agriculture, due to that fact that in times of low prices (1997-2005, see Figure 2) corn was bought, this also affected the farmers by them neglecting their production and, in many cases, totally abandoning their culture.

Figure 2. International price of yellow corn U.S. \$ / ton



Fuente: Source: Own design based on USDA data
 <<http://www.ers.usda.gov/Browse/view.aspx?subject=Crops>>
 Note: FOB (free on board before freight) prices in the Gulf of Mexico

Despite this, according to Barkin, it must be recognized that although the panorama of farming has been desolate there were some indigenous peasant segments that have developed survival strategies by diversifying their productive activities, “the Mexican

peasantry (including indigenous groups) is reorienting itself and the rural economy in response to declining opportunities in urban industrial society. These communities have diversified their economies, developing specialized high quality products, such as organic or fair trade (*fair trade*) products, exotic fruits, free range chicken and certified timber production, ecotourism, and even environmental services like carbon sequestration and the restoration of aquifers “(Barkin, 2006: p.150).

Barkin’s analysis is interesting because it shows how the indigenous peasant agriculture and corn production tries to regroup against the threats of globalization and economic liberalization. However we have seen that NAFTA adversely affected corn growers by their low productivity compared to large producers in the north. While the first could not cope with the initial reduction of prices, the most affected small producers in the most marginalized areas succeeded in placing their surplus on the local market and then they began to migrate en masse, as has been the case with producers from the Frailesca region of Chiapas (Ballinas, 2011).

In agriculture, asymmetries between Mexico and the United States are enormous. If in 1990 the US agricultural productivity per worker was 8.5 times higher than Mexico, in 2006 it exceeded 11.5 times (Puyana and Romero, 2008). The asymmetries are also important within Mexico, as national productivity per agricultural worker is 2.6 times greater than that of Chiapas, while Sonora is 8.3 times higher (Lopez, Martinez Pelaez, 2011). It should be noted that these differences would be even larger if instead of averages a comparison between mechanized farming entities and the poorest population, indigenous groups, were taken.

That is why in the most backward regions, where the weight of the pre-capitalist relations of production is very high (in terms of population), NAFTA accentuated the decomposition of these productive ways. In Chiapas, the situation was further complicated when considering the coexistence of pre-capitalists with backward capitalist segments. In these sectors a process of disin-

tegration of the old and traditional forms of organization of production (indigenous communities, indigenous peasant economy, etc.) is observed and, therefore, the corresponding expulsion or lack of absorption of manpower that worked there. Faced with this situation, above the worst of all possible worlds is presented: on the one hand, pre-capitalist sectors that are not able to retain their workforce and, on the other, a capitalist sector that cannot absorb these expelled sectors nor its own labor. Subsequently, stagnation of the capitalist sector and non-capitalist decomposition is reached (Valenzuela, 2011).

It is for that reason that we maintain that NAFTA threatened the indigenous peasant agriculture since it has low productivity and is unable to face competition. For this reason in the nineties the challenges and demands of ethnic groups increased and became more visible in the public space, and so in some countries in the region there emerged new social actors and in some cases new political actors that challenged traditional ways of doing politics (Bello, 2006).

CHANGES IN RELATIVE PRICES IN THE WHITE-CORN TORTILLAS PRODUCTION CHAIN

The previous section discussed how NAFTA involved a process: first, low prices for corn imports effected producers and later, when prices rose, producers were not able to respond with more production due to the structural damages to the maize subsector.

However, in Mexico the increase in tortilla prices in recent years has been attributed to rising international corn prices. While this is the basic input for producing tortillas, its price has increased less than the price of tortilla and was even slightly less than the increase in CPI (inflation). Here it should be noted that basically yellow corn is imported and tortillas are made mainly with white corn. It should also be noted that sometimes

yellow corn for making tortillas is used, even though the latter being primarily for animal consumption it is also used for human consumption. It is required to clarify that if yellow and white corn were fully differentiated products, it would mean that the first would follow the price in the US, while the price of white maize would be determined by the conditions of supply and demand in Mexico. However, while they are not perfect substitutes, both markets are linked to a certain point by supply (for their production requirements are very similar) and demand (through substitutability as food livestock) (World Bank, IMCO, 2007).

Below we present how inflation has evolved by the national index of consumer prices, the rate of the increase of corn prices, corn flour, tortillas and minimum wages after the enforcement of the free trade agreement with North America (NAFTA).

Table 1. Change in the national consumer price index, tortillas and salary

PERIOD	NICP	Tortillas	Minimum wage	Corn	Flour
1994-2008	500.6	945.3	368.5	491.6	697.8
Tortilla difference	88.8	---	156.5	92.3	35.5

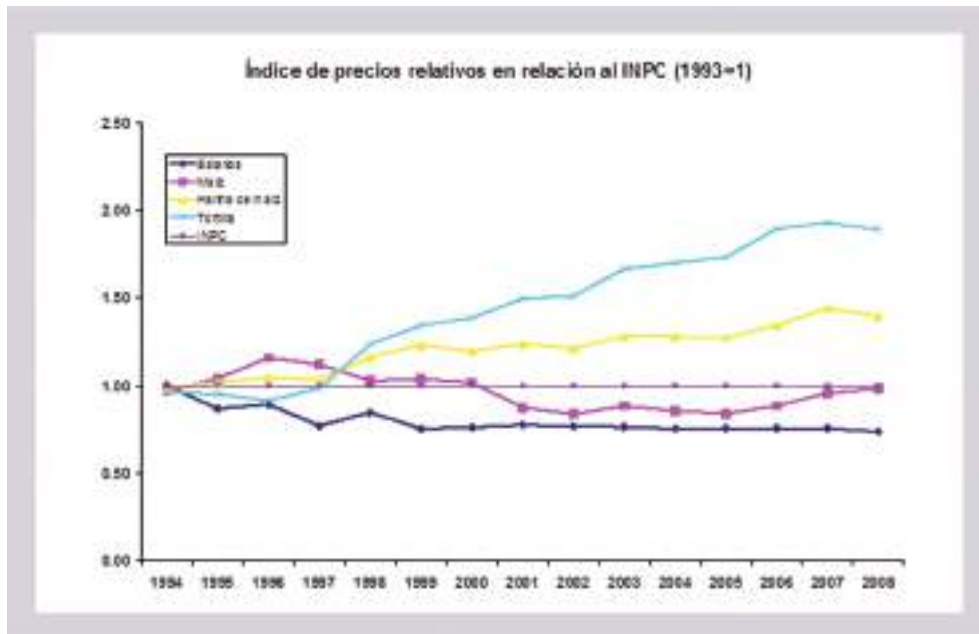
Source: Bank of Mexico and CNSM

As shown in Table 1, the increase in the price of tortillas has been 92.3 percent higher than corn, 156.5 percent compared to the variation of wages, 88.8 percent to the increase in inflation measured by the NICP (National Index of Consumer Prices / *Indice Nacional de Precios al Consumidor- INPC*) and just 35.5 percent from corn flour in a period of operation of NAFTA (1994-2008). You can also see that in recent years the rising price of tortillas has always been superior to changes in minimum wages and in-

flation, which intensified during the administration of President Vicente Fox (2000-2006) (see chart 3).

This means that in the production chain for white corn to tortilla, increasing the price of imported maize increased benefits which were not intended for corn growers but were concentrated and distributed in successive phases in the transformation of maize flour and in the final product represented by the tortilla. If the price of tortillas grows more than the minimum wage, there is no doubt that real wages of urban and rural poor are experiencing a decline in terms of tortilla (see Table 1). Moreover, if the price of corn rises at a smaller scale than the tortilla and corn flour, then it means that their relative price has deteriorated despite price increases in the international market.

Graph 3. (salaries, corn, corn flour, tortilla, NIPC)



Source: Authors' calculations based on data from the Banco de Mexico

From December 2000 to December 2008, the cumulative price increases have been 98.41 percent in the case of tortillas, 69.29

percent for cornmeal and 41.03 percent in maize (Banco de Mexico)⁵ conditions with a decline in real wages. That situation was in itself an outrage for the economy of the poorest regions of Mexico such as Chiapas, specifically for family economies of the poorest urban and rural sectors whose alimentation is largely based on the consumption of tortilla. It was therefore revealed that this situation also benefitted the company Maseca which is monopolizing much of tortilla dough production (the other company is Minsa and the third is Cargill - one of the worlds oligopolies), while there was a change in relative prices in the increase in the price of tortillas during the last federal administration of 62.17 percent higher than that of cornmeal and 476.61 more than corn. Therefore, the price of maize flour has increased 255.56 percent more than corn, even if it serves as raw material for the flour industry. Hence, there is a significant change in relative prices favoring the flour and tortilla vendors and hurting consumers and producers of corn. In other words, in the chain of corn prices (raw material) -flour corn (industrial inputs) tortilla (final product), economic inequality is set since the most adversely affected on the supply side are corn producers and on the demand side, mainly low-income tortilla consumers due to the reduction in real minimum wages in terms of tortilla (see chart 3).

In the case of Chiapas 271.581 corn producers are considered sub-subsistence (92.2 percent)⁶, 21,245 medium and surplus (7.2)⁷, 1600 large and transition (0.5) and only 42 very large or capitalists (0.01) (SAGARPA, cited by Miranda and Espinosa, 2007). From these production figures, one can deduce that the

⁵ <<http://www.banxico.org.mx/SielInternet/consultarDirectorioInternetAction.do?accion=consultarCuadro&idCuadro=CP185§or=8&locale=es>> [consulted on June 15, 2010]

⁶ It is considered that each producer has a family composed of 5 members; there is an average of 1.35 million buyers of tortilla or corn among the producers of the grain.

⁷ If it considered that a family of 5 is the equivalent of 106, 225, which are medium and surplus but who eventually buy corn and tortillas.

large or capitalists surplus sellers are those who lose because they are the ones who mostly attend the market as sellers of maize (22,887 corn producers), while sub-subsistence farmers who constitute the vast majority of most producers simply do not achieve or produce enough for their own consumption. Hence the sub-subsistence producers have become buyers of maize and could theoretically be the ones to benefit from the decline in the relative price, however, most of them appear in the market as buyers tortilla or flour tortilla corn, not corn grain, and consequently their capacity as consumers is affected in order to buy tortillas at relatively high prices.

Another seriously affected sector is the urban and rural poor, given that the increase in minimum wages represented less than half of the increase in the price of tortillas. In relative terms, the increase in minimum wages has been lower compared to the growth of inflation and even more in relation to the price of the tortilla itself. (See Table 1 and Figure 3).

Therefore the following question emerges: In what hands is concentrated the increased value added in tortilla production? The response is that the producers of corn flour and tortillas win and the consumers of tortillas lose, especially the urban poor and those rural populations that have stopped producing corn and attend the market as buyers. It should be noted that the increase in corn prices in recent years has been the result of dependence on US corn. However, the rising price of corn was lower than the increase of cornmeal, whose producers, as oligopolies, still enjoy the use of a non-competitive market and the tortilla producers incur costs, not only for flour but other inputs to final consumer.

The increase in the value added chain in corn-tortillas tends to focus on corn flour and tortilla, the first being an oligopolistic market and secondly a relatively competitive market (see Table 1). Thus, it is confirmed that the liberalization of corn trade under NAFTA was an accentuated poverty and inequality trap for the urban poor and indigenous communities of Chiapas.

TORTILLA AND *GIFFEN GOODS*

In 1890 Alfred Marshall observed a common behavior in the society to which he called the *law of demand*, which established the inverse relationship that occurs between price and quantity demand of a good. But in 1895, Robert Giffen⁸ heralded a possible exception to this law which is that before a price increase of a good the population reacts by increasing their consumption of that good, well away from what the law of demand prescribes.

Jensen and Miller (2002), starting from rice and noodles market in some regions of the south and north of China, show empirical evidence of a Giffen behavior. According to these authors, in a family a Giffen behavior can be detected when being in a state of poverty, their consumption is based predominantly on a low cost product but has a high caloric content⁹.

Mckenzie (2002) based on data from the National Survey of Income and Expenditure (ENIGH) in Mexico, says there is no evidence of Giffen behavior in this country in the case of the tortilla. According to that study the tortilla would be an inferior good but not a Giffen good. The main reason according to the author, would be “*Mexican Consumers may have a wider array of available substitutes than do Chinese consumers, So that tortillas do not play quite the same role as rice does in China*” (2002, 17). Considering that the price effect can be deconstructed into the sum of a substitution effect and an income effect, and assuming that the tortilla (as the author himself confirms) is an inferior good, this conclusion would imply that an increase in

⁸ Although it seems that the first to declare this exception was Simon Gray (Stigler 1947 and Masuda & Newman 1981).

⁹ The Giffen behavior cannot happen in homes in extreme poverty, where only one product is consumed since in this case an increase in price obliges a reduction in consumption. It requires that the home has a minimum diversified consumption, in this sense its level of poverty cannot be extreme.

tortilla prices would give a place to a significant substitution effect in absolute values that exceeds the income effect.

We will try to understand if in the case of tortillas there may be evidence of Giffen behavior among the urban poor sector of the population. If so, the rising price of tortillas bring deeper redistributive consequences of what at first glance it might seem, since the mentioned social group would be greatly prejudiced in favor of the tortilla vendors.

The aforementioned assumption is that if the price of this staple food (tortilla) increases, poor consumers cannot hope to acquire other alternative foods. However, as a cultural good, there is a tendency to increase basic consumption. But insofar as the consumer's income grows, there are new satisfactions, and consequently there unfolds purchasing impulses that were not possible when income was lower.

Undoubtedly, the increase in tortilla prices reduces the purchasing power of the household due to the nonexistence of a compensative increase in nominal income. If the strength of the "income effect" is less than the "substitution effect", the traditional law of demand remains valid: product price increases and demand decreases; while the Giffen paradox arises when the income effect is opposed to the substitution effect as with inferior goods, and that in absolute terms is higher: in this case as the product price increases the demand grows. Goods showing such a demand curve are a subset of inferior goods or goods of the poor; meaning that the Giffen goods are necessarily inferior, but not all inferior goods are Giffen.

Our hypothesis is that in the poorest sectors of society, the tortilla is assumed as a Giffen good- in other words its consumption increases as the product price increases unlike beef, milk, fruit or beer, whose consumption increases as family income increases and decreases when the level of income decreases. In the case of tortillas, if household income increases there is a decrease in the consumption of this product-replaced by other

satisfactions. And on the contrary, if you lower the household income consumption tends to increase. Hence, one could say that the tortilla becomes a good “safe haven” for the poor allowing them to “kill hunger”.

This can be illustrated with an example involving tortilla demand. It is known as a product of high consumption in Mexico among the poorest sectors. Under the assumption that a family is composed of father, mother and three young children, where the only person that brings money to the house is the family head who earns \$ 200 a month working in low-skilled occupations, the consumption of tortillas and beans will be high, because their alimentation largely depends on these products which are the staple food of the poor in Mexico. Each month this household consumes 30 kilos of tortillas, 25 kilos of beans, and 3 kilos of meat. Now suppose this person finds a permanent, quite well paid job earning a salary equivalent to \$ 500 a month, plus \$ 100 that he continues to earn with an eventual weekend job. Household income is now \$ 600 per month and the consumption pattern changes; In other words, they begin to eat 5 kilos of meat per month, 50 eggs, and 5kg. of sweet bread. The consumption of tortillas and beans decreased and is now 25 kg. of tortilla and 20 Kg of beans, because the consumption of novel foods modified the amounts of consumption of beans and tortillas. The result is that income is 3 times higher, but bean consumption is reduced by 20.0 percent, and the tortilla 16.7 percent. In microeconomic language, tortilla and beans, in this case, are inferior goods- in other words, demand increases as the income of consumers decreases.

In the opposite situation, where a poor salary is present and under the assumption that the price of tortillas rise from 60 cents to 85 cents a kg, or an increase of 42.0 percent, under the Giffen assumption this family is expected to react by eliminating meat consumption and buying more tortillas and beans. So the end result is a denial of the law of demand: the price of tortillas increases and tortilla consumption also increased relative to the

incomes of the impoverished sectors. If we represent a graph with this result, we should see the demand for tortilla curve slope upward, which shows a clear exception to the traditional law of demand, which is a negative slope.

In more technical language, we can say that if you increase the price of tortillas and beans, their consumption should decrease by the substitution effect, but grows by the income effect. Every time the price of a product increases, consumers are looking for a replacement and this trend would apparently not have exceptions. However the substitution effect in the case of tortilla consumption by the poor does not operate, because for cultural reasons they do not conceive the use of alternative assets to the tortilla, such as white bread.

TORTILLA: POPULAR RESPONSES TO THE PRICE INCREASE¹⁰

This section shows the results obtained from the survey of 150 questionnaires applied to socially differentiated households in the city of San Cristobal de Las Casas, Chiapas, Mexico. Based on the analysis of social indicators of basic geostatistical areas (BGA) of the National Institute of Geography and Statistics (INEGI, 2005) Two colonies with lower rates of welfare and two upper class subdivisions were selected. For the application of the questionnaire the whole household of four selected areas were considered. Of the total number of questionnaires, 100 were for households in economically emarginated areas of

⁹ Those that participated in the registering of field information, Juan Santiz Giron, technician at El Colegio de Frontera Sur, and the students from the Faculty of Social Sciences of the Autonomous University of Chiapas: Fernando Balboa Cruz; Claudia Guadalupe Sánchez Santiz; Emmanuel Arrazola Ovando; Bibiana Alejandra Kánter Gutiérrez; Miriam Citlaly Vázquez Sánchez and Segundo Gregorio Ballinas Cano. Juan Sántiz Girón, who captured and processed the 150 interview questionnaires.

the city whose names are: Plan de Ayala and Primero de Enero, while the remaining 50 questionnaires were applied in homes of two of the wealthiest colonies city: Bismark and Villa Mayor. In the first two colonies indigenous populations were identified- the Tzeltal and Tzotzil ethnic groups whose residence in the city is explained by the phenomenon of immigration, particularly from the political events of 1994 in the state; while in the second two there were mainly wealthy families the majority of which were originally from the town in question. A single questionnaire with modules on housing conditions, demographic characteristics of family and household behavior against increases in the price of tortillas and their level of consumption was applied.

SOCIOECONOMIC DIFFERENTIATION

Despite the obvious about social inequality can be assumed between these two populations, some indicators of social differentiation should be mentioned in order to present the final trends in the consumption of tortillas. First, 86.0 percent of wealthy families have an income amounting to more than 10,000 pesos a month, while the remaining 14.0 percent said their income is between 5 and 10 thousand pesos. In this sector, one hundred percent of households reported having all the electro-domestic appliances than any middle class household has (computer, stove, refrigerator, washing machine, blender, television, radio, stereo, video player). Meanwhile, in the homes of the two marginal urban settlements, variation of income was higher, because the result gives a percentage of 31.0 percent of those households whose income lies between 500 and 1,000 pesos a month ; 43.0 percent are located in the range of revenues from 1001 to 2500 pesos- a range in which the bulk of this subset of the population is located; and finally, there is the range of 2501-5000 pesos where 26.0 percent of that population is located. Within the sub-

set of poor urban households, the segment of households whose income is 500-1000 pesos and, as stated above, constitutes 31.0 percent with a total lack of any type of electro-appliance in the home, that is, apart from cooking with natural elements such as coal and wood, neither have the means to preserve food and much less other devices of entertainment and distraction. The most telling indicator of the level and socioeconomic differentiation is related to vehicle ownership such as in the marginal urban household sector of the first two income groups (500-1000; 1001-2500) where all lack of any type of vehicle. But in the next group (2501-5000) 25.0 percent of households have a car, besides having some entertainment devices; while in the last two income groups (5001-10000; 10001 and more) all households have at least one vehicle.

Based on the above, the data allow the differentiation of the entire study population into three social strata, the first two that are integrated into the urban-marginal population, and those who are socially differentiated by the level of income: Low income that is in a situation of *extreme poverty* whose income range is from 500 to 1000 pesos a month, and added another of *half poverty* that is comprised of income whose ranges are: 1001-2500 and 2501-5000. The third group is made up the ranks of middle to high income ranging from 5000 to 10000 and 10001 pesos and more, which for purposes of this study will be called *upper middle class*.

Regarding family size, we find that the range of 3-5 members is covering the highest percentage in all surveyed households in the area, regardless of social status. That is for example for both households poor sectors as well as middle class and above, in most of them there is a greater presence of a household size from 3-5 members; while the difference make larger homes because they are concentrated in the poorest households whose income is from 500 to 1000 pesos and 1001-2500 pesos where the largest family size prevails (6 members and more), this accounts

for 25.0 and 41.3 percent respectively. By contrast, in the case of upper-middle class sector, the largest family size drops to 2.6 percent of total revenue for the range of 5 to 10 thousand pesos, and 0.0 percent higher in the range of 10000 and more.

Within the group of extreme poverty, 80.6 percent said they have a daily intake of food once a day, 9.6 percent twice a day and an identical percentage three times a day, while in the two subgroups of average poverty as well as the two subgroups of the third sector (upper middle class) even though each bear a considerable social distance, have expressed an intake of three times a day. However, it is clear that while the first two layers (extreme poverty and poverty) there is a difference in relation to the number of times a day food is eaten (once vs three times), there is another relation to the food quality, since in both groups, although the staple diet is based on the tortilla and beans, complements of these products are different because in the first layer (extreme poverty), tortillas and beans become the only means of food, accompanied only by chili and salt; while in the second tier (average poverty), the tortilla and beans are complemented at times with small portions of meat, vegetables and eggs (Table 3). In that sense, the social union can be seen through both sectors for tortillas and beans, but there are socially differentiated by the number of times per day that they consume the products, as well as the role that they products have in this differentiation which are complements. Moreover, the difference between these first two subsets of urban-marginal sector with the third (upper middle class) sector constituting the wealthy population of the study, lies not only in relation to the number of times per day that food ingested, but also the quality and variety of the food because in the latter sector, tortillas and beans go from being a staple to being a supplement, while consumption of meat, eggs, sausages, dairy products, bread, pastas, vegetables, grains and fruits are part of the staple diet of daily consumption (see Tables 2 and 3).

Table 2

Alimentos Consumidos	FRECUENCIA DE CONSUMO DE ALIMENTOS, SEGÚN INGRESOS Y NÚM. VECES AL DÍA									Total						
	500-1000			1001-2500			2501-5000				5001-10000			10000		
	1 %	2 %	3 %	1 %	2 %	3 %	1 %	2 %	3 %	1 %	2 %	3 %	1 %	2 %	3 %	%
Tortillas	25	16.7	3 2.0	3	2.0	2 1.3	41 27.3	26 17.3	26 17.3	7 4.7	7 4.7	43 28.7	43 28.7	7 4.7	7 4.7	150 100
Erijol	26	17.3	3 2.0	2	1.3	2 1.3	41 27.3	26 17.3	26 17.3	7 4.7	7 4.7	43 28.7	43 28.7	7 4.7	7 4.7	150 100
Huevos																109 100
Leche																38 100
O/prod. Lácteos																14 100
Cereales																14 100
Chile																83 100
Sal																31 100
Verduras																43 100
Frutas																34 100
Carne																14 100

Fuente: Elaboración propia con base en el censo de sobre consumo de tortillas en San Cristóbal de Las Casas.

Table 3

Alimentos consumidos	CONSUMO DE ALIMENTOS, SEGÚN SUBSECTOR E INGRESOS Y NÚM. DE HOGARES											
	Pobreza extrema		Pobreza media				Clase media-Alta					
	500-1000	%	1001-2500	%	2501-5000	%	5001-10000	%	+10000	%	Total	%
Tortillas	31	20.67	43	28.67	26	17.33	7	4.67	43	28.67	150	100.00
Frijol	31	20.67	43	28.67	26	17.33	7	4.67	43	28.67	150	100.00
Huevo			20	23.26	16	18.60	7	8.14	43	50.00	86	100.00
Leche			20	23.26	16	18.60	7	8.14	43	50.00	86	100.00
Otros productos lacteos							7	14.00	43	86.00	50	100.00
Cereal	31	20.67	43	28.67	26	17.33	7	14.00	43	86.00	50	100.00
Chile			43	28.67	26	17.33	7	4.67	43	28.67	150	100.00
Sal	31	20.67	43	28.67	26	17.33	7	4.67	43	28.67	150	100.00
Verduras			20	23.53	15	17.65	7	8.24	43	50.59	85	100.00
Frutas			15	18.75	15	18.75	7	8.75	43	53.75	80	100.00
Carne			10	13.16	16	21.05	7	9.21	43	56.58	76	100.00

Fuente: Elaboración propia con base en el censo de sobre consumo de tortillas en San Cristóbal de Las Casas.

Based on these results, it should be noted that in Chiapas, as in most of the country, the consumption of tortillas and beans even though widespread have different roles and contributions according to the social sector in question, because for some it is the only food source; elementary, basic and every day, and for others consumption will also be everyday, but as a dietary supplement. Hence tortillas and beans are formed as the cement of a culture like Mexico for its widespread use, but according to their nutritional character it simultaneously becomes the medium that segments society, without ceasing to be the two most popular consumer products across the country.

CONSUMPTION 4.2 TIMES TORTILLA PRICE INCREASE

When asked how often tortillas were bought before experiencing increases in the price, responses were varied depending on the amount of income. It is also worth noting that in order to avoid distortion would mean taking the absolute consumption data in kilograms by family income, we proceeded to generate a more accurate indicator which was to divide the purchase of tortilla in kilograms between the number of working household members thus resulting in consistent data on consumption *per capita* in grams of tortilla. On this basis, the following results were obtained:

According to Table (4) , it can be seen that before the rising price of tortillas, the whole study population had a different behavior with each other with respect to the volume of consumption of tortilla. For example in the stratum of extreme poverty, it is seen that the majority consumption stood in the range of 401-800 grams. with 56.2 percent of total households, without underestimating 31.3 percent consuming 301 to 400 g, *per capita*; as in the same income group, a percentage of 12.5 percent of households had a consumption *per capita* located in

the following range is 801-1500 g. which reveals that along with the first data from the first consumer range a high intake tortilla in that social stratum.

Moreover, in the first group of income that forms the average poverty of 1001-2500 pesos per month, tortilla consumption tends to concentrate in the consumption range from 401 to 800 grams. whereas in that range is located 45.1 percent, preceded by a 29.1 percent is in a lower range is 301-400 grams. and 25.8 percent in the range of 201-300 grams.

Table 4

Gramos	Consumo de tortilla antes y después del incremento del precio									
	Pobreza extrema		Pobreza media				Clase media-Alta			
	500-1000		1001-2500		2501-5000		5000-10000		1000 y +	
	Antes	Después	Antes	Después	Antes	Después	Antes	Después	Antes	Después
125-200							61.1	67.5	71.4	85.7
201-300			25.8	21	20.8		30.9	32.5	28.6	14.3
301-400	31.3	8.6	29.1	22	33.3	45.9	8.0			
401-800	56.2	81.2	45.1	57	33.3	44.1				
801-1500	12.5	10.2			12.6	10.0				
	100	100	100	100	100	100	100	100	100	100

Fuente: Elaboración propia con base en el censo de sobre consumo de tortillas en San Cristóbal de Las Casas.

In the next group of the same sector of extreme poverty, which corresponds to income range of 2501-5000, the trend is more dispersed, because they basically are distributed almost evenly into three ranges of consumption per capita : 201-300 grams. 301-400 grams. and 401-800 grams. whose percentages are 20.8, 33.3 and 33.3 respectively. According to the information, it seems that in this social stratum there were no clearly defined patterns in the consumption of tortillas and tends to vary depending on other factors in this study given the available information and are not possible to identify.

Finally, there are the two income groups of wealthy conditions (upper middle class section), whose behavior together is

quite similar. In the first group whose income is 5,000 to 10,000, 61.1 percent of the households surveyed are located in the lower range of established tortilla consumption of 125-200 grams. while the remaining 38.9 percent is distributed in the two subsequent consumption ranges (201-300 grams. 301-400 g.). With regard to the higher income group, 71.4 percent of cases are located in the first range of consumption; 28.6 percent in the second range, and the remaining 14.3 percent in the third (Table 3).

These findings about the previous consumption of tortillas offer us a differentiated picture while we see the existence of a trend towards increased consumption of tortillas when it comes to the poorest households, and their opposite trend, that is, the existence of a minor amount of said product when the social sector is assumed to be comfortable.

After having experienced the rise in the price of tortillas, according to the same table 4, we have the following results: more families in extreme poverty (500 -1000) that previously placed in the consumption *per capita* of 401-800 grams . rose from 56.2 to 81.2 percent at the expense of a previous smaller range (301-400 g.) and the last range (801-1500 g.), which indicates a strong increase in tortilla consumption in the population of that highest poverty stratum. In the next layer that sits in revenue 1001-2500 pesos a month (average poverty) also it increases the number of families that consume 401-800 grams settling at 57.0 percent in this range, whereas it previously consisted of 45.1 percent; this increase was at the expense of the lower ranges already mentioned, suggesting a transfer of homes from one range to another higher consumption as indicated. In these first two layers (extreme poverty and first average poverty group) made mention that the increase in the consumption of tortillas, has happened by sacrificing other products that are eventually consumed such as vegetables, eggs and cookies.

In the next layer of income that is at 2501-5000 pesos a month (second group of average poverty), had shown the impor-

tance of the second consumption range (201-300) disappears to later increase in the second (301-400) with 45.9 percent and in the third (401-800 g.) valued at 44.1 per cent, while it had previously been 33.3 percent, which again we see that a greater number of families in that stratum increased their consumption of tortillas. However, it should be noted that this layer of additional food consumption persists, what is why it is considered to be in this group of average poverty where there could be a real increase in household budget for food.

Finally, as regards to both higher income strata which in the case of this investigation represents the wealthy group, the non-indigenous sector, not marginal and high income in the village, we see that in the first group (5000-10000) the tendency is to keep the amount of consumption, reaching the minimum range of 125-200 g. *per capita* number of households which reaches a rate of 67.5 percent, similar to previous consumption (61.1%) figure; the rest (32.5%) is occupied by the consumption range of 201-300 grams of tortilla. With regards to the second wealthiest stratum, the first range of consumption is 85.7 percent, 71.4 percent higher than the amount that occupied this range before rising price of tortillas; in this social stratum, only 14.3 percent of households consume 201-300 g.; indicating that in both groups whose common characteristic is to show conditions of economic well-being exhibited almost the same tortilla consumption behavior with an inclusive tendency to reduce consumption at its maximum expression.

EVALUATION OF RESULTS

According to information available, we can say that in the case of this study carried out in a socially differentiated city, two essential conditions are set:

1) With regard to the consumption of tortillas in the absence of sharp increases in the price of the same, it is observed that in extreme poverty consumption *per capita* of tortilla is considerable, since this product is conceived as on almost a sole basis along with beans in the diet, whereas in other strata, including poverty, having a small increase in household income, consumption *per capita* tends to diminish and encouraged the consumption of other products in addition to tortillas and beans . At the other extreme, in the case of wealthy sector, tortilla consumption is complementary to a variety of products that are ingested due to the economic possibilities that facilitate the diversification of the diet, but, still, it's worth taking into account there were no households where tortilla consumption was omitted.

2) In terms of an increase in the price of tortillas, it conclusively shows that in the lowest rung of the local society, there is a reaction to considerably increase the consumption of tortillas, and to cancel the consumption of other complementary products, because the family budget is aimed at strengthening the cultural consumption of more accessible products, which continues to be the tortilla, and cancel other products whose cost is impossible to bear. Hence you have a registered increase of 25.0 percent of households that increased their consumption of tortillas, while the next stratum (1001-2500) did it at 11.9 percent; and the subsequent (25001-5000) 11.2 percent.¹¹

3) Furthermore, there exists certain segments that still being poor, but that enjoy a greater margin of income and can support increased tortilla prices without reducing or omitting the use of other complementary products; hence it is they who face increased tortilla prices that represent increased spending to maintain the profile of food consumption.

¹¹ These data refer to the variations in the percentage of greater increase that the range experiences (from 401 to 800 grs.)

4) In the case of upper-middle class , it is concluded that due to the complementary nature that the tortilla has, consumption remains almost intact like that of other products in the daily diet, while noting that interestingly in both groups in this sector the trend is to an insignificant decrease in consumption of the product, which as a hypothesis can be advanced that in these socioeconomic groups is where the same expenditure on the purchase of the product is maintained, regardless of the number of kilograms of tortilla that proportionally suffers a decline, and consequently a lower per capita consumption.

In short, the consequences of inflation are relevant: the rising price of tortillas means not only a redistribution of income in favor of intermediaries benefiting from an oligopolistic market, it also implies a consistent loss of purchasing power in poor households, accentuated by Giffen behavior. That is, in the absence of cultural substitutes for the tortilla, and the income effect that is typical of the lower goods determines in the case of the urban poor, an increase in tortilla consumption as a result of the price increase.

FINAL THOUGHTS

With the enforcement of NAFTA, the Mexican agricultural sector has had to face competition with producers from the north in terms of technological inferiority and low levels of relative productivity. This has been very evident in maize production. US imports have been increasing and domestic production has remained stagnant. Besides the price variations of the grain, there have been a number of important implications which require going beyond a summary analysis which we have tried to clarify in this article.

For example, in the production of tortillas there is a change in relative prices that occurs with a transfer that goes from corn growers to corn flour producers, and of these tortilla vendors

there is an accentuation of the accumulation in flour producers that win from the favorable evolution of the aforementioned prices.

To illustrate this, you can then point out that on average, in 1973 with a minimum wage one could buy 28 kilograms of tortillas, and in 2000 only 9.12, and in 2007 only 5.7 (INEGI-CNSM). This gives us a measure of the actual deterioration of wages, especially if we consider that the poor spend a large part of their salary on the consumption of tortillas, which obviously implies a negative impact on the poor and so on the poorest entities such as is the case of Chiapas. If the increase in tortilla prices hurts consumers in general, the most affected within them happen to be the urban extremely poor, whose consumption increases since tortillas are a Giffen good.

Therefore, the increase in international prices of corn has been used as a pretext¹³ as a product based on the increased use of bio-fuels, especially for the main producer and exporter: The United States, to justify the higher price of tortillas regardless of the increase in corn prices that are passed on directly to consumers. Before the atomization of producers and consumers it is difficult to exercise market power, so certainly those price differentials are leading industrialists and mass marketers (Maseca, MINSA, Cargill), which have an oligopolistic market and manipulate prices in their favor. It would mean that the so-called “industrial tortilla” should be benefited by the price differential, however, while there are an estimated 65,000 tortilla producers around the country, then the national market is divided among this large number of tortilla outlets. Also, as the number of tortilla producers nearly doubled in a few years (from 35,000 in 1999 to 65,000 in 2007) with deregulation, a decrease of revenues occurred, then consumption did not increase in the same proportion because as we have seen the demand for tortillas is quite inelastic.¹⁴ Thus, there are only three companies that monopolize the market (Maseca, MoH and Cargill); while among industrial

tortilla sellers there are some that have a single establishment and others have several, but one alone has the ability to affect the market, so it follows that this is a market that is quite about perfect competition. In the case of flour, the situation is different because their small number makes it easier to reach agreements and establish oligopolistic prices, in addition to controlling the marketing of maize and imports.

It is noteworthy to mention that the increase in international maize prices have benefited producers while imports have become more expensive, so they may be functioning as a barrier to trade liberalization agreed on January 1, 2008, however, despite the recent price increase it is still importing corn which reveals that this maize is still cheaper than that produced in the country.

BIBLIOGRAPHY

- Appendini**, Kirsten, Raúl García, y Beatriz de la Tejera (2003). “Seguridad alimentaria y “calidad” de los alimentos: ¿una estrategia campesina?”; en *Revista Europea de Estudios Latinoamericanos y del Caribe*, 75. Octubre. Amsterdam.
- Bacon**, David (1996). “L.A.’s immigrant strikers target Mexico’s tortilla king.” *JINN Magazine* 2(19). Retrieved from <http://www.pacificnews.org/jinn/stories/2.19/960916-tortilla.html>, on 14 October 2003
- Ballinas** Cano, Gregorio (2011) “Crisis del maíz y flujos migratorios en el Ejido el Parral, Municipio de Villacorzo, Chiapas”; en López Arévalo, Jorge y Óscar Peláez Herreros (Coordinadores), *Migración, pobreza y acción pública en Chiapas*, Universidad Autónoma de Chiapas.
- Barkin**, David (2006). “Construyendo un futuro para el México rural,” en J Rus y M. Tinker-Salas (Coordinadores), <México 2006-2012: Neoliberalismo, movimientos sociales y política electoral,” pp. 149-158, México D.F.: Universidad Autónoma de Zacatecas y Miguel Ángel Porrúa Editores.
- Beadle**, George Wells (1997). “Teosinte and the Origin of Maize”, en D. B. Walden (ed.), *Maize Breeding and Genetics*, NuevaYork: John Wiley and Sons.
- Bello**, Álvaro (2006). “Globalización, derechos humanos y pueblos indígenas” en Álvaro Bello *et al.* (eds.), *Pueblos indígenas, globalización y territorio*, Temuco, Chile, InfoAndina, pp.2-13, <http://www.infoandina.org/node/8288>
- Calva**, José Luis (ed.) (1993). *Alternativas para el campo mexicano*. University Program in Foods Programa Universitario de Alimentos–PUAL, UNAM. México, D.F.: Distribuciones Fontamara. Vol. I [250] y Vol. II.
- Cepeda** Nery, Álvaro (2007) “Sin maíz no hay país”, revista *Fortuna*, Año IV, No. 49, febrero, México, D.F.

- Centro de Estudios de las Finanzas Públicas (CEFP)** (2007). México: *El Mercado del Maíz y la Agroindustria de la Tortilla*, H. Cámara de Diputados, México, D.F.
- Cornell**, Michael (1998). "Talkin about tortillas: Producers look toward consumer education and new markets to continue tortilla sales momentum"; en *Baking and Snack Magazine* 20 (3) (http://www.bakingbusiness.com/archive_article.asp?ArticleID=17187)
- De Ita**, Ana y Pilar López Sierra (2003). *La cultura maicera mexicana frente al libre comercio*, en Amándola, Carmen (Ed), "Maíz. Sustento y cultura en América Latina. Los impactos destructivos de la globalización", Redes Amigos de la Tierra y Biodiversidad, Sustento y cultura, Montevideo, Uruguay.
- Fazio**, Carlos (2007). "México- El pacto de la tortilla", Prensa Latina, La Habana, Cuba.
- INEGI** (2005). *Áreas Geoestadísticas Básicas*, Cartografía, San Cristóbal de Las Casas, Chiapas
- Jensen**, Robert & Miller, Nolan (2002). Versión preliminar de: "Giffen Behavior: Theory and Evidence". Mimeo Universidad de Harvard.
- Lind**, David, y **Barham**, Elizabeth (2004). "The social life of the tortilla: food, cultural politics, and contested commodification"; en *Agriculture and Human Values*: 21. Kluwer Academic Publishers, Netherlands.
- López** Jorge, Julieta Martínez y Óscar Peláez (2011). "Reproducción económica y social de los pueblos indios", Mimeo, Universidad Autónoma de Chiapas.
- Mckenzie**, David (2002). "Are tortillas a Giffen good in Mexico?", *Economics Bulletin*, Vol. 15, No.1, Pp. 1-7, Nashville, TN, USA
- Masuda**, E. & P. Newman (1981) "Gray and Giffen Goods", *The Economic Journal*, 91: 1011-1014.

- Minutti**, Mónica (2007). “Análisis de los sectores agrícolas de México y Estados Unidos desde la perspectiva de la sincronización económica: una evaluación general de los efectos para México”, tesis de maestría en Estudios de Norteamérica, México, Departamento de Relaciones Internacionales y Ciencias Políticas, Escuela de Ciencias Sociales, Artes y Humanidades, Universidad de las Américas Puebla.
- Miranda** Ocampo, Raúl y Luz María Espinosa Cortés (2007). “Producción de Maíz en Chiapas en el contexto nacional”, *Chiapas: La paz en la guerra*, UNAM, Ecosur, Editorial Comuna, México, D.F.
- Pinto**, Anibal (1976). “Heterogeneidad estructural y modelo de desarrollo reciente de la América Latina”, *Inflación: raíces estructurales.*, Fondo de Cultura Económica, México, D.F.
- Pozas**, Ricardo (1979). *Juan Pérez Jolote: Biografía de un Tzotzil*, FCE, México, D.F.
- Puyana**, Alicia y Romero, José (2008). *El sector agropecuario y el TLCAN. Efectos económicos y sociales*, México D.F., El Colegio de México, p.165.
- (2009) “El sector agropecuario mexicano bajo el Tratado de Libre Comercio de América del Norte. La pobreza y la desigualdad se intensifican, crece la migración” en Carlos Barba-Solano (coord.), *Retos para la integración social de los pobres en América Latina*, Buenos Aires, Consejo Latinoamericano de Ciencias Sociales, pp.187-213.
- SIAP**, Sistema de Información Agroalimentaria y Pesquera. s/f Situación Actual y Perspectivas del Maíz en México. México D. F. Juan Manuel Galarza Mercado. <http://www.financierarural.gob.mx/informacionsectorrural/Documents/maiz96-12.pdf>. 21 de febrero 2011.
- Stigler**, G. (1947). “Notes on the History of Giffen paradox”, *The Journal of Political Economy*, 55: 152-156.

Valenzuela, José (2011). *El mundo es más ancho y más ajeno: neoliberalismo y desigualdades regionales*, ms; México DF, Universidad Autónoma Metropolitana - Iztapalapa.

World Bank, Instituto Mexicano de la Competitividad (IMCO) (2007) Integración del mercado norteamericano de maíz: implicaciones para los productores y consumidores mexicanos, documento del Departamento de Desarrollo Sostenible Región de América Latina y el Caribe.

Versión estenográfica de la reunión de la Comisión de Desarrollo Rural con productores e industriales de maíz, harineros y productores de tortilla 17 de enero 2007 http://www.senado.gob.mx/comisiones/LX/desarrollorural/content/actas_reuniones/docs/2601/version17enero.pdf

QUESTIONS ON THE NOTION OF
INHABITING AND ITS RELATIONSHIP
WITH SPACE:

Ontology and Topology

Arturo Romero Contreras
rcarturo@gmail.com

Free University in Berlin. Institute of Philosophy.



ABSTRACT

The present article presents a discussion on the concept of dwelling and its relationship to that of space. To pose the question about dwelling implies to address the link between the same and the other through the concept of limit. This relationship constitutes a space. In ecological thinking this questions involves the relationship between man and nature (where they are opposed, where they are different, where they exhibit a local intersection). In political thinking, the issue at stake involves the relationship between the same and the foreign, (what is a community, who and what counts as such): In social and economic thought, we deal with the ways in which social frontiers are constructed (be it between countries, inside cities or in an architectonic space).

Keywords: *Ontology, Topology*

How to inhabit the world? It is now the most urgent question worldwide. The question points to multiple directions at once: it is an ecological question: what relationships can and should we establish with the surrounding natural environment? Policy: what can and should govern relations among men? and economic-material: how can and should you use the scientific-technical and production capacity of man? To ask about inhabiting is to do it by the forms of relationship between the self and the other as well. Men and nature, men and men, men and things. From the outset, these relationships are defined by opposition; the same *against* the other, or the other *outside* of the same, and reveals the inadequacy of the terms. What does it mean when we define the same and the other? Boundaries, borders. How do we live in the world? Does it mean how to think, exercise and live the limits? The limits are left to be understood as borders or edges, sometimes as boundaries, sometimes as a separation.

The question of inhabiting, conceived as a thought and praxis of bounds, must be understood as a topology, a question for the spaces: social, cultural, environmental, symbolic and political spaces. How to inhabit the world? It is a fundamental question with regards to the essential way to how any category relates to itself and its (s) other (s). Science, technology, politics, everyday life, words (whether they are rigorous concepts or common words) are structures where the world is defined and it acquires its differentiation. It is in them where the world is broken and distributed according to regions, areas and records. What should count as the same and as the other, which is a set of variations, forming unit, dispersed without collection, which shares a border and what is disconnected, the interior and exterior, all of them are not only part of a conceptual network, but of a game and configuration of limits.

What do we do with the limits and emergencies in today's world? The task of philosophy is to think about the essential link between what we find today is most urgent to solve: poverty,

environmental catastrophe, the domination of some over others, with the history of thought where our categories have emerged , our conceptions, our institutions, our ways of conceiving, producing and reproducing the world. Once shown this link, your task continues by providing coordinates to penetrate, with thinking and practice, different areas, so that they can inhabit in other ways. Finally, if you can inhabit in other ways, this implies a relationship between thought and construction, as space implies a dual enrollment It is what we think and what we inhabit, the object of thought and the site where thought is written and developed.

PHENOMENOLOGY, ONTOLOGY AND THE ISSUE OF SPACE

In the early twentieth century Husserlian phenomenology tried in a highly radical way to understand how the overall experience takes place and how every question, practical or theoretical, takes on its connection and relevance: a concrete world in a world of life. This world of life means that every activity is located in time but also in space. Following this line, Heidegger radicalizes the momentum of phenomenology and tries to give it new life.

Heidegger tried to understand violence, destruction and catastrophe by analyzing existing historical tradition in science, but also Western thought in general, and he developed his concepts and his peculiar way of understanding the world as a whole. This lets you see how far modern science is and has , in addition to technical, been of social, political and economic nature. To this science lies a concept of space that should be investigated and addressed. Heidegger allows us to take a first direction to reinterpret existing sciences and to rebuild their historic tradition and their underlying assumptions, making visible the way they shape

our way of inhabiting the world- this common space. However, it is an approach to the Western philosophical tradition and his science which also permits seeing that his way of conceiving space was never unitary. Therefore not only an ontological criticism is necessary, in the sense of Heidegger, of current science and his concept of space, but also a reconsideration of other concepts of spatiality in general, both of the philosophical tradition and of contemporary science is needed . A key role is played in this regard by mathematics.

HEIDEGGER, TIME AND SPACE

Heidegger breaks into the philosophical thought of the twentieth century with the question that asks about the meaning of being and seeks a profound questioning of the contemporary world. The fundamental text is *Being and Time* (Heidegger, 1977) As the title suggests, it is essential to show the relationship between self-realization and a time horizon. In a direct way: time is the horizon over which the self makes sense to us. Time should not be treated however only as history, but as compared to the past and the future. The past is left to be conceived by Heidegger as a source, an origin, from which the story takes its direction. The future, meanwhile, emerges as a project, as a point to move forward to in order to make a possibility. But the essential key lies in *Being and Time* which resides in the relationship that Heidegger establishes between time and death. Time will no longer only be lived, nor this time where things and events come to meet us. Time will be related to *death*. But how is that possible? How can one relate to what denies living, where it is not already, nor can it be? For Heidegger death will not be the negation of life, but rather the way she faces her most intimate possibilities. Heidegger avoids talking about man and proposes the German term *Dasein*, composed of the particle “da” which means there,

here; and the noun “sein,” which means being. Translated as “being-there” *Dasein* is the name given to a man if he understood as local existence, in a here and now, thrown into a world that’s not directly produced, but he understands it and where he moves within it. However, in this world where things appear to be related to each other in networks, or in other words as significant groups linked with a practical life, we are absorbed to the point where it seems immovable, an ultimate reality. The world appears as the most natural, also as what we cannot be otherwise and what devours us in our daily lives. The relationship with death, which first passes through anguish, confronts the *Dasein*, in exchange, with the nothing. Not because it is anything but because it reveals what the world has become without reason. In other words, the reasons that one finds in the world, are not the reasons for the existence of the world *as a whole*, but that it comes from an abyss, from an original possibility¹.

The world has become and can be other ways. Existence appears before oneself as a being open to the possible, otherwise, thanks to a connection with death². In his being, he is his own being, as Heidegger says.

But here is where the question is imposed, which in Heidegger remains unresolved: once the *Dasein* opens itself as a possibility, once the world appears in its radical contingency, once everyday life pales and the abyss of what comes possible, what is there to do? In other words, once the essence of existence ceases to reside in a substance or in a catalog of qualities (the definition of man, whatever it may be) the question arises *after* his confrontation with death : what, how to be now? If Hamlet can serve as a gateway to the question of Heidegger: “To be or not to be”, then can that be followed by how to be? And if Heidegger says

¹ For a discussion about the notion of the abyss in Heidegger, see Xolocotzi (2011).

² Regarding the path of Heidegger towards Being and Time, see: Xolocotzi (2004).

in *Being and Time* that all existence is located in a here, in a world: what can and should be the world? What exists in this world after death? How do you live, how you can continue to live differently now, once the possibilities open abstractly? If the world is never abandoned, even when an existence is called “authentic” by Heidegger, after the relationship with death, what transformation does this suffer? What does the “there” look like of the Dasein? When the fantasy of the world that absorbs us in our daily lives through is crossed and we are convinced of being true, natural and immutable, what remains for us to do? Inhabit.

Is in the late thinking of Heidegger there finally appears a space with ontological dignity. In his text *Building, dwelling, thinking*³, Heidegger advances the concept of the clear (*Lichtung*) which is understood as a place (*Ort*) essentially linked to inhabiting. What might be called the language of existence in *Being and Time*, it is now understood as dwelling in the land, as related to the world in the sense of dealing with limits. The question of being understood is not only in relation to time but also space. This space, however, should be distinguished from how classical science, especially under the model of Descartes, has thought. In a broad sense, Cartesian mathematics defines the world from the extension, which can be captured from coordinates, allowing that everything can be reached from points in space. These points in the plane also allow a measurement so that everything can correspond to a magnitude. Such thinking was continued by Newton and served as the basis of the mechanistic world view. This mechanism will also serve as the basis for the industrial revolution and scientific and technological development of the modern era.

For Heidegger this concept of space and its involvement in contemporary science makes the world a mere remedy available to calculation and planning. The world ends up being

³ In German: Bauen, Wohnen, Denken, in: Heidegger (2000).

transformed into raw material. As raw material, it is input into a production that has no other horizon than domination and control. The clear concept of *Lichtung* that Heidegger proposes, searches for thinking, however, in a space that does not dominate but lets them be. Clarity is only one *place* where being comes about and only serves as a backup of its game of giving and taking (which in *Being and Time* was anticipated as related to death). In another late paper, *The thing*⁴, Heidegger seeks to think of the world as a quaternary that also reflects an idea as a meeting space. This space is a bridge between earth, heaven, divine and mortal. Leaving aside the mystifying language, space appears as a link, but mostly as a meeting place without unity.

So far it seems that the thinking of clarity has nothing to do with science, and that the latter is overwhelmed by ontological thought. However, Heidegger insists that in while in the structure of science man is in danger it is true that “where the danger grows, there grows redemption” (Heidegger, 2000, p.29). That quote is taken up by Hölderlin and shows the profound ambiguity towards science. For Heidegger the essence of science is a productive attitude, it is *ποίησις* (creation) (Heidegger, 2000, pp. 30-31). In German the word *Wesen* can also mean matter. As a verb, which is now in disuse, *wesen* means staying in existence (*verweilen*). Now, every temporal permanence requires a place, a “there”. The temporal permanence is called a dwelling and inhabit, returning to *Being and Time*, it could be read as a being-in. The relationship that philosophical thought can establish with science and technology is through the production (*hervorbringen*) of space as such. We must then ask whether science, against the harsh statement by Heidegger that she does not think, can help to suggest fundamental questions. We must

⁴ In German, Das Ding en: Heidegger (2000).

examine then whether science can think of time as a radical evolution and space as spaciousness, both thought of as a dwelling. Among all the sciences, it is perhaps mathematics that, since the nineteenth century to date, has made from space the object of the deepest and most fruitful reflections.

OONTOLOGY AND TOPOLOGY

Never approaching this topic enough, Heidegger knew, however, that mathematics was about ontology, that is, the question of being, to address the issue of space⁵. In a course dedicated to the dialogue of Plato's *The Sophist*, Heidegger refers to Hermann Weyl, a mathematician who made fundamental contributions in the field of topology, and who from a philosophical position exposes a key issue in contemporary mathematics: the continuum. In his text *The Continuum* (1918) Weyl advocates for a conception of it which does not start from the point. While Descartes thinks the continuum (of a line for example, which in mathematics is the set of real numbers \mathbb{R}) as an aggregate of points, Weyl sought to think of it as an origin, starting from oneself and beyond the quantitative relationship. Heidegger's reference is crucial in that it binds with the mathematical tradition of topology.

Heidegger says in his course on *The Sophist* (1992): "The question of the *continuum* has been deployed again in contemporary mathematics. If you come back to Aristotelian thought, as one learns to understand that the *continuum* cannot be solved analytically, but must come to be understood as a given (*Vorgegebenes*), before a question can be made on its analytical insight. Work in this direction has been done by mathematician

⁵ For the relationships of Heidegger with the science of his time see: Xolocotzi (2009). Heidegger also dealt with the theme of space of Aristotle in: (Heidegger 2003).

Hermann Weyl doing particularly fruitful efforts for the fundamental problems of mathematical physics. In this understanding of *continuum* arrives a relationship to the theory of relativity in modern physics, which, in comparison to the geometry of distances (*Ferngeometrie*, which could be interpreted as a global geometry, generic, AR) as that results from the position of modern physics of Newton, the concept of a field (*Feldbegriff*, of its own local geometry, or *Nahgeometrie*) becomes crucial. The physical being is determined by the field- “ (...) I only give this indication to aim at how Aristotle, away from any hasty theory, to results today as to how natural-scientific geometry is pursued in an inverted manner”. (Heidegger, 1992, pp.115-116).

That topology pursued philosophical issues in an “inverted” manner is already, by Heidegger, a whole concession: that of thinking. Science thinks in an inverted way. This inversion is not a fault, but only marks a distance between philosophy and mathematics, that is, that they are irreducible, that one cannot *justify* the other. And yet, there exists an essential relationship. This relationship is given by the intersection of the purpose with the theme of space.

The term was coined *topology* in mathematics by Listing in 1848, and responds to the need, as noted by Leibniz (in his *situs geometry*) does not think of the space starting with the magnitude, but from *purely qualitative* relationships. Topology arises from the need to consider the modalities of space and, more properly, spatial insights from concepts. In the field enters the definition of n-dimensional spaces with constant or variable curvature, the establishment of groups of symmetries and transformations, graphs and analysis of knots and the spaces that they imply. Listing writes that topology must be a “doctrine of manners relations of space objects, or the laws of the set (Zusammenhang), a reciprocal situation and the sequence of points, lines, surfaces, bodies and their parts or their aggregates in space, regardless of size and magnitude relationships “(Listing, 1848, p. 814).

This delimitation of topology not be possible without the formal definition by Riemann of space. In his inaugural lecture, Riemann ⁶ proposes a research program where (a n-dimensional) advanced ideas are generalized and Gauss ⁷ and Lobachweski on the intrinsic qualities of space that give rise to non-Euclidean geometries. Very generally, it can be said that these geometries are based on a fundamental assumption: a spatial figure can be defined intrinsically, without reference to space and the environment where it is inserted. A simple example is the sphere. If it is embedded in a Euclidean space of an environment of three dimensions, it has no peculiarity. In other words, all geometric and metric properties are shared with Euclidean space (\mathbb{R}^3). But if the sphere is taken as a surface (S^2), then their properties are very different. The famous Euclid postulate on parallels states that given a line A and a point P outside of it, there can only exist one line parallel to A and B passing through point P. In the case of the sphere, however, lines are actually curves, called geodesics, drawn on its surface. Thus, for S^2 the following applies: given a line (here a geodesic must be taken as a maximum, such as the line of the equator) and a point outside of it, there is no line parallel to B because B always intersects A at two points. On the sphere there are no parallels. If in Euclidean geometry the sum of the angles of a triangle add up to 180 degrees, in spherical geometry its value will be higher and in hyperbolic less geometry it will be less. That means that the properties of the figures are not inherent in the figures, but depend on the spaces where they are embedded or immersed. Hence there is the need to differentiate between a figure: one that is rigid and has dependent metric properties of the space environment, and a form, that is a structure with intrinsic properties.

⁵ The reading is titled: On the Hypotheses which lie at the Bases of Geometry, in Riemann (2013).

⁸ Gauss (1828).

Riemann generalizes these ideas and presents the mathematical program, rigorously thinking about the concept of “multiply extended magnitude”, which is “susceptible to various metric relations”, being a consequence of the fact that the “theorems of geometry” of nature are not empirical and transcendental a priori (Riemann and Ferreirós, 2000, p.2). This means that a metric space has intrinsic properties and classical geometry, in other words, are Euclidean and do not have an absolute value. On the contrary, certain axioms can vary (such as parallels), that maintaining a consistent system where the properties of the figures who enroll in it are different from the Euclidean space. Later the concept of variety (*Mannigfaltigkeit*). For Riemann any *quantitative* determination is possible where there is a “general concept that supports *various* determinations”, which are “a continuous or discrete choice depending on whether or not to place continuous transitions from one to another of them”; and stresses that if the natural language can name discontinuous varieties, it is hard to imagine the continuum, which can be presented from examples like “the colors and positions of sensory objects”, both constituting an extended variety in multiple dimensions “ (Riemann and Ferreirós, 2000, pp. 3-4). A variety may be continuous or discontinuous, but its main quality is to be defined from a number n of dimensions. Second, a continuous range is defined from a function of continuity, that is, from the possibility to differentiate infinitely. Two spaces are part of the same one if can be deformed into each other continuously. A Riemannian variety can be defined, more formally, as a space that locally obeys Euclid’s postulates, but not on a global level. The concept of the Gauss geodesic advanced the idea that a space may vary locally in its qualities

⁶ Su lección se tituló: „Sobre las hipótesis que están a la base de la geometría”: en Riemann (2013).

⁷ Gauss (1828).

(the curvature of a surface can vary from one region to another). Following this idea and, again, generalizing in n-dimensional spaces, for Riemann all variety is Euclidean in a local manner in the limit, but the structure may vary from point to point and be *globally* very different. The space is no longer homogeneous and no longer limited by a particular metric. Moreover, figures, or what we could say that “appears” to its limits and its properties, does not depend more than the figure as such, but the space in which it is designed and registered. And if there are variations of space, this means that every figure can take many metric properties depending on their “location” in the variety.

In the coining of the concept of underlying variety is the attempt to rethink space based on non-metric relations and through general concepts such as continuity, discontinuity, town, locality, and continuous transformation. Additionally, topology could speak about the limit and border, of the compact and open or the hole, but also figures that combine time, such as folding or twisting. Space can be thought of starting from its area, intrinsically and not necessarily as a homogeneous variety- indifferent given a priori- and can be given as the opposite of the space that underlies Newtonian physics and that Heidegger makes the target of his criticism.

With this very thick exhibition of the meaning and intention of the topology and the relationship of time and space in Heidegger we can finally ask. Can you think of clearly in a topological way? Or inversely: can topology become a thinking being?

Relations between topology and philosophy are emerging. Much is due to René Thom, who in his book *Structural Stability and Morphogenesis* (Thom, 1972) attempted to transform the first into a general theory of models. Historically it meant a fundamental transit of the concept of structure that structuralists and poststructuralists had developed under the model of a combinatorial and discontinuous logic. Thom makes from topology a theory of the structure linked to the continuum and time. The

title of his most important work is an index of his program: Think in two registers: genesis and stability. Topology will become, thanks to Thom, a general theory, that is to say a diagonal to different disciplines (mathematics, philosophy, biology, sociology, physics) of the form. The forms will be thought of in their double structural and dynamic character. Therefore, the philosophical theme of the origin of the world and its meaning will be thought of more as emergency forms stemming from other forms. The emergency will be called by Thom as a catastrophe. A catastrophe is only the point at which a function is no longer continuous (differentiable), or, more generally, the turning point in which a dynamic system changes its behavior dramatically acquiring new properties. A catastrophe is a topological change, a change in the shape of space. But by the same token, what exists, what appears, whether in the world of perception, is in embryonic development, has a dynamic form, which gives it *stability*, thus being. Topology thus becomes a thought of time and space, of the coming, of the permanence and the forms of the future.

Thom writes: “Reality is presented on the forms of phenomena , of which we discover the presence for their qualitative discontinuity”, that is, the world is a game of shapes and limits; but “the objects “often suffer many slow transformations and only its relative stability allows us to rediscover within their multitude and diversity”, so that the duration is inseparable from its appearance and lasting stability. There can be a general principle, namely, that “all science is the study of phenomenology,” that is, that “you see, what you see, and any appearance occurs on some space.” (Thom 1974). This space is a topos, a place. In this regard, Thom says “In its abstract, philosophical use the word place(*lieu*) in French has always had a strong existential connotation (...) hence the hypothesis that virtually word topos implies virtually in a human or an animal that inhabits (usually) in that place “(1999) Inhabiting is inhabiting a space, a space is the set of limits in its *advenir* (genesis), lasting (structural stability) and disappearing

(disappearance or transformation of the form). It is finally shown the connection between topology and phenomenology, including topology and the question of living⁸.

For Heidegger, ontology was always more than phenomenology. Or rather, phenomenology can only be understood as ontology. As in *Being and Time* the horizon of the world was overrun and opened in its possibilities by death, the question of being goes beyond phenomenology which ponders not only on what appears, but for the conditions that it appears. Not questioned by the authorities (which appear in the world), but by his being, making possible its emergence as genesis and leaving that void that is never empty, but has the shelter of being. Well, the space that thinks topology is not the figures of the intermundane, but rather one in which these figures are displayed, with its limits and borders. The space is the a priori of the appearance, the bottom that never appears explicitly but on which everything else folds and unfolds, differs, lasts, emerges, dies or suffers a metamorphosis.

FINAL THOUGHTS

Time is the means of its subjectivity, its history and its existence. But space is the means of multiplicity, that is to say, of the community. The commonality is space. Spacing is cohabitation. Commonality is not a common denominator, the enclosed space of a category or feature that guarantees the identity of the elements. What is common is shared space. Space differentiates: it breaks and is distributed: within subjectivity, inter subjectivity exists. If you want to see it in this manner, space is the common

⁸ For a development of the ideas of Thom and new directions of the philosophical and scientific dimensions of topology, see Boi (2003) and (2011).

of the uncommon, the simultaneity of the non-simultaneous (This is what Heidegger always considered the main feature of being, that is, the difference of the present for yourself), live in the future.

Heidegger's ontology stands on two axes: time, that horizon where the game of concealment-revelation is deployed from the difference between being and entities; and space, the place where the body comes and dwells temporarily; where it inhabits; the question of cohabitating, since the idea of pilgrimage and of delay, the coming in all its forms and giving shape to the common space. Arguably, the question of being involves thinking in the common being starting from the temporal difference, the being-which is not reduced in its presence and its topology: the deployment of the limit, where the entities and men are exposed to each other and where the other becomes an ontological question, but also a decision and therefore, policy.

REFERENCES

- Boi, L.** (2011). L., *Morphologie de l'Invisible. Transformations d'objets, formes de l'espace, singularités phénoménales et pensée diagrammatique (topologie, physique, biologie, sémiotique)*. Francia: Presses Universitaires de Limoges et du Limousin.
- _____(2003). Les formes vivantes : de la biologie à la philosophie. Pp. 159-170. En: *Vie, monde, individuation*. J.-M. Vaysse (Ed.), Hildesheim: Georg Olms Verlag.
- Gauss, C. F.** (1828). *Disquisitiones generales circa superficies curvas. Commentationes Societatis Regiae Scientiarum Gottingensis recentiores*. Tomo VI., 99-146.
- Heidegger, M.** (1977). *Gesamtausgabe 2: I. Abteilung: Veröffentlichte Schriften 1910–1976. Sein und Zeit*. Von Hermann, Ed. Frankfurt am Main: Vittorio Klostermann.
- _____(1992). *Gesamtausgabe 2. Abteilung: Vorlesungen 1919-1944. Platon: Sophistes*. Frankfurt am Main: Vittorio Klostermann.
- _____(2000). *Gesamtausgabe 7. Vorträge und Aufsätze*. Frankfurt am Main: Vittorio Klostermann.
- _____(2003). *Bemerkungen zu Kunst, Plastik, Raum = Observaciones relativas al arte, la plástica, el espacio = Oharkizunak arteari, plastikari eta espazioari buruz; Die Kunst und der Raum = El arte y el espacio = Artea eta espazioa. Edición trilingüe*. Pamplona: Universidad Pública de Navarra.
- Listing, J.B.** (1848) *Vorstudien zur Topologie*. Göttingen: Vandenhoeck und Ruprecht.
- Riemann B. y Ferreirós, J.** (2000) *Riemanniana selecta*. Madrid: Consejo Superior de Investigaciones Científicas.
- Riemann, B** (2013). *Bernhard Riemann: „Über die Hypothese, welche der Geometrie zu Grunde liegen“*. *Klassische Texte der Wissenschaft*. Berlín-Heidelberg: Springer-Verlag

- Thom, R.** (1972). *Stabilité structurelle et morphogénèse: Essai d'une théorie générale des modèles*. Mathematical physics monograph series. Reading, Massachusetts.: W.A. Benjamin.
- ____ (1974). *Modèles mathématiques de la morphogénèse*. París : Collection 10-18, Union Générale d'Éditions.
- ____ (1999) "Aristote topologue". *Revue de synthese*, 1(Enero-marzo), 39-47.
- Weyl, H.** (1918). *Das Kontinuum, kritische Untersuchungen über die Grundlagen der Analysis*. Leipzig: Veit y Comp.
- Weyl, H.** (1968). *Felix Kleins Stellung in der mathematischen Gegenwart. En: Gesammelte Abhandlungen. Band III. K. Chandrasekharan, Ed.* Berlin, Heidelberg, New York: Springer Verlag.
- Xolocotzi, A.** (2004). *Fenomenología de la vida fáctica: Heidegger y su camino a "Ser y tiempo"*. México: Plaza y Valdés.
- ____ (2009) *Facetas Heideggerianas*. México: Los libros de Homero. Benemérita Universidad Autónoma de Puebla.
- ____ (2011) *Fundamento y abismo, aproximaciones al Heidegger tardío*. México: Universidad Autónoma de Puebla, Miguel Ángel Porrúa.

RURAL TOURISM AND GENDER

The case of Urbión model forest

Manuela Garrido
nolagarri@gmail.com

University Valladolid



ABSTRAC

In recent decades, different studies, projects and public actions have promoted gender approach in tourism ventures in rural areas as a way to visualize, measure and empower women.

Present the binomial Women and Tourism is not without setbacks, more if possible in rural areas, which is what concerns us. Regional differences that such issue involves, the different public-private partnerships, professionalization of the sector or the degree of organization of women themselves would lead to mixed results in different territories. However, identifying success factors in each case and subsequent transfer of results, techniques and methodologies, would support a model of endogenous, sustainable, impactful and transformative tourism development.

Keywords: *Gendre Polices- Sustainable Tourism- Empowerment- Training and Network- Partnerships.*

In recent decades there has been a series of projects worldwide that are trying to promote rural enterprises in tourism with a gender perspective, integrating within its objectives the empowerment of women.

In general there are two positions on the labor market analysis that revolves around tourism and women: those who observe a reproduction of forms of gender subordination and those who think that serialization of positive chain reaction effects can alter the gender patterns (Cánoves, 2000). In our opinion, and that is just what leads us to consider this approach to reality, all these initiatives provide a glimpse into the agency capacity of women.

No doubt that the regional differences on a global scale of this subject involves and their impacts depends according to the territories of both the senders and receivers, and the degree of organization of women in relation to this activity.

Gender Studies in Rural Tourism are recent and not very abundant in our country, and are raised from different theoretical frameworks, so their results and uneven territorial coverage does not place us in the best scenario to conclude from exemplary situations which offer the best plans of action.

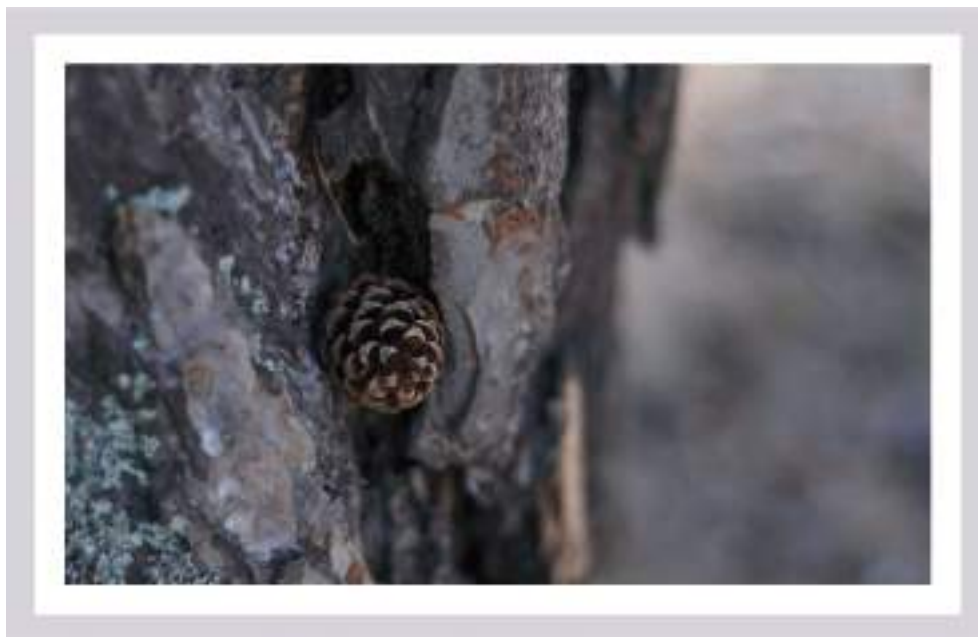
When suggesting the binomial Women and Tourism, we are required an effort of synthesis, given the transversal nature of gender and the different attention that tourism is addressed in rural areas, on the one hand still seen as an emerging sector, and on the other, warning signs of its excess of capacity.

Yet what is at issue is to measure the contribution of women in socio-economic development of the area in question and encourage them to take all of the measures that would achieve gender equity, for only then can we continue to talk about powerful and transformative endogenous development.

The rapidly changing processes should not ignore feasible factors to transfer results in success stories.

OBJECTIVES AND METHODOLOGY

With the present work, the assessment of the role of women in tourism development in a particular area of Castilla and Leon community is done that focuses on domestic tourism as one of the strategic pillars of its economic development.



The choice of model mount Urbión was mainly due to that it is the only territorial management model which has earned inclusion in a network with international recognition, the Model Forest, and in the process being declared a Biosphere Reserve.

Theoretical framework

This issue requires an integrated effort of synthesis that allows us to be situated in a time when the sustainability of many destinations in our rural areas pass through the strengthening of

accommodation facilities that are able to meet the new rules of globalization, a process neither innovation nor women should stay out of. They are:

- **Rural tourism:** as an engine of development that implies a brief analysis of the state of affairs regarding origin, current state and prospects of this type of tourism in Spain through literature review.
- **Women in rural areas:** in this sense it is to show their journey from being overlooked to be regarded as essential for the future of these territories.
- **Binomial tourism and gender:** and their application in rural areas.

Research work

The analytical and descriptive nature of this section presents a transversal qualitative investigation. It is not enough to quantify the number of women in the economic activity, but we want to advance as far as the actual capacity of this niche of employment with respect to women's aspirations.

For this reason a semi-structured interview will be used, which allows us to approach reality in a more flexible way. After a preliminary survey, we proceeded to conduct 12 telephone interviews after the summer of 2012 with the owners of establishments.

To ensure greater reliability and validity of the data, there was a carefully planned greater heterogeneity in the sampling from three variables: gender, class and geographical location of establishments. The reliability and validity of the data has considered the heterogeneity in the random sampling.

The result of all this leads us to consider the opportunity that would move forward on an issue that raises efforts in its diagnosis, communication and action. Political agendas often easily leave these issues in the context of crisis, such as is happening in the

present, so the other players should join the achievements that have been made so far and not decapitalize successful initiatives.

Tourism in rural areas

The first initiatives of rural tourism in Spain appear in farmhouses in the seventies. The interest of administrations and data to regulate such activity was directly related to the farms.

However, it is from the late 80s and throughout the 90s when the administrative intervention in this sector is observed, arguing its great potential and opportunity for the transformation of the productive structures of rural areas, which began to become obsolete. The model that was promoted rests on a series of pillars that are still in place:

- *Heritage motives*: 68% of the properties of Cultural Interest are located in rural areas and 29% in municipalities with fewer than 1,000 inhabitants. They would promote the best examples of folk architecture
- *Economic motives*: Regional Tourism (RT) provides nearly 20,000 direct jobs, representing 0.10% of the total of those employed in Spain (EPA 2008). Investments in the sector containing a traction mechanism above other sectors.
- *Social motives*: identity, rootedness.
- *Tourism motives*: saturation of certain destinations and new demands in line with changing times, such as the environment and culture.

It is thus observed that tourism as a driver of infrastructure, conservation and restoration of heritage has a tractor effect on other productive, primary and service sectors. In addition, in Spain this process has been followed by opinions promoted by EU institutions to boost tourism to supplement farm incomes and economic diversification. Overcoming the agrarian vision for rural areas,

the implementation of Structural Funds through LEADER and the Spanish PRODER programs have been effective instruments for its methodologies and its effective demonstration. Alongside the public-private participation, all of these initiatives propose the implementation of local development strategies whose main goal is the promotion of quality of life and diversification in rural areas through support to the promoters of such actions.

The response from entrepreneurs and investors in this area has been positive, which have also received support from other regional and local governments.

However, according to sources, in most cases the alternative is not observed at a major agricultural activity, but rather economic strategies that have resulted in the creation of new businesses in rural areas, whether by residents or not. This logic of “spontaneity” and responds to the clear lack of an implementation strategy of a true model of territorial development of this type of tourism- an uncoordinated administrative or legal framework in which the activity takes place.

There is not a national consensus on policy and rural tourism. In fact, it has been the Autonomous Communities that have been responsible for the regulation of the sector, thereby obeying the constitutional mandate.

In general, each autonomous community has regulated according to their own rural reality: population criteria, dominant economic activities, and on occasion also grouping scenic concepts, put forward to narrow a term to define this emerging economy. In any case, regulation have been focused on the regulation of the different classifications of lodgings and categories.

One result that could better illustrate this scenario is that there are currently 46 different types of accommodations in our rural areas with an annual growth rate of over 30% in the last decade (INE, 2010), an average annual occupancy rate bordering 20% and a pronounced seasonality- facts which do not mention sustainability.

In short, the legislator has paid more attention to the regulation and promotion of the range of accommodations; political discourse on tourism as a solution to development problems still demanding an increase in demand which is increasingly international, but does not specify means and methods.

The evolution of the industry together with substantial alignment of all these decrees to Directive 2006/123 / EC – the beginning of normative hierarchy - is leading many communities to a legislative review on this issue.

The current parameters for the reasons blur the motives of Tourism in Rural Areas and there is still pending the homogenization of the only feasible deal through greater coordination of regional policy. From here, other factors that come together for the positioning of the sector are:

- Creation of a common strategic framework for intervention on RT in Spain that starts from a global, integrated and participatory concept of tourist destinations.
- Creating structures that enhance receptiveness to adequately improve actions and commercialization to a market that is increasingly globalized, demanding and eager for experiences.

Innovation to betting on rural spaces is important, and tourism can remain one of the pillars to lean on. This would require, among others, greater professionalization of the sector and the creation of spaces for public-private cooperation from those who make decisions at all levels, and an increase in the value chain of the tourism sector in areas with a vocation for development. Scant attention has been given to the offer to the structuring and strengthening of the industry, which would be able to allow proper marketing of authentic tourism products or the capabilities of their promoters. Until recently, there was also little attention to the importance that these promoters were women.

Women in rural areas

Rural women in our country are a group that covers about 5 million people. Their situation and expectations for job performance are conditioned by internal variables-age, training, family responsibilities and for external variables in the area, economic dynamics in the area, endowments and service, and the overcoming of roles.

You cannot understand the current situation of women if we do not consider the functional paradigm of rural areas (Garcia Sanz, 2004). Indeed, the crisis of the economic model of the 60s brought the reduction of farming in rural areas and the flight of its workforce-populations attracted by the industrial development of cities.

By providing some data, we can say that of the 8,801 Spanish municipalities, 7,032 can be considered rural, 60% of them have fewer than 1,000 inhabitants, and they have only 4% of the Spanish population.

This exodus from the countryside to the city has been more acute in women, which has involved quite a vicious circle that has been difficult to subvert.

Indeed, the modernization of agricultural activities and professionalization of farming relegates women to second place without regulation of their rights. In a context of limited economic diversification and regressive utilities, their options were to perpetuate their reproductive function and mere “family support” or succumb to the edge of modernity that the city seemed to offer. This is how many young women leave rural areas, which will soon be aged and male-dominated and what is worse, without generational change.

The decrease in the effective population in our State, as in the rest of the European Union (EU), despite the logical regional differences in terms of volume and impacts has led to the inclusion of a gender perspective in Rural Development policy and

the corresponding Regional Rural Development Programs and Community Initiatives.

The response of women to these operational programs has also been widely supported by women. In the different operational programs of LEADER, it has gone from 30% to 46.5%. 80% of these projects which have been framed in the Small and Medium Enterprise measures and services and the Valuing of Heritage and Tourism. As for job creation, we can say that 43% of jobs are female and represent 52% of jobs created (compared to a previous 36%).

New sources of employment arising from the multi functionality sought by the authorities see women as a strategic objective of fixing population in rural areas, with an activity rate still far from that held by women in urban areas (22% versus 43%).

According to statistics, rural women entrepreneurs are mature, they lead family-run small family type businesses and have a lower level of training than that of employed women. Qualitative research suggests that responsibilities and family loyalties are always present in their access to entrepreneurship and in the daily management of their business¹.

No doubt women of rural areas have faced in the last 30 years a situation of change, continuous transformations at all levels, but the facts show that they have adapted and successfully managed the paradigm shift: economy, education, culture and social participation, among others. Not surprisingly, the trend of rural-urban and population flows have seemed to have stopped.

There are many obstacles and challenges in rural areas, but according to the latest data, at least population flows to the city seem to have stopped.

However, the positive impact that women may have had on this whole scenario of structural changes cannot be estimated

¹ Sampedro, Rosario in *Revista Internacional de Sociología*, Vol. LXV, n° 48, pp. 121-146.

as it should due to the lack of data or indicators of territorialized gender to measure the real contribution that women have led combining their reproductive and productive role in our rural areas. Overcoming or not of gender roles would also be part of the debate.

We hope that the periodic reports that forces the recent and specific Rural Development Act for the Spanish State Law 45/2007 for Sustainable Rural Development, on the situation of women in rural life, will have adequate screening and recommendations applied.

“Women entrepreneurs are a pivotal change, this means they bring passion and innovation and creativity” (Jeannie Javelosa). Women, therefore, are change agents and protagonists of their environment.

The Binomial woman and tourism in rural areas: road to empowerment?

Tourism has become in recent decades a way for access of the female labor market and for the empowerment of women in disadvantaged areas.

According to the OIT (*Organización Internacional de Trabajo*), 49% of jobs in the sector are held by women. The percentage of women entrepreneurs is almost double in the tourism sector than the average economic sectors, and their presence in decision-making levels in this area evolves positively in a global way, which does not happen in other economic areas or decision levels. Other scholars seem to confirm how the tourist potential of a region can decide the permanence of women in rural areas.

However, after a period of optimism this relationship is beginning to being questioned by officials of UN Women, who warn that in 2010, most of the jobs that women performed in the sector were of low quality and one of the greatest shortcomings is 60% are represented in informal work.

From the EU emerged various community initiatives that have tried to solve problems of rural development and the problems of women that have influenced the improvement of the situation of both. The principle of equality has been introduced into the plans and community aid, and move from being mere alternatives to forced precepts. The legislator sees women in rural areas as a strategic way of fixing population in rural areas.

In Spain, according to the INE, the employment generated in rural tourism is predominantly female (68%) and employed (63%). The income that is generated is not a guarantee of the independence of the workers, their training, or it is unclear or not related specifically to the sector (wages or salaries M., 2005).

Along with the use of statistics, studies more not excessive, qualitative type, at different points of the Spanish rural geography has dislodged a number of conclusions:

- Women offer competitive advantages in the development of this economic subsector: they are the main workforce, ranging from joint ownership to the informal contribution, thus minimizing production costs.
- The type of businesses undertaken by women are smaller and generate less employment. In some ways ownership can be confused with management under social economy formulas that are adopted.
- They detect imbalances in the distribution of benefits, influenced by gender.
- Overcoming obstacles to increased income and social and cultural exchanges

Women are strong, capable and creative, but they are not leading the sector. They need to be aware of their skills and this is key to their formation, facilitating access to resources and benefits.

VARIABLE ANALYSIS AND RESULTS ON GENDER IN TOURISM URBIÓN MODEL FOREST

Context and geographical demarcation of the area under study

The growing crisis in rural areas in Spain was particularly important in Castilla y Leon. 99% of the rural municipalities of Castilla y Leon have fewer than 20,000 inhabitants and are grouped as 49% of the total population. Most of the nuclei in the region has less than 2,000 inhabitants. But more important is that those municipalities have increased less than 500. 84% of municipalities have a density below 20 inhabitants / km². Therefore it holds one of the highest rates of rurality at the community level.

Facing the dynamism of urban areas, the Castilian-Leon rural areas are currently in a situation of limited territorial significance before a complicated future by the continued loss of economic and demographic vitality of most of its municipalities.

Demographic factors described undoubtedly create a vicious circle of economic activity in rural areas, so any intervention aimed at alleviating this situation must take into account the spatial and human component, and not only from a merely economic point of view.

From the spatial point of view, encouraging conversion strategies has led many mountain areas of the region to adapted to new uses for its high environmental and landscape values. Maintenance and / or recovery of these units have been profitable through promotion, not planning, of tourism through the allocation of funds for it.

Moreover, any policy to develop and involving socio-spatial transformation must serve the population as one of its fundamental objectives. In this community not only their small numbers stand out, but also a demographic structure characterized by aging and masculinization. Which brings us to consider the

aforementioned strategic role previously mentioned for women in such “restructuring”. Besides the generational change which itself is guaranteed by their presence, a number of intangibles that make possible and make visible the new social landscape are provided.

The rural tourism in Castile y Leon: regulation and contribution of the role of women

The promotion of rural tourism in this community is carried out by both public bodies and private entities. It is the first Spanish community in the segment of rural tourism.

In absolute terms, Castilla y Leon lead the supply of rural tourism at the national level with 18% of the total. In relative terms, Navarre mentions, are 14% of overnight stays.

During this study there is currently an ongoing revision of Decree 298/93 of the Ministry of Culture and Tourism, on the management of rural tourism, which was subsequently amended by Decree 84/1995.

That rule provides for rural tourism as a form of tourist accommodation service , and defines it as those buildings located in rural areas whose special construction features, location and authenticity, providing tourist accommodation through their price.

So this law distinguishes between the Country Cottage, either as a rental or Shared Hosting, Inn and Rural Tourism Centre and forwards the very conditions of this type of tourism to its regulations. The capacity management and service delivery increases as they are exposed.

In Law 10/1997 of tourism in Castilla y Leon and the transposition of community measures, changes may be made to adopt the new regulation. One can already anticipate the disappearance of Rural Tourism Centre, which will be renamed Hotel Rural. We

are not aware that other criteria such as environment, economy or gender are included.

The territorial-culture attraction of Castilla y Leon, culture, art, climate- and response by businesses have favored the vantage point of this community, but there are many issues to improve.

According to official data the Castilla y Leon community in 2005, the total tourism companies whose ownership was individual, 52.33% was owned by women. And if we obey the results of other studies² we have as the current dynamics of many rural areas depending on its tourism potential and proactivity of women for the implementation of business activities. The debate is served.

Justification: BMU development model



The Model Forest concept, coined in Canada, was born in order to promote the comprehensive and sustainable management of forest resources, their growth and conservation through the

² Rico, Margarita. La Contribución de la mujer rural en la economía de Castilla y León, en *Rev. Economía Agraria y Recursos Naturales*, Vol. 9, 2 (2009). pp. 51-57

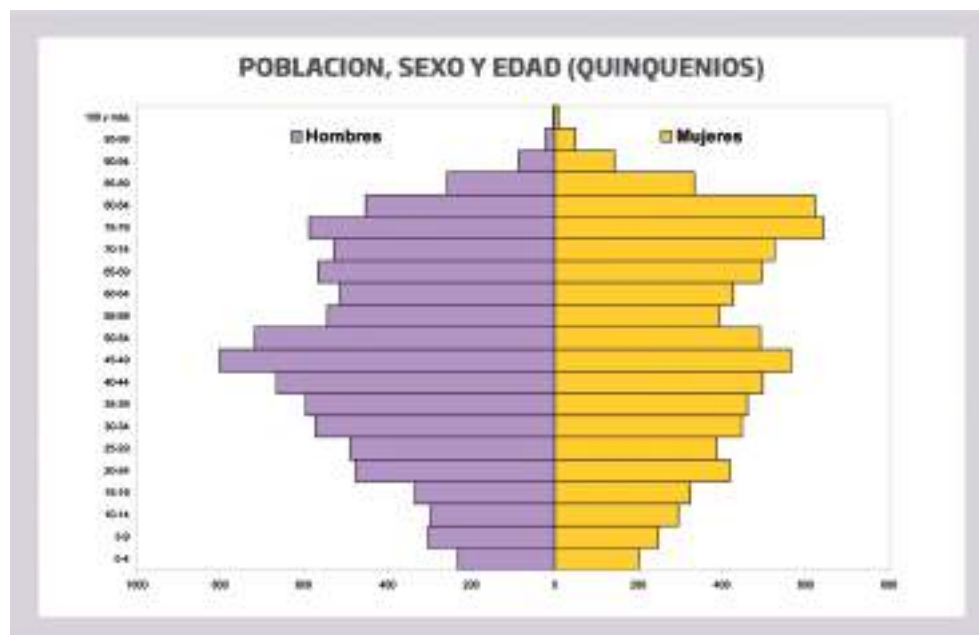
practice of participation and consensus. Since the Rio Conference, it was decided to form the International Network of Model Forests, in which the landscape concept is introduced and the global projection is sought starting from the local.

The territorial area under study is the continuous forest mass -the most extensive of the peninsula- covering more than 100,000 hectares of continuous surface that share 35 municipalities. 15 correspond to the province of Burgos and Soria with 20.

Demography

The volume of people in the area, according to data from the INE (Census 2001 Revision), is 17,033 inhabitants, representing 1.8% of the population of Castilla y León (7.2% Burgos, Soria 1.8%).

The observation of the chart cannot be more illustrative of the fragile demographic situation in rural areas, marked by a high rate of *masculinization and aging of the population*. To the problems that may arise are added to the future of rural areas is the lack of generational change. Hopefully the changes in trends announced in above lines can slow the loss of human resources in rural areas, based above all on sustainability.



Economic Structure

The *pinariega* economy has been based primarily on ranching and logging, followed by stone. According to the INE 2009, the number of companies in this sector would fall to 6% in Castilla y Leon, of which 25% would be recorded in this region. Although not quantitatively important in number, if it becomes apparent that the majority are those that give employment in the region.

However, a weak marketing and transformational structure in this sector in the current crisis has caused a decline in the number of companies in the area by 20% and decreased the number of employees by 15%. Its rate of decline would be around 25%.

In terms of number of companies, the service sector would be the dominant, so it also assists the previously announced outsourcing of rural economies, consisting of very small businesses and low level of employment.

If we add the two variables, number of firms and trading volume, the main economic activities of the region would be: the timber industry, construction, furniture, ground transportation, hotel and retail.

It is just the latter two which we wish to emphasize for being based on the support of tourism, and also because in order that concerns us here are the two subsectors with greater female participation in the area, proactively or not, and even more because the other subsectors, such as wood or construction, are given little to the recruitment of women and even less with the uncertain future that has been described.

The new commitment to the Rural Tourism BMU: contribution of mountain women. Result of research

The *pinariega* economy is in a process of inflexion, but the heritage of the peculiar “communal” management of natural resources is just what has allowed to keep a landscape which is considered

viable to tourism development in the area. Nature, landscape and physical environment, history, historical and artistic heritage, culture, and traditions speaks for itself.³



The supply of tourist accommodations is diversified and has not seemed appropriate to include both hotel and non-specific supply and rural tourism.

The quantitative analysis of this section is made possible from the data provided by the Urbión Tourism Association and the exploitation of those data offered by the Ministry of Tourism of the Junta de Castilla y Leon.

³The first in-pout tourism in this área is without doubt the fact of the convergence of distinct Natural Spaces: The Natural Park of the *Cañon del Rio Lobos*, Natural Park of *Las Lagunas Glaciares de Nelia*, *Sierra de Urbión* and *Sierra de la Demanda* reserves, The Natural Reserves of *Sabinares del Arlanza* and *La Fuentona*, The Nature Reserve of *El Sabinar de Calatañazor* and many other protected áreas: Natural Spaces of *Sabinares del Arlanza* and *La Fuentona*, ZEPA *Sierra de la Demanda* and *Sierra de Urbión* and LIC *Sierra de la Demanda*, *Sierra de Urbión* and *Cebollera*, *Riberas del Río Duero tributaries* , where there is a great number of native species in the ecosystems that are present.



Quantitative analysis of total inbound tourism

At this point we must note that in the subsequent sampling, there were only individuals identified as the legal persons since the legal representative does not indicate the gender of their promoters, which undoubtedly would enrich the results of this work.

A second point to consider is who is truly behind the management and / or operation of such land, and this is where lies part of the controversy in relation to tourism and gender: Although women may be landowners it is merely a patrimonial maneuver by the spouse or partner, or may be male exploitation of the female.

Receptive Offer		Ownership						
type of hotels	Units	Subtotals Type	% Total	% Relat.	Legal status	Wo-man	Man	
Apartment	6			3.75				

Hotel / Pensioning	42			26.25				
Camping	5	55	34.37%	3.12				
Hostel	2			1.25		26	17	12
Rural typology Offer					% Rural type			
House/ integrated	75			46.9	71.4%			
Shared House	9	105	65.6%	5.62	8.2%	17	44	39
Rural Tourism Center	15			7.4	15%			
	6			3.75	5.5%			
TOTAL OFFER	160					43	61	51

The first reading that emerges from these data is that in spite of having a very diversified range of tourist accommodation, the range of accommodation types of rural tourism is almost twice that of hotels, which confirms the high growth of this tourism mode which has been mentioned and that can indicate a weakness in the efforts in the control of the offers on part of the administrative authorities.

Within this same form the predominant position of the cottages is also observed, with nearly a third of the total, mostly in the form of integrated regime. Given that we could talk or rather the investment strategy could also be annotated or be the least business management modality or degree of professionalism required for investment.

In any case, since the effects that concern us here is entirely illustrative regarding the preeminence of women in terms of ownership, both for hotel accommodation and rural tourism, even more so in the latter case, there is also greater numbers of those who hold shared ownership.

More women also observed in almost all types of rural accommodations. However, attention was drawn to two cases in which men were leading: Integral Rural cottages in rent, where the presence of the hosts is almost nonexistent, thus not being

able to assess one of the defendants in this criteria type of tourism, and in the opposite case, the posadas, accommodation with the highest degree of demand of professionalism and management, in addition to quality.

Even with the greater female presence in the ownership of these accommodation units, they do not allow us to see the same leadership in managing the size of business.

Supply **table** of the offer legislated under the designation RT

Gender in ownership of Accommodation		Cottage Rental	Cottage Shared	Rural Tourism Center	Posadas	Distribution By gender
Individual Ownership	WOMEN	29	6	7	2	44
	MEN	31	2	2	4	39
Collective ownership: 17						

	Capacity: <= 6 places	Capacity:> sleeps 6
WOMEN	14	30
MEN	9	30
	25	60

We see that from the quantitative data and gender issues targeted in previous sections, such as warning about the size of businesses or greater degree of professionalism.

Qualitative analysis of the data

Along with the share in ownership of these businesses we will mention the following items, from which we approach the topic of the identification of patterns that maintain or modify the gender gap in rural tourism initiatives:

- Social Profile: gender, age, marital status, education or employment history.
- Finding differences in business management of these businesses by gender: seniority in the business, access to resources, promotion, economy, job creation, position in the market, training requirements, and ultimately quality.
- Overcoming or not of gender roles and stereotypes.

a) Socio-demographic data

Most of the responding owners were both men and women are in the age group of 45-54 years old, although there have been registered women in advanced age no younger than 45, a fact that does occur in the case of men. They are natives of the region under study and we found only one case of a “neo rural” man to be exact.

Marital relationship prevails: it is always the case for women. We've only seen one single and another divorced man. Generally these entrepreneurs tend to have an average of two children, although we find it significant that for the same age group, especially among those 40-45 years of age, women already have adult children while not so in the case of men. Although the number of interviews is not wide enough to draw generalization about the area, it seems that women launch tourism enterprises once they have met their family responsibilities.

As for training, primary education dominates especially among women, followed closely by media studies, where again men outnumber women. We only found higher education in one man.

		Age			Marital status			Minor children		Prove-nance		Level of Educa-tion		
		35/45	45/55	55/65	S	C	D	Si	No	Rural	Neo	Básico	FP/ BUP	Dp/Lc
G e n d e r	M(7)	-	5	2		8		3	5	7		5	2	
	H(5)	2	3	-	1	2	1	4		4	1	1	3	1
Total		2	8	2	1	10	1	6	5	11	1	6	5	1

b) Business Data

It first place it can be observed that in years of operation, women and men are equal, but it seems that there are fewer men who decide to appear in the accommodations created in the last decade- A fact which, moreover, seems to confirm the highest number of women as registered holders.

In terms of financial resources, most of these entrepreneurs have also stated that, in addition to their own resources , they had loans from financial institutions and grants from the LEADER groups that are in the area, ASOPIVA (Pinares-Urbión) and AGALSA (Sierra Demand). However, it seems that women have had to borrow more and / or apply for public aid for the start of activities that only serves to make visible the increasing participation of women in paid work and actively respond to new sources of employment in the context of diversification of the rural world, mainly related to rural tourism.⁴

The main reason for making the decision to start the tourist activity is self-employment in the rural areas where there resides both men and women, where there coincides the motivations

⁴ Un estudio del MARM sobre la participación de las mujeres en la aplicación de los fondos LEADER y PRODER pone de manifiesto cómo el Turismo Rural (medida B3) suponen el 66% de las inversiones y un 40% en cuanto al número de proyectos presentados. El Turismo Rural es así el sector protagonista en el emprendimiento de las mujeres rurales.

for the undertaking, in some cases reinforced by having family businesses related with hospitality (hotels, bars, taverns) or the trade sector. Few cases of family businesses related to the primary sector, which also shows the loss of character pull in the current rural economies.

Revenues are not sufficient to maintain this activity only in the family. Especially in the case of houses, either Full or Shared Hosting Rental revenues provide a supplement to household income. They could only be considered as the main source of family income in cases where that strategy is to go beyond accommodation and provide catering and to a lesser extent, offer complementary tourist activities. Only in the case of higher quality accommodation, especially in *Posadas*, and some cases of CTR, both spouses no matter the ownership live from the tourism sector.

In the rest, revenues are complementary to activities related to the sector independently done by the spouse and outside the tourism service sector activities; we found this only with the case of a woman who runs a small farm.

Such activities generate very little paid employment, although in the cases of rural tourism centers and inns there is usually frequent hiring of one or two employees, also typically women. Also noteworthy is the increased importance representing unpaid work for smaller businesses, whether run by a man or woman. This is contrasted with what has been said in the theoretical section of the utmost importance that represents the unpaid work in family businesses run by women and less so with other sources of employment. What is found is that the work of women is key within the rural tourism sector.

As a general rule, the cottages, whether they are Rural cottages, complete rental, are managed by the owner with family support (spouses, parents or natural or political descendants) and only in the case of CTR and *Posadas*, especially the latter, have fixed or discontinuous staff, at most 3 women from the town being the personal contact through recruitment.

In the generation of employment, it is not important the gender difference, especially those with a more recent nature that deal with CTR and Posadas. Moreover, whether they are led by men and women, they are supported by the spouse, and are paid positions without realizing a clear separation of tasks based on traditional roles. The most repeated phrase is “two do everything”, and is the character of the person, rather than gender, which ultimately determines this distribution. We found only one case in which the man does not cook, “*because he does not know how*”.



As for tourism competitiveness strategies, perhaps for the context of crisis, a general message about price is perceived but few they are willing to lower their margins. Again we find that only in cases where there is greater professionalization, CTR and Posadas, policies are carried out for customer loyalty.

In all of the cases competitiveness goes through the customer, both men and women we speak of work on “the detail of the deal,” the care and cleaning of the business, and how not to be on the internet. The environment or location has also been reviewed as another element, but not too much.

A significant part of these entrepreneurs do not have vocational training courses related to tourism or have had previous experience with such businesses. Almost all of the respondents recognize the value of training, with specific cases where they have not participated in any training activity, and arguing that it is not necessary to receive specific training courses on rural tourism because they believe that this activity is an extension of work at home. These cases have occurred in married woman over 55 years old and unmarried men between 50 and 55, perhaps cases where the level of professionalism was not expected for the future viability of tourism in rural areas.

The main training activities for both men and women owners of lodgings have been related to new technologies, customer service and marketing. Specifically they are formed in Business Management, despite reaching this activity without great theoretical knowledge, although they had experience in the catering sector.



Two cases have not drawn attention: the case of a woman over 55 who did participate in training at the start of her activities more than 10 years ago, and who played a highly motivating

role for her entrepreneurial choice, and that of a man, between 40 and 45 years, whose experience and not theoretical knowledge pushed him to training sessions in the area. Although in general a greater willingness has been detected from women regarding lifelong learning.

It is also concluded that men and women exercise more or less formal relations with other social and economic stakeholders involved in tourism development in this rural region, which can affect an improvement in the management of accommodation and rural tourism in general.

The viability of the tourism industry, nobody doubts, is that you must go through quality criteria even more so in times of crisis. The subsector of rural tourism is no exception to any of these two premises. It is a productive activity capable of generating significant revenues which requires a degree of entrepreneurial training. It has to be a professionalized sector characterized by its quality and not lose the essence that it originated from -the survival of lifestyles and traditional rural environment.

The concept of quality has been more controversial and we have found more women who were willing to become certified in quality issues. While most men do not see this line of arguments to ensure the industry's future, it should be noted that the only case of registered certification is for an accommodation run by a man. Also it has come to our attention the phrase of a woman who claims that "quality doesn't pay."

On the promotion of cultural and natural heritage, all agree on its importance although strategies in this point are much sharper in some cases than in others, again, regardless of gender.

Finally, on protective measures on the environment, gender differences were also found. The main measures revolve around saving energy: biomass, pelex, wood, and solar panels. Just in the case of a woman entrepreneur have we have noted action on saving water.



Male and female entrepreneurs declare that the main problems that tourism in rural areas face are associated with an increased supply of establishments faster than the increase of tourists, the lack of promotion of certain areas of the region, financial difficulties, seasonality, inadequate municipal infrastructure and lack of activities that complement the offer of accommodation.

To conclude this section of quality, we would like to summarize the words of one interviewee who says that quality in rural tourism will continue to be given whenever there is the magic of the country, that there is the key to quality and that today, in his opinion, rural tourism can do without that qualification.

		Type of accommodation				Age (In years)			Investment capacity		Importance of tourism income			Motivation for conducting business		
		CRAC	CRA	CTR	PO	<5	5-10	+10	Own (+40%)	Oblivious	Único	Ppal.	Compl.	(1)	(2)	(3)
g e n d e r	M (7)	1	1	3	1	2	2	3	2	4	1	2	3	4	1	1
	H (5)		2	2	2	1	1	3	4	2	2	3	1	2	3	1
Total		1	3	5	3	3	3	6	6	6	3	5	4	6	4	2



c) Women in Business

Many rural women who have chosen to develop their careers within the municipality in which they live have opted for self-employment in activities that are part time or allow some time flexibility and that do not require travel, so that they can attend to other tasks, whether domestic or in the productive sector. In addition, they have recognized jobs, contrary to what happens in the case of women who work in the household or on the farm, which has given them a high degree of self-esteem and economic independence (Garcia Ramon *et al.* , 1995).

In this sense, when asked about making business decisions, the man / woman consensus is usually the general trend, even though there are more women who decide on their own. They also raise the issue that the problems of conciliation are often presented interchangeably if you work, whether employed or on your own, and even some argue that the latter option is precisely because they can address them more directly through such business or because social networks in rural areas still allow some

relaxation on the daily movement of the children . Which they do not say is that there have been women, albeit few , who would have preferred to have fewer responsibilities, having solved the issue of reconciliation through the transfer of parenting to other women who they have had to hire.



The vast majority believe they can conciliate today, especially older women, who have not had anywhere near the children's services that for the moment exist today. It is also stated that younger women, in their perception , have husbands with whom they can “work together” with the housework. In some cases only, this expression of “collaboration” was rectified. And also they seem to confirm the more sensitized nature of the male gender respondents. To highlight an opinion of men in this subject we look to a female entrepreneur who was asked about this subject who argued “she does say that she has conciliation issues.”

About this heading, it was already mentioned in the lines above that you might not detect conciliation issues because entrepreneurs already have adult children, either because there are women that are not aware that working two jobs is something natural.

Consistent with these answers, respondents think all women and men have identical characteristics to solve business issues related to the sector, both related to its internal policies -relationships with employees and with management- and external policies with customers or suppliers. Again, it is the personal character that makes the trend.

However, other major doubts exist again between men and women, most between the latter, when discussing the relationship between smaller businesses and women-owned businesses, and although based on the premise that they should not exist, if they think it may occur in reality. It is even worth noting the position of a man who recognizes that even though he has taken his business with family support, especially with women, this aid cannot be given in the case of entrepreneurs which according to the respondent may even be subject to opinions against business choice. Finally, and in relation to women's associations, the work of the sector is recognized but there is no existing direct connection with such associations since those that exist only perform some activities related to entrepreneurship.



With all this, we see how the presence of women in tourism ventures in the area under study confirms its contribution to the development of the sector in rural areas, and that the characteristics of this project reproduce the behavior of their agency capacity which is apparently more limited than in the case of men, and therefore, is not being taken advantage of as a potential that could develop if women counted with more positive measures of action, more so in rural areas, where the difficulties of women are supposed to be even greater.

We also want to point out something, which is why in addition to justifying greater attention by rural tourism business by women: they have the greatest predisposition to training and attention to concepts of quality, factors that are targeted as key factors for the future of this type of tourism. The only thing that is lacking is that the information technology industry provides this industry with the “creation of emotions”.

CONCLUSIONS

The approach to this subject can make us see that the relationship between tourism and gender, despite a difficult message to communicate, remains a common thread: they are doomed to be understood despite the difficult balance that intervention strategies for development in territories are held with tourism skills and good attitudes of human resources.

The creation of micro business tourism in rural areas has positive multiplier effects on local economies and impacts on the situation of women. There is not enough empirical adequacies demonstrating the controversy surrounding the empowerment of women through tourism as a formula for gender subordination. If there are, they are not sufficiently communicated.

Therefore, they should be more abundant gender studies and analysis of gender, which results encourage all complementary measures leading to a real gender equity of stakeholders.

Political discourse must adapt to the realities, at any scale, of being capable of meeting the challenges of space and human processes that arise in these new rules of the economic game. Do not treat it as a new trend, since this would lead only to a new social and economic marginalization in the long term, to an unsubstantiated innovation.

The creation and promotion of women tourism professional networks served by the appropriate entity would be a strategic factor that would transfer techniques, methodologies and results and activate, under the gender perspective, the real potential of this sector.

Inserted into globalization, we need to innovate and know the diversity in a broad sense. The professionalization of women, public and private cooperation, and sustainable tourism are points where both responsible women in tourism at the international level, agree are challenges for women for empowerment through tourism.

REFERENCES

- ALARIOS TRIGUEROS, M. (coord.,) (2004) *Las mujeres en el medio rural de Castilla y León*, en Consejo Económico y Social de Castilla y León.
- CÁNOVES VALIENTE G., y VILLARINO, M. (2000): Turismo en espacio rural en España: actrices e imaginario colectivo, en *Documents d'Anàlisi Geogràfica*, 37: pp. 51-77.
- GARCÍA RAMON, M^a D. et al. (1995): Trabajo de la Mujer, Turismo Rural y Percepción del Entorno: una comparación entre Cataluña y Galicia. En: *Revista Agricultura y Sociedad* n^o 75, pp. 115-552.
- GARCÍA SANZ, B. (2004): *La mujer rural en los procesos de desarrollo de los pueblos*. En: *Revista del Ministerio de Trabajo y Asuntos Sociales MTAS*, n^o 55, pp. 107-120.
- MARM (2009): Tendencias del Turismo Rural. En *Análisis y Prospectiva*. Serie Agroinfo. n^o 14.

AN UNCOMFORTABLE SUB DELEGATE: JOSÉ JOAQUÍN DE ARRIOLA (1801-1807)

Ana María Parrilla Albuerne
ana.parrilla@unicach.mx

Faculty of Humanities at the University of Science and Arts of Chiapas



ABSTRAC

This paper aims to rebuild the relational strategies of several members of the Chiapas elite during the Bourbon period. Link types that establish the various local officials, through the performance of charges arising from the application of the Ordinance of 1786, and the interest of new officials to be inserted into the local elite networks are analyzed, not always good fortune. This set of interests appear mediated by the application or not of legislative apparatus and use of justice as an instrument of inclusion-exclusion in the new tissue.

Keywords: *Bourbon reforms, subdelegate, Ixtacomitán, elites, justice.*

“The exercise of the few individuals of medium lights that came down to be sub-delegation of those miserable towns where they lived with the reprobate distribution trade with the natives who sacrificed their greed”
(AHCH-UNICACH)¹

To make our analysis we take as an axis the reference of the case against Jose Joaquin Arriola, Deputy Commissioner and later deputy of Ixtacomitan, who, as we refer to in the title, was to become an “uncomfortable official.” To do this, we examine the performance of the sub delegate in the party under his charge. The different actions of the protagonists in the case will be discussed - the sub delegate; the counsel, Mariano Valero, and the oligarch official, Sebastian Esponda y Olaechea. In parallel an outline of the implementation of the Ordinance of Mayors in the province and territorial demarcation of sub delegations are presented.

The regional historiography of the late eighteenth and early nineteenth century of what we know today as Chiapas is quite limited, but not non-existent. We have interesting works that deal with the political situation during this eventful period, such as is the case with the work of Mario Vazquez Olivera (2010) and Jesus Aquino and Arturo Corzo Gamboa (1994). We can also consult the work of Alma Margarita Carvalho (1994) who studies the political evolution of Chiapas since the implementation of the Bourbon Reforms until its annexation to Mexico by analyzing Chiapas elites. Sergio Nicolas Gutierrez, makes a critical study of the opinions of different authors on the process of the annexation of Chiapas to Mexico (1997). Finally, Michel Polushin presents the

¹ Historical archive of Chiapas (Archivo Histórico de Chiapas)- Universidad de Ciencias y Artes de Chiapas. From this point on the AHCH-UNICACH.

results of an investigation of the period, focusing on local government (1999).

Although at first glance it may seem that there have been few studies that have been concerned with the analysis of this historic moment, we must recognize it has been a period that has grabbed the attention of historians, especially from a political perspective. In all of these works the figure of sub delegate appears in a biased manner, despite its importance as an intermediary between the ordinary citizen and the highest levels of the state apparatus.

Chiapas has certain historical characteristics that make it a unique territory. On the one hand, it has always been considered a territory of the border—first as part of the Guatemala Kingdom and later with Mexico. Moreover, the economic interest that might be awakened by different governmental bodies seems to have been zero, which allowed both religious and secular local elites a political independence which resulted in strong economic control, expressed in constant pressure on the indigenous peoples often resting on fraudulent transactions and strategies of resistance developed by the latter (Viqueira Alban, 1994: pp 237-267). This also marked the construction of new forms of relationships and interdependence.

IXTACOMITÁN

José Joaquín Arriola arrived in the Administration of Ciudad Real, and came from the Villa of Durango in the Lordship of Vizcaya, Spain. His first position seems to have been the guardian of the monopoly of tobacco, which was established in Guatemala in 1766.

Unfortunately we do not have information on his training and job performance. What we do know is that in 1800 he was a lieutenant in the party of Ixtacomitán, in the Administration Ciudad Real, during a period when this population depended on

the sub delegation of Tuxtla that was in the hands of Sebastian Esponda y Olaechea.

Ixtacomitán was north of the Municipality, very close to Tabasco, within the Zoque cultural area Zoque. At the time of the conquest the region already had a rich cocoa production activity that continued throughout the colonial period, although with some fluctuations in quantity and quality of production. We need to recall that between 1670 and 1684, the price of cocoa fell 30 pesos the load to only 10 pesos (AGI, Guatemala, 44 exp. 38 ff. 11v-14).²

During the sixteenth and seventeenth centuries the cocoa trade was monopolized by senior mayors who commercialized the product, sending it to New Spain and the Metropolis, which came through the port of Veracruz. Juan Pedro Viqueira pointed out that the Spaniards were not interested in cocoa production, which was left to the indigenous that allowed some to amass considerable fortunes such as what happened with Francisco de Santa Cruz in the early eighteenth century (Viqueira Alban, 1997 8C).

This region was also a source of cheap labor for the cocoa plantations of Tabasco (Gerhard, 1991: 34, p. 36). The economic importance of the Riverside of Ixtacomitán can be seen in the appointments of lieutenants by the senior mayors, who watched over their interests which in principle should be for the crown. It seems that in the late seventeenth century, the diocese began to appoint a Dominican priest to administer only the inhabitants of the Riverside – of which the great majority were not indigenous - in addition to those that were in Ixtacomitán and who attended to the natives of this town and its annexes (Viqueira Alban, 1997).

It is precisely the area of the Riverside de Ixtacomitán with its cocoa haciendas, which had flourished during the second

² General Archive of the Indias (Archivo General de Indias). From here on referred to as AGI

half of the seventeenth century, the only one in the area of Chapultenango into which it was inserted, that escaped the economic downturn that occurred in the region in the early eighteenth century. However in light of this, the difficulties were many, including: the falling price of cocoa which we previously mentioned, and the shortage of labor despite having a large number of blacks and mulattos. The latter situation led the owners of the haciendas, who were mostly mestizos, to see the need to attract the indigenous to the area (Viqueira Alban, 1997 8C).

The situation in the area did not look very good in the late eighteenth century. A report generated in 1792 in response to inquiries made by members of Guatemala on trade in cocoa production in the Administration, reported that the only parties in which the appreciated product was produced were: Ixtacomitán, Soconusco, Tila and Moyos. However, the exposure of the situation that had these plantations had were not very *alagüeñas*: “... those of Ystacomitan , for refusing to bear fruit for some years now because of a extremely strong south wind that fights the plants: and others for lack real cultivation”(AHCH-UNICACH, background from Manuel Orozco and Berra, TI doc. 11-1ff (ms), 1st) But this was not the only one, as specified in the same report of the products being produced in the province, which should be added: indigo ink, pepper, coffee, achiote, tobacco, sugar cane, Balm of Mary, sweetgum³ , vanilla, sarsaparilla, *Fistola* cane , *palo santo*, Palo Brazil, cotton, wild grains and many other fruits.

But the miserable situation that the report exposes when it comes to the parties of the Administration of Ciudad Real is due to, according to the mayor Augustine Quantas de las Zayas, the ban that the Ordinance of Mayors applied with respect to the ratings and divisions that were permitted previously by the senior mayors.

³ This is a tree from the Altingiaceae, family, also known as the amber tree whose resin is used for medicinal purposes and in the elaboration of perfumes.

Despite the situation of impoverishment lived by every party of the Administration, it seems more than likely that economic activities that were previously monopolized by the senior mayors and a group of local oligarchs continued to be exercised through the control of trade in contraband, by the same actors. It is precisely the relational networks built by members of certain families with senior mayors of major municipalities of Chiapas that allowed for the underpinning of the economic, social and political position of the Esponda family - Olaechea in this particular region, as discussed in the following section.

THE ESPONDA- OLAECHEA FAMILY AND THEIR INTERESTS IN IXTACOMITÁN

Of course, the interest of our research is not to conduct a thorough portrait of this family, perfectly designed by Sergio Nicolas Gutierrez Cruz, but to show the data in a rudimentarily manner that can be helpful for our study.

Francisco and Salvador Olaechea, descendent from the Navarra family, came to America in the early eighteenth century. The first was named governor of the Soconusco on August 17, 1731 and it appears that the capital available during his arrival was rather low, a situation that remained similar during his office. This circumstance probably caused Francisco's decision to leave the province and try his luck in other provinces that were part of the *Audiencia* of Guatemala (Gutierrez Cruz, 2009: pp 43-45.).

Sebastian, the other Olaechea brother, was for a short period of time in the Soconusco but later decided to take the road north to settle in the Zoque party, a region that is found Ixtacomitán. During this first generation the family agreed to certain positions through marriage alliances. Sebastian Esponda married the daughter of Captain Martín de Michelena from Navarre and obtained property, since in 1751 he appears as the owner of haciendas

and he held certain positions within the City of Ciudad Real, as appointed mayor (Gutierrez Cruz, 2009, p. 37). This designation was marked by a confrontation with the mayor, Francisco Elias y Zaldívar, who refused to recognize the chosen officials for the town council of Ciudad Real. The basis of this negative struggle was control of the supply of beef in town. This event resulted in that Sebastian would not go into business with the senior mayors. This view was soon abandoned since in 1768, when he was the receiver of accolades and favorable winds in the Tuxtla party, he received a royal decree which stated that the province was to be divided into two large mayoralties: Tuxtla and Ciudad Real.

This event involved the direct intervention of a higher authority in their self-interests that existed in the Zoque region; therefore, it was decided to establish a relationship with the Mayor appointed to Tuxtla, Juan Oliver, by offering to marry the only daughter who was single, Josefa Antonia- a marriage that did not occur until 1778 when John Oliver was no longer Mayor (Gutierrez Cruz, 2009: p. 53).

Due to this fact the marriage of his other daughter, Maria Gertrudis, occurred who was betrothed to nephew, Salvador Esposito, from Spain who became administrator of the estate of his uncle and father-in-law in Ixtacomitán. Thus a triad was formed : Sebastian Olaechea – Juan de Oliver - Salvador Esposito, who controlled the area of Ixtacomitán.

In the commercial relationship established between indigenous and Spanish, they sold those manufactured goods or food products for cocoa or *grana*, that served as currency, but the Spaniards turned them into goods for export. The stores that Oliver gave responsibility to Juan Salvador Esposito in Solosuchiapa and Ixtacomitán, controlled trade in the area. The goods from Ciudad Real and Tuxtla were kept in the stores and then sold to the natives. The goods ... arrived to the hands of the senior mayors who traded them to the viceroy of New Spain or to Spain (Gutierrez Cruz, 2009, pp. 54-55).

The Polanco bishop in 1778 recommended to the Crown, that in the circumstances of indigenous exploitation, divisions were abolished and there was a return to one more mayor for the whole province-but his request was ignored.

Thanks to Juan de Oliver, the first mayor of Tuxtla, Olaechea managed to consolidate his position in the area. In this way he managed to have his nephew, Salvador Esponda, the title of sergeant major of militia in Ixtacomitán in 1770. The intention was for Esponda to eliminate the consumption of aguardiente liquor in the region but interestingly, it resulted in the creation of a smuggling network in confabulation Juan Oliver (Gutierrez Cruz, 2009: p. 55).

Sebastian Esponda subsequently renewed his partnership with the next mayor, Luis de Engrava y Ovalle. In this agreement, Engrava was recognized by Olaechea as mayor and military ruler, and on the other, Olaechea received the ability to appoint a deputy for the Ixtacomitán party which accounted the trade in cocoa. Olaechea's position led him to seek more profits as he could- he had ten thousand pesos in funds for other towns of the Mayor and which made reference to as "cotton to yarn and blankets, petticoats, backpacks, grana, chayote, hats and machetes" but you could also place a justice administrator in Tecpatán, Jiquipilas and if necessary, in Jitotol. Proceeds would be divided between him and the Mayor. This agreement encompassed five years but if Olaechea died the pact would remain with his heirs. Ironically Sebastian Olaechea died six days after signing the agreement and the company remained in the hands of his sons, Juan de Oliver and Salvador Esponda.

As we can see, in the second generation a breakthrough occurs in the conquest of the political and economic interests of the family. The male sons-Friar Manuel, Esteban Vital and Basilio Antonio (interim governor of the Soconusco and the Mayor of Verapaz) - held positions within the church and the army, while daughters contracted marriage with individuals who provided

them with a strengthening of family fortune . Maria Gertrude married Salvador Esponda and Josefa Antonia with Juan de Oliver, the first Mayor of Tuxtla. In this generation there was an increase in the acquisition of properties.

In the third generation there would be another step upwards.. On the one hand, Manuel Esponda y Olaechea, son of Mary Gertrude and Juan Oliver, who served as sub delegate in the Tonalá party in the early nineteenth century. Although his performance was not very prominent we can point out that he was accused of the crime of cowardice, a fact that never managed to be proven, despite his intention to retire with honors with the rank of lieutenant colonel which was not granted (Gutierrez Cruz, 2009, p. 63). Sebastian Esponda y Olaechea became a lawyer, one of the few in the province, and was elected Member of Parliament; However, his career was cut short by his death on a trip to Cadiz. One of the most significant events was the fight he had with counsel Mariano Valero from 1805-1811. Esponda y Olaechea died, and the conflict dragged on until 1817. It would be Mariano Valero who became one of the protagonists of the lawsuit filed against Jose Joaquín Arriola.

As we can see the family used several strategies to achieve its social-political rise : marriages, the incursion into church and military life, the detention of charges relating to taxation, the foray into political office, and the inclusion in different networks and education (Gutierrez Cruz, 2009, pp. 81-86). Obviously, all these tactics enabled them to achieve a strong economic position and control over various parties; among them, those in Ixtacomitán.

LOCAL OLIGARCHIES IN THE ADMINISTRATION OF CIUDAD REAL

The Administration of Ciudad Real was created in 1786. After the formal organization that was expected of the prov-

inces, such as Chiapas, Tuxtla and the Soconusco, they played a key role - a subordinate power - to the economic and political revitalization of the Spanish crown. But the establishment of the administration in Chiapas had as an antecedent the creation of the Mayor of Tuxtla in 1768, leaving the territory made up of two major municipalities: that of Tuxtla and Ciudad Real. This separation, in the words of Michael A. Polushin, had to do with the idea of facilitating and rationalizing taxes, especially that of cocoa. All taxes were collected in rural communities, sent to Tuxtla and Ciudad Real where the Mayor cleared the accounts, between his salary of 1,000 pesos and sent the surplus to Guatemala (Polushin, 1999 p. 53).

On the other hand, it is important to note that the city of Ciudad Real was an institution with an intermittent life. This was dissolved in 1751, for an issue that was raised by its members and the Mayor to try to define who should control the supply of meat in the city. As will be evident, the Crown sided with the Mayor, dissolving the council. As specified by Michael Polushin, from this time forward the senior mayors reached unprecedented power and the members of the local elite, who until then had enjoyed that privilege by detaining positions in the local council, had to conform to it- with the Mayor appointing them as lieutenants, of course with the subsequent result of building relationships of codependency and cronyism (Polushin, 1999 p. 137). However, the form of economic monopoly exercised by senior mayors, resulted in repeated efforts to reestablish the council which was not achieved until 1782, thanks to the intervention of Bishop Francisco Polo who had arrived in Chiapas in 1770. That is, when the Ordinance of Mayors was applied, creating the Administration of Ciudad Real in 1786, the council had been reestablished for only a little time.

The restitution of the council was a process that was delayed for three years. At first, the bishop was requested to make a list of fifty worthy residents of the city, while from the Administration

of Guatemala determined the value of the positions. We must remember that at the time of the Habsburgs and until the implementation of the municipalities, several positions were venal with the most “coveted” being the town councilman . Even taking this into account, it was not easy to find neighbors willing to fill the offices of the municipality. In 1782, these positions has been filled but the mayor, Ignacio Coronado, did not look kindly on the intrusion of the city council in his jurisdiction, and he applied a bureaucratic ritual and had to wait until January 1783 for the ordinary election for mayors and other unsaleable positonis.

One of the main reasons for the implementation of the regime of municipalities in the colonies was the consolidation of public finances, to ensure and improve revenue administration. Thus the administrative system exercised by mayors or magistrates was headed by unpaid positions. With municipalities, a salary was proposed for officials to prevent any other activity other than the administration of public resources (Lira Gonzalez, 1998, p. 31). Now, if what the Bourbons wanted was administrative decentralization to exclude local groups of power by loyal officers to the Crown (Carmagnani, 1994, p. 51), in the case of Chiapas occurred precisely the opposite, since the actions that were taken precisely favored these groups.

Elite akin to the first settlers and conquerors of the territory were losing strength in the various confrontations between them and the senior mayors of the province; indeed, it seems that the “primitive” elite were losing power at the same time the city of Ciudad Real came and went intermittently from the scene. When the municipality resurged in 1782, people who held positions belonged to a new elite, with certain characteristics: descendants of “heads of families” that arrived in Chiapas Peninsula in the first half of the eighteenth century and belonged to a group of merchants / landowners. As indicated by Jerome Romero in the case of Sonora, and we think can be applied to the Chiapas province:

... These gentlemen found the opportunity to become owners of economic and military power and therefore of social prestige, essential in such a stratified society such as that of New Spain, which allowed them to establish appropriate mechanisms to facilitate the formation of their own political class (Jerome Romero, 1998, p. 24).

So when the council was reconstituted in 1783, there were three families who monopolize positions: Robles, Gutierrez and Coello, who gradually joined Esponda - Olaechea and Farrera, which had nothing to do with “traditional” powerful families in Ciudad Real and had forged their fortunes while protected by the higher mayors of Tuxtla.

JOSÉ JOAQUÍN DE ARRIOLA: THE UNCOMFORTABLE DEPUTY

José Joaquín de Arriola was appointed lieutenant commissioner to the Ixtacomitán party on May 31, 1801 (AGCA, Leg. 50, exp. 571)⁴, under the sub delegate of Tuxtla. His predecessor, Juan Domingo Patoni, had been deputy of Ixtacomitán since at least since 1792 and would be appointed acting deputy of the party in 1803, the date in which our protagonist was put under house arrest. We make this clarification because obviously Patoni was a subject of confidence to the Esponda- Olaechea family, and it was not in vain that he had helped Maria Gertrudis to appoint a legal representative when the occasion required and, of course, had turned a blind eye to fraudulent businesses of the family in the area..

It is precisely in 1801 when Jose Joaquin de Arriola, newly appointed deputy of the party, began to have problems with the

⁴ General Archive of Central America. From here on is noted as AGCA.

administration authorities: the priest of Ixtacomitán Jose Manuel Lopez, and the deputy of Tuxtla, Sebastian Esponda y Olaechea. We offer a question- who supported Arriola for his appointment? We believe that it was surely not Sebastian Esponda but we do not yet have that information.

The lawsuit began as a power struggle between the ecclesiastical authority, in this case represented by the Dominican priest, and the civil authority by Lieutenant Jose Joaquin de Arriola. We must remember that in the Municipality of Ciudad Real the judicial hierarchy and scope of the parties were an extension of existing parishes and that the figure of Lieutenant derived from the vertical relationship with the senior mayors (Polushin, 1999, p. 171). Before the events and hostility of the priest, Jose Joaquin on a temperamental outburst sent his resignation to the sub delegate of Tuxtla Sebastian Esponda y Olaechea. We must remember that, as we noted earlier, the family had economic power in the region of Ixtacomitán and permanence of a external lieutenant, oblivious to their interests, which was not satisfactory. This is why Sebastian Esponda soon accepted the resignation of the lieutenant and decided to reintegrate his post to Juan Domingo Patoni, its predecessor, with which the family had probably had a more fruitful relationship. This decision was supervised by Mariano Valero, legal advisor to the mayor Augustine de las Quantas Zayas, with whom Esponda had a disagreement; since in several occasions the first had been seen as the second interfered in functions that, according to counsel, were of his position-he had been appointed secretary to the mayor, a non-existent position, but was allowed to have knowledge of all the issues that were followed by the counsel. Valero wrote a document to Sebastian Esponda indicating that he admitted he was surprised that the resignation had not been on sealed paper, which went against the Royal Treasury, and had not respected the authority that only the mayor had. In another event the Lieutenant forced Ixtacomitán Indians to sign a letter requesting the tenure of his office, taken from lieutenant Arriola;

the person responsible for making the inquiries was Sebastian Esponda as sub delegate of Tuxtla- a position he held since 1799 (AGCA, Leg. 45, exp. 528).

Following this event in 1802, Arriola asked Augustin de las Quantas Zayas, mayor of Ciudad Real at the time, to include him in the short list for the post of Assistant representative of Ixtacomitán- this petition is curious since it included positive recommendations from the priest with whom he had his first dissent in the party. Despite the good reports, the mayor decided not to include him, but surprisingly chose José Domingo Patoni in third place (AGCA, leg. 200, exp. 1509). An important fact that probably determined the decision of the mayor was that same year and Sebastian Esponday Olachea was dispatched as interim counsel in the Municipality of Ciudad Real (AGCA, Leg, 213, exp.1575).

Finally, after expressing his complaint to the authorities of Guatemala, Arriola received confirmation of his appointment as deputy of the Party of Ixtacomitán in 1802 (AGCA, Leg. 213, exp. 1573). Definitely nothing could be done by the interim lawyer, Sebastian Esponda, against a decision that came directly from Guatemala.

However, we keep in mind that since the early nineteenth century the sub delegations went from the initial three - in the provinces of Tuxtla, Chiapa and Soconusco - to become eleven. This change and fragmentation of the territory was given by the effort of the Bourbons to streamline tax administration and the jurisdiction of the territorial units, since the problem Intendance of Ciudad Real resulted in lieutenants who exercised their office in two different sub-delegations as was the case for Robles from the sub delegation of Chiapa and Tuxtla at the same time - and, what was even more disturbing, the fact that the individual accounts of the lieutenants were grouped as part of its debt to the royal treasury; thus the settlement of the actual accounts of the respective sub-delegation became very confusing. Indeed, as Polushin noted in areas such as Ixtacomitán and Blanquillo river, which were im-

portant centers of smuggling, the locals had not paid much attention to taxes belonging to the royal treasury. Ironically Sebastian Esponda y Olaechea was partially responsible for the creation of the sub-delegation Ixtacomitán and for the arrival of the uncomfortable sub delegate Jose Joaquin de Arriola. Obviously Esponda's arguments focused on the distance between this party and the capital of the sub delegation that he wielded, making it nearly impossible to monitor tax administration and establish order in the region. At the bottom was his interest in climbing positions in the provincial administration, aspirations in which the problems between him and his lieutenant Arriola could have been a serious obstacles; a failure in the settlement of accounts could bring dire consequences. In this manner evading the responsibility for supervision and the passing of the new deputy, who was under the watch of the Royal Treasury and the mayor (Polushin, 1999, pp. 179-80).

PROCESS ANALYSIS

José Joaquín de Arriola was appointed Commissioner Subdelegate of Ixtacomitán in 1800 by the Mayor of the Augustine de las Quentas Zayas. On January 22, 1802 the mayor of Ciudad Real presented the three candidates for the election of the deputy of Ixtacomitán, newly founded sub delegation. Of the three candidates, there did not appear the name of Arriola. The Commissioner filed a complaint with the Administration of Guatemala, whose President called for a review . When the order to review the case came forward, it was oserved to the interim mayor Counsel, Mariano Valero Advisor, which reported that although there had been complaints they did not pertain to him and he considered that

“... Should report impartially for the sake of better service to God and the King -Arriola was the only and most appropriate of those who were submitted to the sub delegation, for the motive might

strengthen the command during the interim, according to ordinances, of inferring that Arriola was no longer acting as judge in the Party. "(AGCA, Leg. 201, exp. 1519). The latter circumstance, according to authorities, justified Arriola had created enmity with some people.

. Thus the Crown approved the appointment of Arriola made on March 18, 1803, while recognizing the aforementioned circumstances. That same year it arrived the new mayor of Ciudad Real, Manuel de Olazabal, when Arriola had still not submitted his finances.

It is following the appointment of Arriola as deputy when the cases against him began to accumulate, he dealt with the distribution of businesses- an activity that was totally banned for sub delegates – and he physically assaulted people of the district, extorted the population and conducted trade in contraband (AGCA, Leg. 159, exp. 1148) ... but perhaps his greatest crime was losing respect of the local priest and the mayor Agustín de las Quintas Zayas (AGCA, Leg. 203, exp. 1526). The deputy was not too long in the post – in 1803 Arriola escaped from house arrest, running away to Guatemala (AGCA, Leg. 200, exp. 1514).

During the trip to Ciudad Real in September 1803, the new mayor passed Ixtacomitán where the complaints against the sub delegate were reported and he immediately asked the Court to revoke the appointment. This action angered Arriola who soon sent letters of contempt to the Mayor, who rebuked him at different times, which ended with Arriola's arrest without asking the opinion of a lawyer. Arriola sent a representative to the Administration of Guatemala, which: "... was secretly introduced through a window of the Palace" (... AGCA, Leg 201, 1519 exp, f 9) In the document that was presented, Arriola complained about the hardness of his arrest and lack of application of the formalities of law, so the President decided to take legal course to report in view of the opinion of prosecutor and legal counsel. At this time it was considered that the mayor was acting on personal hatred. The result was the re-

lease of Arriola and the removal of house arrest. This change allowed the deputy José Joaquín Arriola to escape to Guatemala where he presented his complaint of the wrongs that had been perpetrated against him.

This process reached the highest levels, as the king dictated by royal decree in 1804, requiring an in-depth investigation of the case. After having considered all of the causes and after several interrogations, they concluded that they had no legal basis and it seemed that these were magnified by the mayor and his secretary, Sebastian Esponda. The final resolution was the payment of criminal costs of 2188 pesos and three quarters, to the guarantors of Mayor Olazab, who by then had already died, and to the beneficiaries that Esponda had as secretary, a position at that time that he no longer wielded – we can recall what Esponda made his toughest decisions not acting as a secretary but later as the sub delegate and as the attorney of the royal taxes – concluded that: “... (they) have more paper than substance, and show more commitment in their heat and zeal for monitoring the administration of justice. (AGCA, Leg. 201, exp. 1519, p. 92) This is why, by taking each one apart, the prosecutor found no grounds to prosecute Arriola and 1806 called for him to be acquitted of all the charges against him.

The documents that were consulted correspond to criminal proceedings and as such are composed of three parts: the actor, the defendant and the judge. Normally the person who set in motion the criminal action was the judge who requested a trial to punish the offenders and the imposition of the punishment for the offense. Recall that, as Garriga states: “... [the] justice, [was] conceived as perpetual and constant - to give everyone what is theirs ... power that should maintain the established social equilibrium” (Garriga, 2009, pp 204. -5) .

Throughout this process, presented here in a summarized form, the accused, Arriola, filed a request or complaint to the regency of the criminal court. In the royal decree of March 11

of 1776, there were established important modifications to the indian administrative system, among them an increase in salary and the positions in the civil and criminal areas, but one of the most important innovations was the introduction of the regency in the indigenous audiences. This position was, in the majority of the occasions, conducted by the president of the Administration in such a way that as some authors note, seemed that the functions were superimposed and created permanent rivalries between distinct levels of the indigenous administration, which is known as a “system of counterweights.”

It is precisely this case which is a clear example of how the law is exercised by the criminal courts to the jurisdiction, represented by the figure of the mayor, whose legitimacy and ultimate goal lay in maintaining the established order (Garriga came before, 2009, p. 205). In this manner the judges are constituted as managers of public affairs through a judicial model of government by the courts and their agents which allow the maintenance of order.

However, in this concrete case it became clear that the mayor Manuel de Olazabal, clad in powers of justice and duty, had contravened the fundamental precept that should govern the actions of the judges: to remain oblivious to their private interests. By acting as a private person, guided by their emotions or disaffections, they had to repair the damage and guilt by paying court costs for their creditors catches since, as noted above, in 1806 the mayor had died.

CONCLUSIONS

As we all know, the sub-delegations, from the implementation of the Royal Order of 1786, were an important link between ordinary people and the higher levels of the state apparatus. They had broad powers dealing with the *four causes* -justice, war,

police and taxes in indigenous regions, while in the mixed areas where Spanish and Indians coexisted, they should leave the causes of justice and police in the hands of ordinary mayors, dealing only with finances and war (Margadent, 1988, p. 671). Although the intention of the Bourbons, by introducing these roles, was to reach the lower layers of society and end the frauds committed by senior mayors, the truth is that they soon began to perform the same abuses that had occurred previously.

Now these sub-delegates, representatives of power in the party, depended on the cooperation of the Community authorities to apply the rules of indigenous law in everyday life (Hensel, 2010, pp. 41-62). However, it is also true and no less important, at least in the province of Chiapas, was that the local representatives will have the approval of local elites, who did not necessarily pertain to the party they intended to govern.

Many other sub delegates committed abuses and interfered in the divisions and participated in smuggling. However, José Joaquín Arriola –a newcomer who had failed to create bonds of cooperation with the closed local elite of Chiapas - had the misfortune to arrive at a party controlled by one of the most influential people of the time, Sebastian Esponda y Olachea.

BIBLIOGRAPHY

- Aquino**, Jesús y Arturo Corzo Gamboa, *La independencia de Chiapas y sus anexiones a México (1821-1824)*, (Chiapas, México: Universidad Autónoma de Chiapas, 1994).
- Carmagnani**, Marcello, “Territorios, provincias y estados: las transformaciones de los espacios políticos en México, 1750-1850” en *La Fundación del Estado Mexicano*, Josefina Zoraida Vázquez (Coord.), (México, Nueva Imagen, 1994).
- Garriga**, Carlos Antonio, “Concepción y aparatos de la justicia: las Reales Audiencias de las Indias”, en *Cuadernos de Historia 19*, Ramón Pedro Yanzi Ferreira (Coord.) (Córdoba: Instituto de Historia del Derecho y de las Ideas Políticas Roberto I. Peña, 2009).
- Gerhard**, Peter, *La frontera sureste de la Nueva España*, (México: Instituto de Investigaciones Históricas, UNAM, 1991).
- Gutiérrez** Cruz, Sergio Nicolás, *Encrucijada y destino e la provincia de las Chiapas*, (México: Consejo Nacional para la Cultura y las Artes/Gobierno del Estado de Chiapas, 1997).
- Hensel**, Silke, “Mediadores del poder: la actuación de los subdelegados y su significado para el dominio español en la Nueva España, 1787-1821” en Marta Terán, Víctor Gayol (Coord.), *La Corona rota. Identidades y representaciones en las Independencias Iberoamericanas*, (Castellón: Universitat Jaume I, 2010).
- Jerónimo** Romero, Saúl, “Los ingresos fiscales en los proyectos de formación del estado de Sonora, 1770-1830”, en *Hacienda y política. Las finanzas públicas y los grupos de poder de la Primera República Federal Mexicana*, José Antonio Serrano Ortega y Luis Jauregui (eds.), (México: El Colegio de Michoacán/ Instituto de Investigaciones Dr. José María Luis Mora, 1998).
- Lira** González, Andrés, “Aspecto fiscal de Nueva España en la segunda mitad del siglo XVIII”, *Las finanzas públicas en los*

siglos XVIII y XIX, Luis Jauregui y José Antonio Serrano Or-téga (Coord.) (México: Instituto de Investigaciones Dr. José María Luis Mora, 1998).

Margadent, Guillermo F., “La ordenanza de intendentes para la Nueva España: logros e ilusiones” en *Memoria del IV Congreso de Historia del Derecho Mexicano*, Beatriz Bernal (coord.), (México: Instituto de Investigaciones Jurídicas, 1988).

Polushin, Michael A., *Bureaucratic Conquest, Bureaucratic culture: Town and Office in Chiapas, 1780-1832*, (Department of History, Tulane University: tesis inédita, el 9 de abril de 1999).

Vázquez Olivera, Mario, *Chiapas, años decisivos: Independencia, unión a México y primera República Federal*, (Chiapas, México: Universidad de Ciencias y Artes de Chiapas, 2010).

Viqueira Albán, Juan Pedro, “Tributo y sociedad en Chiapas, 1680-1721”, *Historia Mexicana* 44, no. 2 (Octubre-Diciembre, 1994): 237-267.

Viqueira Albán, Juan Pedro, *Cronotopología de una región rebelde. La construcción histórica de los espacios sociales en la Alcaldía Mayor de Chiapas (1520-1720)*, (París: École des Hautes Études en Sciences Sociales, tesis doctoral inédita, 1997).

Archived documents

Desengaño de los habitantes de Chiapa. Secretaría de Defensa Nacional-Centro Universitario de Información y Documentación, Universidad de Ciencias y Artes de Chiapas (SEDENA-AHCH-UNICACH), f. 86/0052.

Cartas de cabildos seculares, Archivo General de Indias (AGI), Guatemala, 44, exp. 38, ff. 11v-14.

Informe del comisario de Ixtacomitán sobre el cultivo de cacao, Archivo Histórico del Estado de Chiapas (AHECH), Fondo Manuel Orozco y Berra (digitalización del fondo Dirección de Estudios Históricos, INAH), T I doc. 11-1ff (ms), abril 10 de 1792 (1r).

Información en que consta que no fue el vecindario de Ixtacomitán el que pidió que permaneciese el Teniente del partido Don José Joaquín de Arriola sino que este indujo a los vecinos a firmar las representaciones, AGCA, Legajo 50, exp. 571.

El procurador Roxas sobre que se apruebe el título librado a favor del licenciado Sebastián Esponda de subdelegado de Tuxtla, AGCA, Leg.45, exp. 528.

Nombramiento de Subdelegado de Ixtacomitán a José Joaquín de Arriola y la causa formada por el Sr. Intendente contra el mismo o la de que resultó prisión, AGCA, leg. 200, exp. 1509.

Representación de don José Joaquín de Arriola para que el señor gobernador intendente Don Agustín de las Quentas Zayas le tuviese presente en la Terna para la subdelegación de Ixtacomitán, AGCA, Leg, 213, exp.1575.

Oficio del Presidente sobre haber nombrado para subdelegado del partido de Ixtacomitán a Don José Joaquín de Arriola, AGCA, Leg. 213, exp. 1573.

Real cédula particular de 19 de noviembre de 1804 para que la Regencia se aboque al conocimiento de todas las causas pendientes contra el subdelegado de Ixtacomitán Don José Joaquín de Arriola, AGCA, Leg. 201, exp. 1519; f. 8

Sobre fraude de alcabalas y exceso de cargas de Cacao introducidas sin guia en Tuxtla, contra Don José Joaquín de Arriola, AGCA, Leg. 159, exp. 1148.

Testimonio de expediente instruido sobre desacatos repetidos por Don José Joaquín de Arriola ...contra la autoridad y decoro... AGCA, Leg. 203, exp. 1526.

Testimonio de expediente formado a consecuencia de la fuga que ejecutó Don José Joaquín de Arriola, AGCA, Leg. 200, exp. 1514.

FROM INDIGENISM TO INDIANISM:

a review of indigenous empowerment in cultural spaces and in education in the highlands of Chiapas

Carlos Arcos Vázquez
karkos2005@hotmail.com

Ivett Reyes-Guillén
ivettrg2@hotmail.com

Faculty of Social Sciences, Autonomous University of Chiapas



ABSTRACT

This document is a historical analysis of cultural and educational events of the 20th century in the Región Altos de Chiapas. This is important resource to analyze in the discussion between indigenous and indianism. The proposed is to understand the indigenism and indianism as a change in ideology and policy of indigenous, induced by the pressure of the same Indian peoples. This is necessary for access to the processes of development, without the need to be homogenized and strengthen their wealth with their implicit and explicit differences. Analyzes the historical evolutionary process of attention to indigenous peoples in educational and cultural spaces of the first half of the 20th century, subsequently analysed three decades over the second half of the same century, reviewing the creation of the Instituto Nacional Indigenista (INI). In the count of the history of these peoples, the written word has had great impact to give value to indigenous languages, strengthening the writing to disseminate their memories through stories, legends, poems and various literary works, where we sought to give beauty to the indigenous Word. But it also seeks the clear statement of needs in regard to indigenous identity and the search for their own ways of harmonious development.

Keywords: *indigenous, indianism, 20th century, education.*

We can begin by considering **indianism**, not only as a form of manifestation of indigenous issues in literature and painting, associated with forms of representation that established a folkloric, exotic and idyllic expression of the indigenous world, but it is also a protest ideology, it is the search, the identity and re-encounter with our history.

Meanwhile, **indigenism** is considered a set of ideas and concrete activities undertaken by Latin American states in relation to indigenous peoples. It is a practice exercised to produce cultural and socioeconomic changes in indian villages, a set of government policies aimed at assimilating the national integration through policies to transform society. Favre (1998) defines indigenism as a current of thought and ideas that are organized and developed around the image of the Indian.

The **Indianismo** is not a new term in the literature (Warman, 2003), and was used in the colonial era which highlights the indigenous as the main protagonists in the works of writers, which explains the tendency of a focus on literature. This Latin American trend encourages independent life of the countries. In the novel *Netzula*, written by Mexican José María Lafragua in 1832, the figure of the Indian was reflected in a timely manner. This Indianist current is pushed forward in parallel in the countries of Peru and the Dominican Republic.

The concept of the indian is recovering as a sign of identity and struggle, this indianist manifestation is reflected in the texts published by indigenous as an authentic expression of thought stemming from ancestral knowledge and from the construction of historical memory. It is a protest ideology and its struggle against colonialism is the search for the reunion with our identity and history.

Therefore, and throughout this document, it is proposed not only to be seen as a semantic change-indigenism and indianism- but as a change in ideology and indian policy, induced by the pressure from emerging indian peoples themselves; with

emerging policies and ideologies that are greatly needed for access to the development process without the need to homogenize and strengthen its wealth with its implicit and explicit differences.

It is therefore one of the objectives of this paper to analyze the historical evolution process of the attention for indigenous peoples in cultural and educational areas. The partial analysis of the proposals made by anthropologists of the early twentieth century are followed by the analysis of the three decades after the first half of the twentieth century, where the assimilationist policies of the National Indigenous Institute (INI) were established. The previous is the understanding that the project of national education bases for the awakening of the indigenous peoples who seek to be subjects that build it, propose and take decisions for their population, at to stop being served by others in order to start taking care of themselves.

Finally, an overview of the last two decades of the twentieth century, where the indigenous movement is initiated by the vindication of the people, is where indianismo is broadly manifested but not limited to the exhibition of literary or artistic works, but also exposing ideological strokes through the struggles for land and occupying important spaces where they can express decisions aimed at improving social conditions. It was therefore important to give value to indigenous languages, making it necessary to strengthen writing to spread the values of their memories through stories, legends, poems and various literary works, where they sought to give beauty to the Indian word.

HISTORICAL ACCOUNT OF INDIGENOUS EMPOWERMENT IN CULTURAL SPACES IN THE HIGHLANDS REGION OF CHIAPAS, AS THE BEGINNING OF NEW IDEOLOGICAL APPROACHES TO DIRECT THE DEVELOPMENT OF THEIR PEOPLES

Generally, indigenism in Mexico can be distinguished by three periods, the pre institutional- ranging from the discovery and conquest of the New World, until the Mexican Revolution. The second period is the one corresponding to the institutionalization of indigenism, beginning in the revolutionary period, and which gathers momentum with the Congress of Patzcuaro in 1940 and the creation of the Inter-American Indigenist Institute and National Indigenist Institute (1948). The last period marks the events of the institutionalized indigenism crisis, with the adoption of neo-liberalism as the official policy of the Mexican State (Korsbaek and Samano, 2007).

In Mexico, the need to give attention to indigenous populations was felt and in some way served starting in the sixteenth century through *encomiendas* and ecclesiastical institutions, which managed to formalize after the Mexican Revolution when indigenous groups were listed as priority on government agendas and it was sought to establish institutions that responded to their demands. The main idea was the integration or civilization of the Indians, who have historically been a marginalized population.

In 1917, officially institutionalized indigenism was established with the task of educational and cultural integration of the indigenous population. From this moment was born indigenist politics and education for indigenous people as the main instrument for homogenization in both the educational and the cultural aspect.

One of the drivers for the establishment of a department that knows and processed the problems and needs of indigenous

peoples was Moises Záenz, who in his book entitled “Carapan” mentions that:

... Mestizo Mexican insurgency to political and social life and economic liberalization has left the Indian to the margin of the benefits, for though the natives have wielded the rifle or were cannon fodder, the claims have been for the mestizo, for him the law and the power; the land and the ejido ; the schools. Our own Revolution barely escapes from this guilt. Only a very little. We have talked about and sentimentalized the Indian; Some schools have been established, and if he had already reached the condition of being a peon, have would have received some land. But neither the educational program has been drafted with special views to the native, or the agrarian statutes have remembered him much (Záenz, 1936).

In 1936 President Cardenas created the Autonomous Department of Indian Affairs. Cardenas, who was governor of Michoacan, knew about the project that proposed the creation of a department that addresses indigenous issues and it was precisely necessary to avoid bureaucracy that prevails in government institutions.

For President Cardenas, this project was an opportunity to respond to the demands of the population. Until this time policies directed to the indians had had little effect on improving living conditions. With it there was slow advancement in the development of a situation that his presidential predecessors had favored.

Within the powers of the Autonomous Department of Indian Affairs are: 1) to study the fundamental problems of the aboriginal races and order measures and / or actions to be taken in agreement with the President of the Republic; all to make the coordinator of government action redound to the benefit of indigenous people; 2) promote and negotiate with federal and state authorities, all measures and provisions concerning the general interest of the aboriginal population centers (Bonfil, 1992).

However, there was little interest in the practice of carrying out this position of President Cardenas, contrary to what was supposed to be the Autonomous Department of Indian Affairs- This organization dedicated itself to the performance of administrative functions and governance (Vazquez, 1961; Bonfil, 1992).

Indigenous groups have been excluded from the system of capitalist development, and the government has not given the necessary guarantees for indigenous people to be integrated into this system from their worldview and assist in the establishment of educational policies that are conducive to overcoming the lag in community conditions.

The change of education in the communities must start from the assessment of knowledge, experiences and worldview of indigenous communities without radically transforming them, because what has happened to the assimilationist policies is that the dimension of Western culture is still not well understood and parallels a loss in the important values of their own culture, a fact that has been going through educational institutions where the first cultural shocks are generated among indigenous children.

It was not until 1936 when formal education began to recognize bilingual youth as able to bring education to indigenous communities under the understanding that their capacity is increased when considering the management of two languages and allows for the juxtaposition of two cultural worlds. This allowed not only the facilitation of educational processes in these indigenous populations but also ushered in a cultural syncretism. The integration of indigenous peoples to one language and one culture, so that bilingualism was a need to consolidate and clarify its national policy objective.

This power of penetration can be explained, no doubt, in the same way they conducted the Spanish colonization in Mexican and Mayan territories, where a new religion, a new structure of social organization and a western culture was established. This

mechanism was repeated, following the same form of colonization, into the twentieth century.

In this regard, Light Olivia Pineda (1993) analyzes the reflections of Vicente Pineda in the preface to the book *History of indigenous uprisings that have occurred in the state of Chiapas*, as follows:

- a) Notes education as a vehicle of social control of the indigenous, of “taming them” (in the words of the author).
- b) Notes that education is required to produce workforces that require farms and estates, in other words relating education with the ability to work.
- c) Speaks of the need for teachers to educate the Indians, that is, it considers the link between teaching and learning with productive work represented by agriculture.
- d) Suggests that education-training should be given in the indigenous language, an idea that will be the basis of bilingual education many years later.
- e) Finally, it suggests that violence is not used in the capacitive-indigenous educational process, rather persuasion should be used.

The formalization of the education of indigenous peoples began to take shape from the center of the country by anthropologists from different national ideological currents. Among the noteworthy contributors were Alfonso Caso, Gonzalo Aguirre Beltrán, José Luis Gómez Pimienta, Alfonso Villa Rojas and Ricardo Pozas. In the case of Chiapas, the government strengthened this formalization with the creation of the National Indigenous Institute (INI) in the government of President Miguel Alemán, followed by the creation of then the Tzeltal-Tzotzil Indian Coordinating Center on September 4, 1950 based in the city of San Cristóbal de Las Casas, Chiapas.

The main reasons for the creation of these institutes was based on the characteristics of the region, which should be addressed in a timely and appropriate manner: indigenous populations in extreme poverty, rudimentary living conditions, poor nutrition, high infant mortality, morbidity for curable diseases, high rates of alcoholism, high illiteracy rates, and poor land management for agricultural production.

In order to strengthen indigenous education policy it was necessary to continue, at times, with the rural schools, Community centers and cultural missions. The INI's retook them as part of a strategy to bring their social welfare programs. In the 80's, some state institutions continued with cultural missions, among them is the Sub-Secretariat of Indigenous Affairs. Education strategies in the early stages of the INI until the 70's were always essential to strengthen the language and Western presentations.

LATE TWENTIETH CENTURY INDIGENOUS MOVEMENT FOR THE VINDICATION OF THE PEOPLE

The last three decades of the second half of the twentieth century were the basis for strengthening the knowledge of indigenous education promoted by the National Indigenous Institute in the State of Chiapas. The epicenter is reflected in the region of Highlands region Chiapas, with the question "why is it in this space that the impact of actions by the INI are reflected?" Much is due to the location of the first Tzeltal-Tzotzil Indigenous Coordinating Center, exactly in San Cristobal de Las Casas, Chiapas.

In the eighties of the twentieth century, as a result of the policy of homogenization and attention to indigenous peoples, a struggle began to strengthen ancestral knowledge and indigenous science in the state of Chiapas; this movement is known in some

debates as the movement of indigenous intellectuals, the claim of indigenous peoples and the indianist struggle.

The indianist struggle has three processes according to Radha Jhappan, as quoted by Bastida (2001): the first is the **symbolic reversal** which is the struggle of indigenous peoples to reverse those negative aspects which are identified from outside, based on the racism of the dominant society. This fight claims to seek recognition of their cultural values and territory for the defense of the land and defense of their ideology.

At this time they begin to consolidate various social organizations. Non-governmental organizations begin to look for an alternative to regain the lost lands at other times and for different reasons. They seek to occupy national land that are not used for production- objectives that led to fight, resist and pressure the authorities of the State to achieve the goals of indigenous peasants. During this time the targets were not achieved, because there was no will to meet the demands of the land.

Land for indigenous people is a space where everything happens. Land is a reference point in the life of the population, it is most important thing to them. It generates the necessary nutrients; it is a security for housing, with the earth we feel wrapped as when we were born, in it we grow, reproduce and die on the same land, we believe that the earth is the mother, creating cultural identity (Aguirre, 1976, Warman, 1970).

The symbolic reversal has a very important tool that is the word, so, it begins with first attempts at writing short stories, legends, stories of their people that although lack scientific rigor, the value of the language is shown. Over the years, writing in indigenous languages has improved (Garagalza, 2002).

This attempt to create opportunities for indigenous peoples in the social and political fields was intense, unable to find the recognition of various social and institutional sectors of the state. Therefore, in the eighties the movement lasted until the Neo-Zapatista Movement of the Zapatista Army of National Liberation

in January of 1994, which was the watershed between the attempts to be heard and the strengthening of the struggles of indigenous peoples. This struggle lasted as a process until the early nineties, where we searched intensively the reunion and identity with our history, as a vindicated ideology and as a struggle for recognition in the system of government and the world.

Let us now turn to the second process of the symbolic political theory, which is called **symbolic competence** (Bourdieu, 2000 and 2001), Within this we will start to build solid steps to achieve community building, namely the recognition of the values of indigenous cultures. It is precisely this point which begins to manifest the indianista fight on two levels.

The foreground is manifested with the neo-Zapatista, armed struggle, composed mostly by indigenous groups in Chiapas. With this fight there is not only the search for recognition of the social territory, but also the constitutional recognition of Mexican law, revealed in the various divisions of the San Andrés Larráinzar agreements. The whole process brought important benefits to achieve the rights of indigenous peoples, which so far has not been consolidated, but put into national debate the figure of the indigenous to reach important spaces in Mexican politics, education, culture, economy, and institutions where they worked to direct the destinies of politics and economics of indigenous peoples.

The second level is the struggle of indianists in the literary and scientific fields, we continued with the construction and dissemination of the memory of indigenous peoples through literature; narrative, poems, stories, legends, stories, chronicles and fables, published bilingually, in Spanish and in different forms of Mexican languages. In the early 90's, there began to be indigenous civic groups with literary interests, which are themselves driven by the Directorate General of Popular Culture to present their work in various settings as part of Mexican folklore.

It is in 1990 when meetings on literary exposure were held in Ciudad Victoria Tamaulipas, 1991 in San Cristobal de Las Casas

Chiapas, 1992 in Hidalgo ; in 1993 meetings intensified in Oaxaca, Yucatan, Toluca and finally in November 26, 1993, a national association known as Writers in Indigenous Languages AC (ELIAC) was constituted in a meaningful and strategic location full of symbolism, the land of the poet and ruler Nahuatl, Nezahualcoyotl.

Within the goals of ELIAC , the promotion of an official recognition of indigenous languages as a vehicle for teaching and learning content in primary, secondary, normal and higher education stands out. This has gradually permeated the educational institutions in Mexico at various levels, marking different eras.

The ELIAC highlighted the importance of language in literature in the following manner: “We believe that the literature we produce in our native language is one of the ways through which we can preserve the word and the memory of our ancient fathers, to give continuity to our cultures and contribute to the strengthening of languages in our country “(ELIAC, 2009).

To strengthen its objective activities were done that were developed by graduates of literature in Mexican indigenous languages, meetings were held, local, regional, national and international conferences were developed, and the journal *Nuni* was published, a space for the expression of indigenous languages and cultures of Mexico . The magazine *La Palabra Florida* has also become a space for the diverse cultures in which the various literary manifestations of indigenous people are promoted.

This stands out for the advocacy of strengthening of the symbolic competencies, an element that leads to constitutionally propose the *General Law of Linguistic Rights of Indigenous Peoples*, which the Chamber of Deputies gave as a constitutional order in the second article of the Political Constitution of the United Mexican States, to reform the fourth fraction of the seventh article of the General Law of Education, published on March 13, 2003. This was an important for the recognition of the Mexican State to the cultural diversity of the peoples of Mexico.

There were important allies in strengthening indigenous literature, such as researchers, groups and institutions that expressed their full support to the construction of ideas. Among those that stand out and have the recognition of the indigenous we find Miguel Leon Portilla and Carlos Montemayor.

To Montemayor we can give the impulse to the memory of indigenous peoples, through the creation of a collection of important publications which initially were called *dzilb'ob Bejla'e* in Maya (Yucatan). Its Spanish translation reads as follows: *Letras Mayas Contemporáneas* (Contemporary Maya Literature).

He had considered that with the publication of this series of works they had accomplished an important goal, but they had not considered the appearance of armed neo-Zapatista movement in Chiapas. It was in 1994 when the world's eyes turned to the territory in southeastern Mexico where the search for an answer that would make sense of what was happening at the time began. The coordinator of the series *Letras Mayas Contemporáneas* had to launch the second series exclusively for Chiapas in 1996.

Contemporary Maya Literature of Chiapas consisted of 15 volumes which highlighted the major works of indigenous heroes, expressions of everyday life of the people, worldviews and forms of religious organization. It is here where you begin to show the first indigenous works, which currently enjoy a reputation in the literary world. In 1998, the third installment of Contemporary Mayan Literature was published in 15 volumes. In this collection a representative sample of poetry, drama, fiction and customs of the Mayan villages of the Yucatan, Campeche and Chiapas was presented and coordinated by Carlos Montemayor, with which closes an important cycle of the literature of the indigenous peoples of the Mayan region .

In the early nineties in San Cristobal de Las Casas, the first writers in indigenous languages were grouped through an association called the Mayan and Zoque Writers Unit (*Unidad de Escritores Mayas y Zoques* , UNEMAZ). In this unit the common

interests of writers converged to create awareness of the values of indigenous languages and culture of the state of Chiapas. It was important to establish a magazine where all literary manifestations of the various languages were published. It was for this reason that the magazine *Nuestra Sabiduría* (Our Wisdom) arose as a space for the dissemination of cultural diversity. In it we can find many literary contributions in indigenous languages.

In various scenarios we would hear phrases like “*we are tired of being treated*”, “*we want to care for ourselves.*” Institutions with philosophies and missions that focus on serving the indigenous population have to be operated by the indigenous people themselves and have the ability to push policies directed to them. This is already part of the symbolic competition, where there is a demand for spaces of various kinds to highlight the capacity created in various media.

At this time other associations such as the House of Writers and Culture of the Maya Indians (Sna Jtz’ibajom) are strengthened. This strengthening was awarded by foundations, individuals and cultural institutions, and specifically by the support of the poet Jaime Sabines, the linguist Robert Laughlin of the Smithsonian Institution and several anthropologists and national and international linguists who worked as informants and developed the Great Dictionary of the Tzotzil language. There was also the support of Dr. Martha Turok, then head of the General Directorate of Popular Culture, who made possible the publication of a collection of nine books in addition to the ten published by the State Government of Chiapas. The founders and members of the Association of Tzeltal and Tzotzil Actors and Writers set about the task of rescuing, develop and disseminating the cultural values of the Mayan Communities in the highlands of Chiapas.

Sna Jtz’ibajom, with support from the Ford Foundation, Maya foundation and social participation, published manuals in Tzeltal and Tzotzil languages, and a school for teaching those languages was created. Among the notable publications was the

series Ts'ib-jaye , texts of indigenous peoples where various literary texts were manifested.

In 1994 the Fray Bartolome de las Casas series was published- a memory and life of our people- by the Center for Humanistic Research of Mesoamerica and the State of Chiapas (CIHMECH) under the National Autonomous University of Mexico (UNAM). This work enriches the literary manifestation of indianists in the highlands of Chiapas. This institution manifests the effort to strengthen the writing of indigenous languages through contests of indigenous stories and tales.

As a result of the negotiations of the Zapatista Army of National Liberation (EZLN) with the federal government, table 1 of the Dialogue of San Andres Larráinzar on indigenous rights and culture, an old demand of indigenous writers and artists of the state was resolved with the creation of the National Centre for Languages, Art and Indigenous Literature (CELALI) in February 1996. The following year its activities officially started, and with this action the symbolic competence of indianists was manifested, as well as the vindication of indigenous peoples, seeking thereby the reunion and reconciliation with themselves to strengthen their right to cultural self-determination (CELALI 1997).

Since then the Centre has become an important symbol for the construction and strengthening of the indianists, where it is manifested and crystallized with its inception as a series of literature in indigenous languages: the anthology of narratives *Maya-Zoque* (1997), the yearbook *Jabil-Ame* (1997), *El Bolom dice* (1997), *Cursos de cuentos K'ox* (1999), painting, poetry, and sculpture competitions among others where the desire is manifested by translating the values of the indigenous cultures.

Finally, we find the **third process** of symbolic policies, **Community Building** (Naparstek et al 1997). This process should be the end of all the struggles of indigenous peoples, where the coexistence with all cultures, races , religions, visions and conceptions of the world are manifested- an exhibition of true

intercultural relations, however, that are currently still in search of that moment.

The situation of the attention of indigenous peoples from indigenous peoples themselves is a process of complexities, of political and social weights, that prevent the progress of the empowerment of these cultures in the necessary spaces for their full and harmonious development.

Within processes that have already been discussed, progress can be seen in during these two decades, the eighties and nineties. They has been noted significant progress in cultural and educational fields, but this does not imply that in certain sectors there continues to be a process of struggle. These processes are not unique to one or two decades, but rather are a constant that involves improving the process of development of indigenous peoples, in this case in the Highlands of Chiapas.

CONCLUSIONS

Indianism can be seen as a process by which it becomes evident the forms, structures, vibrations and indigenous political ideology. It is the mechanism by which indigenous peoples express their identity and differentiate their status in a homogenizing world, where it is not necessary to lose their identity and adopting others is indispensable for achieving the development of the people.

A heterogeneous world contains more richness and depth that homogenization imposed for the triumph of the least above the rest. Through indianism, this wealth is expressed.; The wealth of identity- without ceasing to interact with other cultures and bring genuine intention to find the right way for harmonious development, peaceful empowerment and cultural delight.

Such has been the case in the historical trajectory of these villages, where the written word has exerted great impact by giving value to indigenous languages, strengthening writing to

spread their memories through stories, legends, poems and various literary works, where they sought to give beauty to the indigenous word. But it also seeks to understand legitimate ideologies, hopes for development and cultural beauty.

While it is true that much remains to be done, it is also true that the analysis and search for the consolidation of indianist processes becomes indispensable. This this reason the writing of the memories of the people, told by the people themselves, is required. It is necessary to express the hopes and work for the processes of inclusive formal education, with regard to the diversity of all peoples, indigenous or not, for the gradual construction of forms of harmonious and sustainable development. Everything must grow- knowing, appreciating and respecting each of its parts.

BIBLIOGRAPHY

- Aguirre B G.** (1976). *Obra polémica*. SepInah. México.
- Bastida M M C** (2001). *Quinientos años de resistencia: los pueblos indios de México en la actualidad. Hacia la creación de un cuarto piso de Gobierno, México*. Universidad Autónoma del Estado de México.
- Bordieu P.** (2000). *Poder, derecho y clases sociales*. Bilbao. Descleé de Brower.
- Bordieu P.** (2001). *Langage et pouvoir symbolique* París Seuil/Points.
- ELIAC (2009). Escritores en Lenguas Indígenas Asociación Civil (ELIAC). Consultado el 15 de septiembre de 2009 en www.eliac.org.mx
- Favre, H** (1998). *El Indigenismo*. México, Fondo de Cultura Económica.
- Garagalza L** (2002). *Introducción a la hermenéutica contemporánea: cultura, simbolismo y sociedad*. Anthropos editorial. Barcelona, España.
- Korsbaek L y MA Sámano.** (2007). *Indigenismo en México: antecedentes y actualidad*. Ra Xinmhai. Enero-abril. Año/Vol 3. No. 001. Universidad Autónoma Indígena de México. El Fuerte, México.
- Naparstek A, Dooley D y R Smith** (1997). *Community Building in Public Housing: Ties That Bind People and Their Communities*, The Urban Institute/Aspen Systems Corporation.
- Pineda, L O** (1993). *Caciques Culturales (caso de los maestros bilingües en los Altos de Chiapas)*. Puebla, México, ALTRES COSTA-AMIC.
- Vázquez G V.** (1961). *El movimiento indigenista en México*. En México 50 años de Revolución. Tomo II. Fondo de Cultura Económica. México.
- Warman, A. et al.** (1970). *De eso que llaman antropología mexicana*. Editorial Nuestro Tiempo. México.

Warman A. (2003). *Los indios mexicanos en el umbral del milenio*, México, FCE.

TUBERCULOSIS, A NON-REEMERGING DISEASE IN CHIAPAS:

An analysis from the academy
and social organizations

Juan Carlos Nájera Ortiz¹
jcnajerao@hotmail.com

Gerardo Núñez Medina²
gnunezm@msn.com

¹ Mesoamerican Center for Studies in Public Health and Disasters (CEMESAD),
² Center for Analysis and Strategic Information for Regional Development (CEAN)
Autonomous University of Chiapas



ABSTRAC

TB represents one of the principal problems of world health. It is a reason of disease in million persons every year, and simultaneously it represents the second reason of death for an infectious disease in the whole orb, 22 countries concentrate 81 % of all the incidental cases in the world. In Mexico of a constant way about 18,000 cases of tuberculosis are brought in all his forms anually, Chiapas according to official numbers thinks inside the first ten conditions of the country that it contributes the major number of cases, nevertheless, studies realized by the academic sector and of organizations of the civil society, demonstrate in his results that the problem can be of major dimensions, since high index of cases is brought in different regions of multidrug resistance, of mortality and of low time of survival of the persons diagnosed with tuberculosis, as well as the subdiagnosis of cases, being represented as an important problem of public health in the region, with big implications of economic and social type for the affected population.

Keywords: *Chiapas, Tuberculosis, Poverty, Public health.*

Tuberculosis (TB) is an infectious-contagious disease caused by the bacterium *Mycobacterium tuberculosis* (*M. tuberculosis*), and can affect different parts of the human body however it is most common in its pulmonary form (TBP) which has a higher importance for public health (Quercia, 2008), and which is the main form of transmission.

The TBP is transmitted from person to person by air by people with TBP through coughing, sneezing, talking or spitting, with a million droplets expelled into the air where the tubercle bacilli may remain for hours in the environment. It is considering that three rods may be sufficient for a healthy person to become infected. An untreated person with active TB can infect between 10-15 people a year (Ticona, 2009). However, not all people infected with *M.* necessarily develop active *tuberculosis* disease, since the immune system, under normal conditions, is able to contain the infection and “encapsulate” germs, isolated by a thick waxy coat that can lie dormant for years.

The risk of disease increases as a person’s immune system is weakened for different reasons. Hence TB appears much more frequently in those characterized as having precarious living and working conditions, hence it is also common among particularly vulnerable population groups such as patients with malnutrition, HIV and diabetes mellitus type II, among other diseases.

Chiapas demonstrates a great lag in the social condition and health- mainly in its indigenous communities. In this respect, there is insufficient quality and coverage of health services, as well as the presence of a highly vulnerable populations regarding health and social condition.

Thus, after doing a literature review of papers published by academics and members of social organizations done in the highlands region of Chiapas with the theme of pulmonary tuberculosis, the objective of this paper is to describe and analyze the principal results. Within these results, there is highlighted the high levels of under-diagnosis, significant levels of abandonment

of treatment and high rates of multidrug resistance and high mortality by tuberculosis (Sanchez et al, 2002; Nájera et al 2008; Reyes et al, 2008, Sanchez et al 2010; Nájera et al, 2012).

THE EPIDEMIOLOGY OF TUBERCULOSIS (TB) IN THE WORLD, MEXICO AND CHIAPAS

TB represents a major global health problem. It causes disease in millions of people each year and is also the second leading cause of death from infectious disease around the world, only after HIV-AIDS (Glaziou et al, 2011).

In 2012 it was estimated that about 8.6 million new TB cases (range, 8.3 to 9.0 million) occurred worldwide, equivalent to 122 cases per 100,000 inhabitants. The largest proportion of estimated 2011 cases were in Asia (58%) and Africa (27%), followed by the Eastern Mediterranean region (8.0%), the European Region (4.0%) and the Americas region (3%) (WHO, 2013).

In the 22 countries with high prevalence of TB¹ that have been given high priority globally since 2000 there appear around 81% of all incident cases in the world. Of the 8.7 million incident cases that occurred ,approximately 0.5 million were children and 2.9 million women (WHO, 2013).

The five countries with the highest number of incident cases in 2012 were (WHO, 2013): India (2.0-2.4 million cases), China (0.9-1.1 million), South Africa (0.4-0.6 million), Indonesia (0.4-0.5 million) and Pakistan (0.3-0.5 million). Only in India and China there were concentrated, respectively, 26% and 12% of

¹ Countries with a high level of TB in the world according to the WHO, 2011: Afghanistan, Bangladesh, Brazil, Cambodia, China, Democratic Republic of the Congo, Ethiopia, India, Indonesia, Kenya, Mozambique, Myanmar, Nigeria, Pakistan, Filipinas, Russia; South Africa, Thailand, Uganda, Tanzania, Vietnam and Zimbabwe.

global cases. Of the 8.7 million new cases in 2011, between 1.0 and 1.2 million (12-14%) were people with HIV-AIDS.

The highest proportion of TB cases co infected with HIV was in countries of Africa, a region in which 37% of TB cases were co infected with HIV, who in turn represent 75% of TB cases living with HIV worldwide (WHO, 2013).

With regard to cases of resistance to anti tuberculosis drugs (WHO, 2013), it is estimated that by 2012 worldwide there were 450 000 (range: 300 000-600 000) new cases of Multi drug resistant (MDR) TB. This total includes cases of primary and acquired MDR TB.

In the case of Mexico, according to the epidemiological history of TB, have recognized population groups that are most at risk whose characteristics have historically presented morbidity and mortality rates higher than other groups; including young adults, older than 20 years old (SSA, 2012). Other groups that have been identified as vulnerable include indigenous people, migrants, persons deprived of their liberty, people in rural areas, children under 5, among others. It has also been recognized that males are more affected than females (Arana, 2010).

According to the registry and reporting system of Epidemiological Surveillance of Tuberculosis, in 2010 there was a total of 18.848 new cases of TB reported in all forms across the country, corresponding to an incidence rate of 16.8 cases per 100 thousand inhabitants . The highest rate was in Baja California with 54.1 cases per 100,000, while the lowest (4.0 cases per 100,000 population) was recorded in Tlaxcala. In the case of Chiapas, the rate was 26.5 reported in the same denominator, being the eighth state in the country with the highest rate (SSA, 2012).

The situation of the disease in the country shows well-defined areas of concentration. Thus, the National Epidemiological Surveillance System (MOH) divides the country by groups of states in three different regions: the north, the center and the south-southeast (SSA, 2008). In the states of the north of the country

(Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon and Tamaulipas), which is considered the most developed area, there were almost 4,627 recorded cases of TBP per year (32% of the country); in fact, this is the region with the highest incidence in the country. Baja California has high morbidity and mortality, mainly due to the high presence of migratory flows, “floating” populations and laborers, large numbers of people who are illicit drug users, the presence of high incidence of HIV and diabetes mellitus, an incidence in prisons, a lack of opportunities for diagnosis and difficulties in a directly observed treatment of short course (or DOTS) (SSA, 2008).

The central region (Aguascalientes, Colima, Mexico City, Queretaro, Guanajuato, Michoacan, Tlaxcala and Mexico State) recorded almost 1,750 new cases per year (11.6% of total cases). This region is the one with the lowest incidence, but also has the highest number of people migrating to the United States, plus it has boundary with high incidence states.

In the case of South-East region (Chiapas, Guerrero, Veracruz, Oaxaca, Puebla and Tabasco) they account each year about 5,400 new cases of TBP (36% of the national total), due to the following factors : i) internal and external migration; ii) problems of access to health services, iii) low levels of development in more than 90% of the municipalities, mainly in rural areas and indigenous communities (UNDP-CDI, 2010), iv) difficulties in implementing the DOTS (heterogeneous and fragmented by the various health institutions) and presence of “silent municipalities” (municipalities where no cases have been reported, but not diagnosed, i.e. municipalities with little or no opportunity to detect and therefore diagnose cases) (b SSA, 2012).

Of the cases of TB in all its forms, recorded by the health sector in Mexico (SSA, 2012) in 2010 (18,848 cases), 81.6% (15,384 cases) corresponds to the TBP, 1.6% meningeal, 5.7% ganglionic and 11.1% for other forms of the disease. The re-emergence of TB has been associated with other diseases and / or health conditions

(comorbidities), the most common are: diabetes (21%), malnutrition (14%) and HIV / AIDS (6%). 4.9% of new cases are reported in the group of pediatric patients (<15 years).

With respect to mortality from TB for 2009 they showed 2,222 deaths in all of its forms. The mortality rate for the pulmonary form (TBP) was 1.8 per 100,000 inhabitants, representing 84% of all deaths from TB in all its forms. The states with the highest number of deaths are: Veracruz, Chiapas, Baja California, Jalisco and Nuevo Leon, who together accumulate 45% of deaths nationally (SSA b, 2012).

For the state of Chiapas, according to official figures, for 2010 an incidence rate of 26.5 cases per TBP 100,00 inhabitants (SSA, 2012) was reported. This figure indicates that Chiapas has twice the reported cases exceeding the national average (13.7 per 100,000) and ranking eighth in the states of Mexico with high prevalence of TB. Regarding mortality from TBP, it is important to note that Chiapas has occupied the top places only after Baja California (5.4 and 3.79 deaths per 100, 000, respectively).

THE SITUATION OF THE TBP IN THE HIGHLANDS OF CHIAPAS FROM A DIFFERENT PERSPECTIVE TO THE HEALTH SECTOR. ANALYSIS FROM THE ACADEMIA AND SOCIAL ORGANIZATIONS

According to official epidemiological reports, the state of Chiapas is frequently among the first eight states that have the largest number of cases of pulmonary tuberculosis (PTB) annually, just behind Baja California, Veracruz, Nayarit, Sinaloa, Sonora, Guerrero and Tamaulipas. Also in recent years, it has held second place in the number of deaths from this cause, just behind Baja California (Castellanos, 2012).

Chiapas has two regions where the TBP acquires a special significance and magnitude. One is the Soconusco region, where

there is consistently reported a higher number of cases in the state. This region is characterized by the constant flow of the cross-border migration of people from Central American countries, particularly Guatemala, and South Americans trying to reach the United States.

The increase in cases of TBP in this region has been a focus of attention by both the Mexican and Guatemalan health authorities and international organizations such as the Pan American Health Organization (PAHO) (Arana, 2010).

The highlands region normally occupies second place in the state in the number of registered cases. In this region, like what happens in the rest of the state of Chiapas, the recorded cases are generally those that are diagnosed in people who have access to health services and are detected passively. In the highlands, it might be thought that according to the conditions (poverty, marginalization, social exclusion, malnutrition and poor access to quality health care) that a better system of detection of TB cases in the region are most likely due to the prevalence of tuberculosis in this region that match or exceed that which is presented in the Soconusco (Arana, personal communication 2011).

The Program for Prevention and Control of TB in the Highlands, which is mostly inhabited by an indigenous population, presents alarming deficiencies. Consequently, the problems regarding the TBP are much greater than that which is recognized by the official sector. Thus, the problems surrounding this disease area have been an area for investigations and actions carried out by academic institutions and civil society. Several epidemiological studies have provided information on adherence to anti-tuberculosis treatment, drug resistance, mortality and survival in people affected by TBP, and the situation of TB in the rural areas of the conflict zone.

The issue of adherence to treatment in the region was addressed in a study conducted by Guillen Reyes et al (2008). This study, conducted from November 2002 to August 2003, consisted

of in-depth interviews with TB patients, family members, institutional physicians, community health coordinators, and traditional medicine practitioners. The results of this study were: i) different perceptions among patients and their families regarding health personnel; ii) communication barriers between the various actors involved in the issue of TB, either as patients, families and health workers; iii) adverse effects of the anti-tuberculosis treatment, considered as one of the main causes of treatment abandonment. The latter situation becomes relevant in the fact that the abandonment of treatment and consequently the multiple treatments turn out to be one of the main factors for the occurrence of MDR-TB, which due to lack of infrastructure to perform routine cultures in different regions of Chiapas is at an unknown magnitude.

Sanchez Perez and colleagues published a study in 2010, aimed at analyzing the proportion of MDR-TB during 2000-2002 in inhabitants of the regions of the Highlands, Selva and Northern Chiapas. Of a total of 88 cultures analyzed, 57 (64.8%) were sensitive to primary drugs, 19 (21.6%) were resistant to one drug and 12 (13.6%) were MDR-TB. Importantly, of these 88 samples that were studied, 60 belonged to residents of the highlands region of Chiapas, of which 41 (68.3%) were sensitive to anti-tuberculosis drugs, 12 (20.0%) showed resistance to one drug and 7 (11.7%) were MDR-TB. These figures become relevant and demonstrate that the situation of the MFR can be considered as a serious health problem in the highlands region of Chiapas. However, according to official figures, in the period from 2000 to 2010 there were only 13 cases of MDR-TB reported (Castellanos-Joya, 2012), reflecting a discrepancy of official data and those provided by the study (Sanchez et al, 2010).

Another study, conducted during the years 2005-2006, follow-up home visits were made to 431 people during the period 1998-2002 who were diagnosed with TBP in the highlands region of Chiapas (Najera et al, 2008). In this study, 208 people were found alive, 145 were not located and 78 had died. Of the 78

deaths, 55 occurred most likely as a result of TBP or its effects. Although TBP is a preventable and curable disease, in many cases this is not fulfilled in the region, consequently resulting in mortality from TBP which has serious economic, social and family formation implications for people who suffer and even more when they die by this disease. In this regard, it is worth noting that many of the deaths by TBP are not registered as such, which results in underreporting of mortality from this cause (Najera et al, 2008).

As a consequence and in response to the results of the monitoring described above, in August 2008 civil society organizations in the region appealed to the Inter-American Human Rights System, in order to: 1. Request precautionary measures to protect the lives of those sick with drug-resistant forms of the disease (MDR-TB), for which it is requested that they administer the secondary anti-tuberculosis treatment to people; and, 2. To request information from 145 people who had not been found in the study, with the aim to locate and, where appropriate, give them the appropriate treatment.

As a result, coupled with the highlighted problems and because of the few resources the program against TB receives, as well as structural and operational failures of the program, in 2009 the Permanent Commission of Congress adopted by consensus a point of agreement to ask for an audit and a technical review of the Tuberculosis Program in Chiapas. In the same year, the Inter-American Commission on Human Rights acknowledged and approved the request for precautionary measures to protect and provide adequate medical care to the indigenous people of Chiapas who had been affected by inadequate treatment, which treatment included a second round of anti-TB treatment for those identified with MDRTB in various studies in the highlands region . Moreover, in 2010, the State Commission for Human Rights issued a recommendation to the State Health Institute of Chiapas (ISECH) that included the review of the program and increased

support for operation and training. Unfortunately it was not possible to obtain from the ISECH information that would allow the 145 people not localized in the study to be found.

As a continuation of this investigation, there was carried out an analysis of survival among patients in follow-up visits (Najera et al, 2012). The study found that among patients who died, the median survival time from date of diagnosis of TBP until his death, was 774 days (median 670, range from 0 to 3.185 days). Of all documented deaths attributable to TBP (n = 78) , 38% occurred during the first year following the date of diagnosis and 53% after two years had passed. The variables of age (45 and over) and time of taking the treatment (less than six months) were associated with decreased survival of the people by TBP (HR, 5.70 - 95% CI, 3.59-9.18).

CONCLUSIONS

According to the WHO, a reemerging disease is one that has previously existed and that presents a rapid increase in their incidence or geographical distribution (PAHO, 1995). In the case of tuberculosis, after the appearance of reliable diagnostic methods and effective therapy in the past century in many countries it was believed that the disease could be controlled and eradicated. However, increasing poverty, migration, association with HIV-AIDS, the resistance of *M. tuberculosis* to the usual drugs (isoniazid and rifampicin), resulted in the WHO declaring in 1993 that the disease was a “global emergency “and thus classify within reemerging diseases.

In Mexico, while if there had not been a good control of the disease one would think of it was in control and eradicated, today the problem of tuberculosis (that has always existed) has worsened mainly due to poverty, lack of access to health services and

the consequent low vaccination rates, the lack of public policies for prevention and the emergence of AIDS and most recently diabetes.

More than a re-emergence, it can be considered the resurgence of a reality already flagellant for the Mexican population, a situation that is no stranger in Chiapas- quite the contrary. As our state meets all the conditions, both those of the population as well as health services, to further the spread of the disease and have it still constitute a serious challenge in the health sector.

It is therefore necessary to reformulate concretely the public health policies employed in the management and control of the disease, both globally as part of the agenda of the 2015 Millennium Development Goals of the United Nations, and as part of Mexican and Chiapas healthcare system. In this sense, the political (and financial) will of the government of our country to prioritize the deserved control of TB is transcendental, because beyond being only a health problem, it is also a social and economic problem for individuals and families who suffer from it.

BIBLIOGRAPHY

- Arana-Cedeño M, “Dos padecimientos de la pobreza y la exclusión en Chiapas: la desnutrición y la tuberculosis,” Pérez Arguelles Mariana (coord.) *Cinco miradas sobre el derecho a la salud. Estudios de caso en México, El Salvador y Nicaragua*. México, D.F., Fundar, Centro de Análisis e Investigación, A.C., pp: 177–230, 2010.
- Castellanos-Joya M. Situación actual de la Tuberculosis en México... Avances y desafíos. Presentación en el XV Curso de Actualización en el Diagnóstico y Tratamiento de la Tuberculosis en el Niño y el Adulto. México DF, 11-15 de junio de 2012.
- Glaziou P, Floyd K, Korenromp EL, Sismanidis C, Bierrenbach AL, Williams BG, Atun R, Raviglione M., 2011. Lives saved by tuberculosis control and prospects for achieving the 2015 global target for reducing tuberculosis mortality. *Bulletin World Health Organization*, 89:573–582.
- Nájera-Ortiz JC, Sánchez-Pérez HJ, Ochoa-Díaz H, Arana-Cedeño M, Salazar- Lezama MA, Martín- Mateo M., 2008. Demographic, health services and socioeconomic factors associated with pulmonary tuberculosis mortality in Los Altos Region of Chiapas, Mexico. *International Journal of Epidemiology*, 37 (4):786–795
- Nájera-Ortiz JC, Sánchez-Pérez HJ, Ochoa-Díaz H, Leal-Fernández G., Navarro-Giné A., 2012. The Poor Survival among Pulmonary Tuberculosis Patients in Chiapas, Mexico: The Case of Los Altos Region. *Tuberculosis Research and Treatment*, (En línea). Disponible en: <http://www.hindawi.com/journals/trt/2012/708423/> Fecha de Consulta: Agosto 10 de 2012.
- Pan-American Health Organization. Regional plan of action for combating new emerging and re-emerging infections diseases in the Americas. Washington, DC:PAHO,1995;vol 5:14-5
- Programa de Naciones Unidas para el Desarrollo (PNUD), Comisión Nacional para el Desarrollo de los Pueblos Indígenas

- (CDI). Informe sobre Desarrollo Humano de los Pueblos Indígenas en México. El reto de la desigualdad de oportunidades. México DF. Octubre de 2010. ISBN: 978-92-1-326051-7
- Quercia Arias OE. La tuberculosis una enfermedad vigente, prevenible, tratable y curable. *Alergia e Inmunología Clínica* 2008. 26 (1-2): 20-23
- Reyes-Guillén, I, Sánchez-Pérez HJ, Cruz-Burguete JL; Izaurieta-de M., 2008. Anti-tuberculosis treatment defaulting. An analysis of perceptions and interactions in Chiapas, Mexico. *Salud Pública de México*, 50 (3): 251-257
- Sánchez-Pérez HJ, Hernán MA, Hernández-Díaz S, Jansá JM, Halperin D, Ascherio A. Detection of pulmonary tuberculosis in Chiapas, México. *Annals of Epidemiology* 2002; 12:166–72.
- Sánchez-Pérez HJ, Díaz-Vázquez A, Nájera-Ortiz JC, Balandrano S, Martín-Mateo M., 2010. Multidrug-resistant pulmonary tuberculosis in Los Altos, Selva and Norte regions, Chiapas, Mexico. *International Journal of Tuberculosis and Lung Disease*, 14(1):34–39
- Secretaría de Salud. (SSA) Subsecretaría de Prevención y Promoción de la Salud, México. Programa de Acción Específico 2007-2012. Tuberculosis. México D.F. 2008.
- Secretaría de Salud (SSA)a. Subsecretaría de Prevención y Promoción de la Salud. Dirección General de Epidemiología, México. Perfil Epidemiológico de la Tuberculosis en México. México D.F. Julio de 2012.
- Secretaría de Salud (SSA)b. Subsecretaría de Prevención y Promoción de la Salud. Dirección General de Epidemiología, México. Perfil Epidemiológico de los Municipios Indígenas en México. México D.F. Julio de 2012.
- Ticona E. Tuberculosis: ¿Se agotó el enfoque biomédico? *Revista Peruana de Medicina Experimental y Salud Pública*. 2009; 26(3): 273-75.
- World Health Organization (WHO). Global tuberculosis report 2013. Geneva, Switzerland 2012. WHO/HTM/TB/2012.6

PERCEPTION OF THE USE OF VIDEOGAMES AS A TEACHING RESOURCE

The case of students of education at the Autonomous
University of Chiapas

María Minerva López García
minerva@unach.mx

Luis Salvador Aguilar López
lsaguilar2180@gmail.com

Elisa Gutiérrez Gordillo
elisagutierrezgordillo@gmail.com

Faculty of Humanities, C-VI. University Autonomous of Chiapas.



ABSTRAC

Rapidly changing times and conditions demand new skills in all professions in order to cope with emerging challenges. In the context of the knowledge society teachers and future educators should attend issues relating to the needs and characteristics of today's students, digital natives who are expecting learning environments that most schools are not offering, such as new ways to access knowledge available in the network that so far have not been taken into account by the educational institutions. Video games represent a potential learning resource absent from the classrooms probably due to the lack of discussion with regard to their educational benefits. In this paper the results of an investigation conducted with pedagogy students at the Autonomous University of Chiapas about their perception of video games as a teaching resource is presented as a study case. The research approach was made through a survey. The main findings of the study show that students perceive the use of video games as for leisure, entertainment or even for self reward purposes but not as a potential learning resource.

It is important to highlight that this approach helps pave the way, to explore the issue of teacher training in Information and Communication Technologies from different angles and discuss the future of education in network society.

Keywords: *videogame, teacher training, perception, teaching resource, conceptions.*

Living in the society of knowledge is a reality that cannot be ignored, from the evidence of access to information that most of us have and which results in the introduction of new practices in communication and information management. Interpersonal relationships have changed their ways of interaction, and many advances in various fields of knowledge have been occurring at breakneck speed. These changes, however, do not occur in the entire population; the subsequent digital divide and information gap are terms that are widening differences in access to and use of information (Vega-Almeida, 2007), but are part of this world that in their eyes appear confusing and unstable, because the certainty of stable knowledge gives way to uncertainty, a situation that we are probably not used to.

The recognition of this uncertainty in a complex world (Morin, 1999) is part of this new way of living in which we find ourselves and that may seem a little complicated to understand for those who, through access to certain information, are transforming the stable version of reality that changes at a dizzying rate. Moreover, as a result of the accessibility to information and communication, knowledge and how that knowledge is no longer in the hands of a few and comes from various sources they are acquired, perhaps outside of the control of school or family, which for some makes for a difficult educational process, particularly in the context of the school.

Information technologies are changing traditional practices, like it or not, with students and we cannot ignore these changes that occur in the so-called network society (Castells, 2011), which have a significant impact on the way teaching is organized, resulting in interest from some teachers to learn, incorporating Information and Communication Technologies (hereinafter ICT) in teaching strategies that occur in the classroom. This new condition can be an alternative to break the monotony and tedium that characterizes certain school spaces that have little congruence with what happens outside of them.

It is important to consider that although it is not a generalized situation, due to unequal access to technology resources, there are some areas of shared concern to modify repetitive practices of teachers who remain in the comfort zone of their unchanged teaching practice, covered by the confidence of knowledge, as something that is finished- something that is transmitted and not built.

The Digital Skills for All Project (Proyecto de Habilidades Digitales para Todos-PHDT) is a sign of the importance that our educational system is in the process of incorporating ICT to educational practices at the basic level with specific actions, relating equipment and training of the teaching staff as has been happening in Latin America, hoping that the students have a more active role.

This project aim is the formation of learning communities involving all educational actors that build their own knowledge. Through the Explore platform, students can also interact with the use of ICT, with an impact on school performance and achievements.

Francisco, who was quoted by Pallares (2014) reflects on these issues, with particular attention to changes in education with the emergence of a new type of student with greater creativity, which requires large doses of motivation to learn and where images are of such a high value as the world of written language. It is from this characterization of students that it must recognized the importance of the incorporation of technology to solve the challenges confronting us posed by old teaching practices. There are other challenges that must also be addressed as those related to the socio-cultural environment, the cultural capital of each student and the ways in which information is selected and processed to understand and learn.

Therefore, retaking the proposal by Dussel and Quevedo (2010) the problem of equipment is not the only thing to worry about, although it is a necessary requirement but it is not sufficient, rather the presence of a symbolic and cultural mutation involves the basis on which the school is built, (p. 11).

In this sense we can consider that the concern does not focus exclusively on providing technology infrastructure, but what to do with it, not to be in the mere recovery of the same content in new formats, but to deal with, reflect on and propose alternatives for teaching with more significance with respect to the integral development of students

New methodological proposals address the problems with communication strategies through social networks, email, forums, chat and other resources. Others have insisted on more structured models, such as learning communities or collaborative learning models. Some of these proposals are in line with the statement made by Coiro (2003) regarding the utility of the Internet, which states:

The Internet provides opportunities for interacting with new text formats (e.g., hypertext and interactive multiple media that require new thought processes); new reader elements (e.g., new purposes or motivations, new types of background knowledge, high-level metacognitive skills); and new activities (e.g., publishing multimedia projects, verifying credibility of images, participating in online synchronous exchanges) (p. 459)¹.

A proposal that is increasingly growing in strength is introducing the use of video games in the classroom to promote learning, but first we must face the myths relating to them regarding addiction and violence, and secondly for the poor preparation teachers have in this sense, being a young area in process of construction. For example Bernart (2006), noted that although games have received much criticism, it is also relevant to reflect on the role that these younger generations have as gateways to ICT. This indicates that the concern for a more serious study of the use of video games for educational purposes has been around a long time, and although most were not created for teaching purposes, the revision of its characteristics has identified a use beyond en-

entertainment whether to develop motor skills, socialization, and disciplinary knowledge, among others.

From the Grup F9, quoted by Bernart (2006) it is stated that games promote a set of skills including the following: instrumental, for resource management in multimedia environments, and for communication and for criticism, among others. With this statement, which is a result from the research generated in this field, other points of view are opened to consider the possibilities of learning from and with videogames. For Revuelta and Guerra (2012), video games:

“... are technological tools that are fully integrated into society. They are a current vehicle of culture in society -we must build on that momentum as something positive as we begin to start building new learning systems. There is a pending issue in the inclusion of ICT in the classroom, with this being a difficult challenge for the seemingly ludic character and being reviled by mass media even though it is a tool present in almost every household (p. 2).”

It is pertinent to think that it is a pending case, because although there are already many experiences of working in all levels of education, using videogames as a teaching resource in the sense of being elements that help to foster meaningful learning experiences – while there still exists classroom spaces. Whether either for poor preparation of teachers or by the limited access to technology or the lack of consent of the parents- their use is debated, controversial and difficult to implement.

THE GAME AS A TEACHING RESOURCE FOR STUDENT TEACHERS

Following concerns about the application of video games in education, in the last decade, there has been a marked increase in research on its usefulness for educational purposes and it has been

concluded that they can play a formative and significant learning function in understanding the complex situations of reality, and achieve a dynamic generation of knowledge.

Efforts to implement change from the paradigm of the smart classroom with a connectionist version of learning, makes video games an object of serious and relevant study in the society of knowledge. Mathematics, science, values, and socialization skills are just some examples of applications in schools and it would be worth reconsidering the stage from where school knowledge does not devalue such a common activity in some students - the use of ICT in their daily lives.

If video games can be considered as a complementary teaching resource in educational practice, we can reflect and search for answers to the following questions:

Do students of education perceive the possibility of using video games as a teaching resource and strategy?

To what extent perceive that joining the teaching practice can affect the academic performance of students?

Does prior knowledge of the use of video games be a reference for understanding them as a teaching resource?

Is the specific training they are receiving be a variable that affects the perception of videogames as a teaching resource?

In an investigation carried out with a sample of 20 students in 5th semester of the Bachelors program in Education at the Autonomous University of Chiapas in the school year from August

to December of 2013, we set out to know their perception about using videogames as a didactic resource.

To account for this perception, we used a survey as a technique and a questionnaire of 14 questions as an instrument, of which 9 questions were open and five closed. This combination was due to the need to know firsthand student data that cannot be pre-encoded such as the names of their favorite video games or what they thought they had learned from them during their use.

This instrument, applied in writing, allowed to know the time they had as a gamer, the age they started, the number of games they know and preferences and experiences in the use of videogames. There were also inquiries about their expectations in their use in education and some considerations of videogames unfit for education. The Statistical Package for Social Sciences (SPSS) was used, with the use of descriptive statistics for processing the data.

RESULTS

Regarding the sample: The choice of the sample was based on the willingness to participate, and only gamers with more than three years of experience were considered. It should be noted that of the total group, more than 50% , did not agreed to answer the instrument, since they did not have this requirement and some argued they were not addicted and were not interested in knowing about videogames. This situation is interesting to analyze, because there are a number of prejudices in the use of video games as something that should be avoided to avoid falling into situations beyond control.

Meanwhile the student's that were surveyed showed willingness and interest in the investigation , noting the time spent on video games in their daily lives and the moment they started this type of activity.

The age of the students ranged between 20 and 25 years, with an average of 21.6, of which 60% (f. 12) corresponding to the female gender, while 40% (f. 8) to the male gender.

Age of onset of video games

Regarding the age of first use of video games, 33.3% (F. 4) of women and 50% (.F .4) of men said that in the range of 5 to 8 years; meanwhile 50% (f. 6) of women and 25% (f. 2) of men said that began in the range of 9-12 years. 16.7% (f. 2) of women and 25% (f. 2) of the men said that they began between 12 and 18, as seen in the following Table 1.

Table 1: Age when first started playing videogames

			At what age did you begin playing videogames?			TOTAL
			5 - 8 years old	9 - 12 years old	12 - 18 years old	
SEX	Female	Count	4	6	2	12
		% of sex	33.3 %	50.0 %	16.7 %	100.0 %
		% of total	20.0 %	30.0 %	10.0 %	60.0 %
	Male	Count	4	2	2	8
		% of sex	50.0 %	25.0 %	25.0 %	100.0 %
		% of total	20.0 %	10.0 %	10.0 %	40.0 %
TOTAL	Count	8	8	4	20	
	% of sex	40.0 %	40.0 %	20.0 %	100.0 %	
	% of total	40.0 %	40.0 %	20.0 %	100.0 %	

Source: questionnaire perception of video games as a teaching resource

The number of games that are known:

41.7% (f. 5) of women and 12.5% (f. 1) of men said they know of 0-10 games, 8.3% (f. 1) of the women and 37.5% (f. 3) men said they know 11-20 games; 25% (f. 3) and 12.5% (d. 1) of men know of between 21 to 30 games and finally 25% (f. 3) of females and 37.5% (f. 3) of men know of over 30 videogames although they have not played them. Thus we can say, that even if a significant number of women know about video games, the proportion of men who know over 30 is higher than that of women, as seen in the second table.

Table 2: number of videogames that are known but have not yet played

			indicate the number of videogames that you know although you have not yet played them				
			from 0 to 10	from 11 to 20	from 21 to 30	more than 30	TOTAL
SEX	Female	Count	5	1	3	3	12
		% of sex	41.7 %	8.3 %	25.0 %	25.0 %	100.0 %
		% of total	25.0 %	5.0 %	15.0 %	15.0 %	60.0 %
	Male	Count	1	3	1	3	8
		% of sex	12.5 %	37.5 %	12.5 %	37.5 %	100.0 %
		% of total	5.0 %	15.0 %	5.0 %	15.0 %	40.0 %
TOTAL	Count	6	4	4	6	20	
	% of sex	30.0 %	20.0 %	20.0 %	30.0 %	100.0 %	
	% of total	30.0 %	20.0 %	20.0 %	30.0 %	100.0 %	

Source: questionnaire perception of video games as a teaching resource

The reasons for playing

This question was designed to as an open question so that students were asked to list three reasons why they play videogames,

encoding the respondents in three options, namely; the first as a distraction, likes and skill, the second as a distraction, relaxation and pass time and the third for fun, likes and exercise.

8.3% (f. 1) of women and 25% (f. 2) of men said it was for distraction, likes and skill. 66.7% (f. 8) of women and 25% (f. 2) of men answered that distraction, relaxation and to pass time, while 25% (f. 3) of women and 50% (f. 4) of the men replied for fun, pleasure and physical exercise. These results indicate that there are a huge variety of reasons why people play videogames, but an interesting fact is what they thought as regarding their use only for recreational purposes. So then, they may still have some connection with the myths of entertainment but not for training purposes, although investigations are pointing to that probability. (See table three).

Table 3: Reasons for playing videogames

			number three reasons who you currently play videogames			
			distraction, like, and skill	distraction, to relax, to pass time	fun, like, physical exercise	TOTAL
SEX	Female	Count	1	8	3	12
		% of sex	8.3 %	66.7 %	25.0 %	100.0 %
		% of total	5.0 %	40.0 %	15.0 %	60.0 %
	Male	Count	2	2	4	8
		% of sex	25.0 %	25.0 %	50.0 %	100.0 %
		% of total	10.0 %	10.0 %	20.0 %	40.0 %
TOTAL		Count	8	8	4	20
		% of sex	15.0 %	50.0 %	35.0 %	100.0 %
		% of total	15.0 %	50.0 %	35.0 %	100.0 %

Source: Questionnaire perception of videogames as a teaching resource

What I learned from videogames

It is interesting to review the responses to this question about what the gamers consider they have learned from video games because students as a whole do not consider the thematic knowledge in their learning from this resource. They focus their skills on such areas such as agility, design strategies, teamwork, dancing, being patient and controlling their nerves. These points serve as a platform to explain the educational applications that can be given to these areas in the classroom, unless they are not related to the development of strategies as will be discussed in detail below. Most women, 50% (f. 6) and 50% (f. 4) of men agreed that they learned to be agile, to be fast and stay awake, as seen in Table 4.

Table 4. Three things than you have learned from videogames

			Three things than you have learned from videogames						
			Make strategies, make teams, analyze	agility, speed, be awake	be patient, have reflexes, work in teams	dance, play in teams, understand tactics	additive, violence, fun	able to learn to lose, control my nerves	TOTAL
SEX	Female	Count	1	6	1	1	2	1	12
		% of sex	8.3 %	50.0 %	8.3 %	8.3 %	16.7 %	8.3 %	100.0 %
		% of total	5.0 %	30.0 %	5.0 %	5.0 %	10.0 %	5.0 %	60.0 %
Male	Count	2	4	1	0	0	1	8	
	% of sex	25.0 %	50.0 %	12.5 %	0 %	0 %	12.5 %	100.0 %	
	% of total	10.0 %	20.0 %	5.0 %	0 %	0 %	5.0 %	40.0 %	
TOTAL	Count	3	10	2	1	2	2	20	
	% of sex	15.0 %	50.0 %	10.0 %	5.0 %	10.0 %	10.0 %	100.0 %	
	% of total	15.0 %	50.0 %	10.0 %	5.0 %	10.0 %	10.0 %	100.0 %	

Source: Questionnaire on the perception of videogames as a teaching resource

The relevance of the use of video games as a teaching resource

After this first approach to gamers in terms of the features of their history, preferences and other aspects, we set out to investigate the appropriateness of the use of videogames as an educational resource to be used in classrooms, given the case students in the near future would be in charge of teaching a group, found that 75% (f. 9) of women and 62.5% (f. 5) of men's considered it possible to be considered in planning, with a view to enhancing learning in their students, while 16.7% (f. 2) indicated that women that they would not include them.

However, it can be seen from the graph that 8.3% (f. 1) of the women and 37.5% of men said they did not know, which may indicate they do not know how they could insert videogames in a activity of teaching and learning, reinforcing this idea that the videogame has its principal purpose entertainment and recreation and rather than a potential learning resource (see Table 5).

Table 5: If you were a teacher, how would you use videogames to reinforce learning

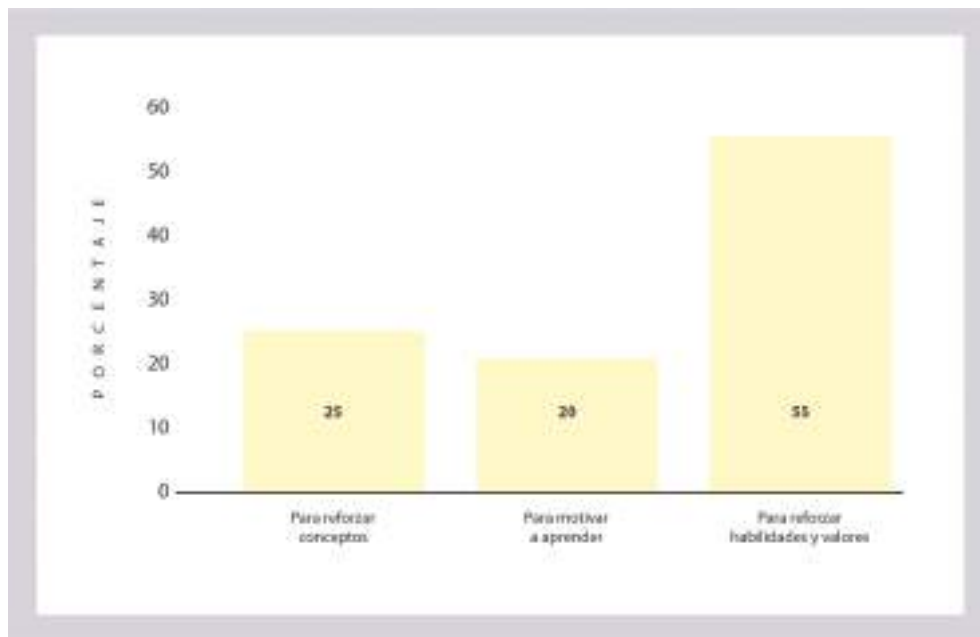
			If you were in charge of a primary school class, would you use videogames to reinforce learning in the students?			
			Yes	No	/ I don't know	TOTAL
SEX	Female	Count	9	2	1	12
		% of sex	75 %	16.7 %	8.3 %	100.0 %
		% of total	45 %	10.0 %	5.0 %	60.0 %
	Male	Count	5	0	3	8
		% of sex	62.5 %	0.0 %	37.5 %	100.0 %
		% of total	25.0 %	0.0 %	15.0 %	40.0 %
TOTAL		Count	14	2	4	20
		% of sex	70.0 %	10.0 %	20.0 %	100.0 %
		% of total	70.0 %	10.0 %	20.0 %	100.0 %

Source: Questionnaire perception of videogames as a teaching resource

The function of videogames in the classroom

Starting from the answer to the previous question, they were asked about the perception of the role of videogames in the classroom, finding that 25% of the respondents would use them to reinforce concepts, 20% as a motivator to learn and finally, 55% perceive the functionality of videogames because of its potential to reinforce skills and values, based on their own experience as a gamer, as shown in Figure 1.

Figure 1: The perception of the primary role of the use of videogames for didactic use



The results allow us to observe that although some students have a different perception of videogames as a learning resource they may still not have a sufficiently clear understanding of the ways they can use them with prospective students for learning purposes.

This may be due to, according to Gross (2004, p.3) that one of the major problems of education and training today is

that most educational approaches used are not in line with the needs of children and young people and the kind of society we are living in.

Those students who do not wish to participate in the study, argued informally that they have not played videogames nor are they interested in doing so, because they have no positive value and that they only result in a lot of wasted time and distraction. This may mean that while studying, teachers most likely have not yet introduced the discussion of using videogames as a teaching resource, showing a bit of skepticism and distrust in their use, indicating that they find nothing positive in them and suggesting a kind of danger that they failed to define.

In the case of the research participants, they responded guided by their own experience, some in addition to the questionnaire responses, suggesting that they would apply videogames in the same way as their computer teachers did with them as a reward for completing a task before the rest of the group, almost as a kind of reinforcement, as stated by operant behaviorism.

A reflection which the future teachers and participants in the study did not have was the relevance of including the discussion of the inclusion of video games as a learning resource, as established by the Horizon project (2013) which indicates that their use may bring opportunities for discovery and goal oriented learning. Also, opportunities for collaboration and the development of skills for team building are increased; moreover, it suggests that using simulations or exchange of roles it is possible to recreate complex situations in order to prove new responses or pose creative solutions.

CONCLUSIONS

The ICT's present in our daily life have profoundly changed our practices with respect to these two essential aspects of human life, to inform and to communicate, in such a way that the knowledge about ourselves and the world has changed substantially, opening doors to new formats of interaction and learning as in the case of videogames. In education, even if the changes seem to be slower, guided by the inertia of teachers who have established routines in teaching, student expressions are felt who symbolically refuse to remain inactive in the habitually that they have gotten used to in the past.

The urgency of change does not occur equally in all educational stakeholders, including students who still wish to remain in the position of spectators of change and expectation of what teachers propose them. However, the demands of society require greater creativity and a more proactive stance from future professionals to have higher levels of adaptation in the knowledge society.

Videogames as a teaching resource appear as an unclear possibility in the investigation participants, due to the little recognition that the school has given this tool that although various authors have pointed out it was not designed for educational purposes, especially online games – they can be redesigned with proper seriousness to be an element in favor to increase the desire to learn and to link the contents of the school with the reality of our daily lives.

In this sense, research in this field should be aimed at the recovery of beliefs and myths that exist not only in students but also in teachers, and to identify the experience they have in the field to the extent possible in order to design specific training programs to give a new face to classroom teaching.

REFERENCES

- Bernart, A.** Los videojuegos, acceso directo a las nuevas tecnologías. En *Revista Comunicación y Pedagogía*, No 216, 2006. Recuperado de: <http://xtec.cat/~abernat/articles/bernat-II.pdf>
- Castells, M.** (2011) La era de la información. Economía, Sociedad y Cultura. La sociedad red. Vol. I. México: Siglo XXI
- Coiro, J.** Exploring literacy on the internet. En *The Reading Teacher* Vol. 56, No. 5 February 2003. Recuperado de: http://www.annenbergmmedia.org/workshops/teachreading35/pdf/read_comprehension_internet.pdf
- Dussel, I. y Quevedo, L.** (2010) Educación y nuevas tecnologías: los desafíos pedagógicos ante el mundo digital. Buenos Aires: Santillana. Recuperado de <http://www.unsam.edu.ar/escuelas/humanidades/latapi/docs/Dussel-Quevedo.pdf>
- Gros, B** – Grup F9 (2004) *Pantallas, juegos y educación. La alfabetización digital en la escuela*. Bilbao: Desclée de Brouwer. Recuperado de <http://www.edesclée.com/pdfs/19236.pdf>
- Gross, B.** De cómo la tecnología no logra integrarse en la escuela a menos que...cambie la escuela. En *Revista Espiral 2004*. Recuperado de: <http://paginas.tol.itesm.mx/alumnos/A01360839/19236.pdf>
- Morín, E.** (1999). Los siete saberes necesarios para la educación del futuro. Paris: UNESCO. Recuperado desde: <http://dide.minedu.gob.pe/xmlui/bitstream/handle/123456789/1448/Los%207%20saberes%20necesarios%20para%20la%20educaci%C3%B3n%20del%20futuro.pdf?sequence=1>aprender
- Pallarès, M.** Los medios de comunicación y tecnológicos como ejes de canalización y gestión del conocimiento. En *Revista*

Educación 2014. Vol. 50/1. Recuperado de: <http://www.raco.cat/index.php/Educación/article/viewFile/287075/375324>

Revuelta Domínguez, F. I. y Guerra Antequera, J. (2012): ¿Qué aprendo con videojuegos? Una perspectiva de meta-aprendizaje del videojugador. *RED, Revista de Educación a Distancia*. Número 33. 15 de octubre de 2012. Recuperado de <http://www.um.es/ead/red/33/>

The New Media Consortium (2013). Breve lista del Proyecto Horizon del NMC: Edición para la educación superior 2013. Bajo licencia Creative Commons: Atribución 3.0 Unported (CC BY 3.0). Extraído de <http://www.nmc.org/pdf/2013-horizon-higher-ed-shortlist.pdf>

Vega-Almeida, (2007) Brecha digital: un problema multidimensional de la sociedad emergente. En *Revista Inclusão Social*, Brasilia, V. 2, Num. 2, p-96-108, abr./sept. 2007 Recuperado de www.brapci.ufpr.br/download.php?ddo=10187

ACADEMIC
PAPERS



Database Administration PostgreSQL

Laboratory 3. Storage and trigger procedures

Luis Antonio Álvarez Oval
loval@unach.mx

Faculty of Accounting , UNACH -Campus Tapachula



This third installment of a series of laboratories of Database Administration (DBA) teaches the use of stored procedures associated with triggers on a table in the database. This work is not intended to teach programming for storing procedures in the database, so therefore the reader should research the topic called procedural language for PostgreSQL, though probably in a second series of laboratories this type of programming will be explained.

The labs are designed to provide the concepts and skills necessary for detailing the system function of “copy and paste” offered by the Windows operating system to reduce the effort of the reader in preparing the work environment and in solving of problems. The section labeled “additional work” requires the reader to apply the experience gained in solving problems related to the central theme of the laboratory. Section basics shows the command syntax and provides some explanations of their use. This material is taken from the manual of the PostgreSQL system which is available on the official website of the tool. In some cases it has been taken from the official site in Spanish. The basic concepts of the project will be applied in this series around “ACME University”, which is the product of the author’s imagination and the source of the practical solution of the problems. The books that are available in the reference section serve as consultation to support some of the concepts that are applied in practice troubleshooting of database administration.

These laboratories have been prepared to provide practical experience to students of the subject Database Management who are studying the degree in Computer Systems offered in the School of Accounting (*Facultad de Contaduría Pública*, or FCP), Campus IV of the Autonomous University of Chiapas (UNACH). In the FCP, there has been at least 14 years of experience in the use of PostgreSQL in the classroom, and research and systems projects have been implemented to automate daily activities at the FCP. As a result of the academic and industrial experience that has been obtained, these laboratories are used in classrooms to train our

students. It has also been reported that they are a resource for graduates who work in the business sector.

As has been previously mentioned, this tool has features and standard programming languages that proprietary systems offer, so that the examples can easily be used in other database systems on the market, or can be referred to apply the concepts in industrial projects. For this reason they can serve as consultation for professionals of Computer Science.

OBJECTIVE

The reader will learn to use storage and trigger procedures and its relationship with the database.

PREREQUISITES

It is expected that the reader has previous experience in the use and conversion of Entity-Relationship (ER) diagrams and the associated database design issues that are not covered in this document. It is also expected that the reader has knowledge of programming in any programming language and if you need additional information on plpgsql, we suggest you visit the website:

<http://www.postgresql.org/docs/9.3/static/plpgsql.html>,

or find this information in the book “PostgreSQL” by Susan and Korry Douglas (2005).

Finally, you must install the PostgreSQL database version 9.3 on the Windows operating system, check the system requirements on the official website of the tool: www.postgresql.org. The system can be downloaded from the website:

<http://www.enterprisedb.com/products-services-training/pgdownload#windows>

PARTS OF THIS LABORATORY INCLUDE

1. A project to develop.
2. Basic concepts.
3. Preparation of the working environment.
4. Problems to be solved.
5. Additional work.
6. References.

1. PROJECT TO DEVELOP

The exercise that is to be performed is a project that describes a problem of a business that provides education services: after reading the text an ER diagram is generated with the solution to this problem. You then continue with the creation of the population tables and tables, to finally work with user and group permissions.

ACME University Project

In UACME, there are two types of courses in the special summer period in which summer courses and extracurricular courses are offered. The first are courses that a regular student pursuing a career in this period takes. You are allowed to advance up to two subjects; while the latter are special training courses offered to students such as regular students or for external professionals.

Teachers of UACME are the only ones who are allowed to teach these courses, for which they receive an additional payment paid in accordance with a tab that indicates the cost of the time of these courses according to the academic level of the teacher. Payment is generated from the start of the course and only one check is allowed

to be issued for each course. In addition, students must go to additionally pay for the cost of the semester that they are attending.

UACME has two departments involved in the administration of the courses:

A) Department of Administration (DA) and B) Academic Control Department (DCE). Making payment to teachers and students fees corresponds to the DA. The DA is run by CP Avila and is assisted by Mr. Cancino. While the DCE is directed by Lic. Barroso and assisted by Ms. Tirado, Martinez, Aquino and Ramos. It is here where you choose the courses that will be given in the period, who imparts the courses, and where the applications of the students are accepted. A special case is that of the teachers, because the DA is the one who can modify their biweekly salary, while the DCE cannot even access that area. The curious thing is that it is the DCE who accepts teachers and logs them into the system, but it is the DA where the salary is captured. It is important for the management of the UACME that this policy is applied to the letter, and that it is implemented directly on the DB. Below are detailed tables which the Administrative Secretariat staff have access to: CheckingAccount, Check, Tab, Teachers, Concept, Receipt, and ReceiptDetail. In special cases, this department will have access to consult the tables of Special Courses, Special Summer Courses, Special Extracurricular Courses, Extracurricular Courses and Subjects. They are explicitly not allowed to change any field or record.

Tables that are allowed access by the School Secretariat staff:

Special Courses, Extracurricular Courses, Subjects, ECSummer, ECExtracurricular, Students, Bimester, Absences, SchoolCalendar.

BASIC CONCEPTS

Triggers

Postgres has some client interfaces such as Perl, Tcl, Python and C, as well as two *Procedural languages* (PL). It is also possible to call C functions as trigger actions. You can currently specify BEFORE or AFTER in the INSERT, DELETE or UPDATE as a register of a trigger event.

Creating Triggers

If a trigger event occurs, the shot administrator (called the Executor) initializes the global structure TriggerData * CurrentTriggerData and calls the trigger function to handle the event. The trigger function must be created before the trigger, and should be done as a function without input arguments and opaque code returns.

The syntax for creating triggers is as follows:

```
CREATE TRIGGER <trigger name> <BEFORE|AFTER>
<INSERT|DELETE|UPDATE> ON <relation name> FOR EACH
<ROW|STATEMENT> EXECUTE PROCEDURE <procedure
name> (<function args>);
```

<TRIGGER NAME> is used to identify the trigger and is also used as the DROP TRIGGER command argument if you want to remove it.

<BEFORE|AFTER> determines which event / s will trigger the function. You can specify multiple events using the OR operator. <RELATION NAME> will determine the area affected by the event table.

<FOR EACH> determines whether the trigger is fired for each affected either before (or after) the sequence is completed row.

<Procedure name> is the called function when the trigger is executed. This function can be written in any of the procedural language or handling PostgreSQL client interfaces.

<FUNCTION ARGS> are passed to the function in the structure `CurrentTriggerData` arguments. The purpose of passing arguments to the function is to allow different triggers with similar requirements to invoke the same function. In addition, the function can be used for triggering different relations (these functions are named as “general trigger functions”).

As an example of use of what is described above, you can make a general function that takes as arguments two field names and inserts the user name and current date (timestamp) in them. This allows, for example, the use of triggers on INSERT events to automatically track the creation of records in a transaction table. It could also be used to record updates if used in an UPDATE event.

Shooting functions return a tuple area (`HeapTuple`) to the executor. This is ignored for triggers fired after (AFTER) an INSERT, DELETE, or UPDATE operation but it allows the following triggers:

BEFORE: return NULL to skip the operation for the current tuple (and so the tuple will not be inserted / updated / deleted); or return a pointer to another tuple (INSERT and UPDATE) to be inserted (as the new version of the updated tuple if UPDATE) instead of original tuple.

Note that there is initialization by the CREATE TRIGGER handler. In addition, if more than one trigger is defined for the same event on the same relation, the order of execution is unpredictable. If the trigger function executes SQL queries, then these functions can fire other triggers. This is known as cascading shots. There is no explicit limitation on the number of cascade levels.

If a trigger is fired by an INSERT and inserts a new tuple in the same relation, the trigger will be called back (by the new

INSERT). Currently, no synchronization mechanism is provided for these cases.

Triggers are part of what is known as “active elements” of a database, as are restrictions such as NOT NULL, FOREIGN KEY, PRIMARY KEY, CHECK. Once they are defined they “will activate” to occur only for events that violate a null value in a field with NOT NULL, etc.

With triggers you try to give the developer more control over the events that trigger an active element. They are known in English as ECA rules (event-condition-action). That is why the triggers have a BEFORE, AFTER or INSTEAD clause and are under an event (INSERT, UPDATE, DELETE)- this way the trigger is fired for each tuple (or row) submitted to the event (FOR EACH ROW clause) but the standard dictates that may also be a SENTENCE FOR EACH. This causes the trigger for the whole relationship (or table) for which (clause ON) is defined to run.

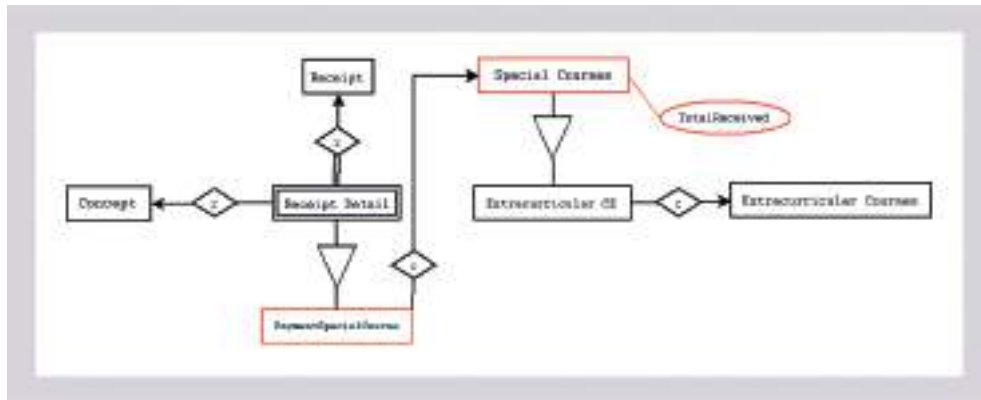
The difference for those who have programmed, for example plpgsql, is then clear: when FOR EACH ROW in the psql function that implements the shutter has a NEW and OLD object that refers to the entire tuple, the trigger sentence (statement) has a NEW and OLD which are a complete relationship. It is clear then that it is a little more difficult to implement a trigger for sentences in a row.

Queries, stored procedures and triggers

To apply triggers to our database we have to make a slight change in the database. This change is that when a student pays enrollment to an extracurricular course he should be asked for the IdCourse in order to register, relate it with the folio detail and consecutive detailed receipt that has been paid and automatically should increase the field *Total Obtained in the Special Courses* table, in order to see the DCE income of this course. Figure 2 shows only a slight modification that needs to be made to the diagram. Entities and relationships colored red are the only changes

in this diagram, the other entities remain intact and have been included only for reference.

Figure 2. Change to the Database for laboratory 3.



The problem is that when it is detected that the student Juan Perez has paid the concept 50 (payment of special courses) for the Course 75, which is an extracurricular course on Java Basics taught from January 10 to 30 2008 and for which he will pay \$ 4.500 pesos. At the time when the Receipt and Receipt Detail is updated, the table *PaymentSpecialCourse* will also be updated, then automatically you should increase the amount collected for the course that has been paid in the SpecialCourses table. Also, if the receipt is canceled, then the amount collected in the SpecialCourses table should be decreased. The changes are reflected in the following table definitions:

```
-- creando la nueva tabla
create table PagoCursoEspecial(
folio int,
cns int,
idcurso int references CursosEspeciales,
primary key(folio, cns),
foreign key(folio, cns) references
DetalleRecibo
);
```

```

- I SpecialCourses clearing the table and then
  redefine it, watch the cascade
- Because if you have data related to it, it
  can be reached and can drop multiple tables
- Having to recreate them from one laboratory.
SpecialCourses drop table cascade;
- Redefining the table with the changes re-
  quired SpecialCourses
create table SpecialCourses (
  idcurso int,
  idprofe int,
  fini varchar,
  ffin varchar,
  ncuenta int,
  cns int,
  TotalRecieved numeric (10,2)
  CostCourse numeric (10,2)
  foreign key (idteacher) references Teachers,
  foreign key (naccount, CNS) Check references,
  primary key (idcourse)
);

```

Now, we prepare the work environment with the right elements, run the following commands with the postgres user:

```

- Inserting student data
insert into student values (100, 'Juan Perez');
- Inserting Data Concept
insert into values concept (50, 'Payment of
Special Courses');
- Inserting data SpecialCourses
insert into SpecialCourses values (75, 5,
'2008-01-10', '2008-01-30', 3, 10, 0.0, 4500);
- Inserting data CE Extracurricular
insert into CEExtracurricular values (75, 4);
- Inserting Data Receipt
Receipt insert into values (200, 100, '2008-02-
10', 4500);
- Inserting Data Receipt Detail

```

```
insert into ReceiptDetail values (1, 50, 200,
4500);
```

This is the function called Total Updater, whose task is to make the increase of the total collected. It is written in the language called plpgsql, and should be copied using the postgres user account. Remember in order to copy this program plpgsql must have installed in your database. If you have not yet installed the language plpgsql, use the create command language and for more information visit:

<http://www.postgresql.org/docs/9.3/static/sql-createlanguage.html>

```
DROP FUNCTION TotalIncreaser () CASCADE;
CREATE OR REPLACE FUNCTION TotalIncreaser ()
RETURNS trigger AS `
DECLARE
VREG record;
vrec record;
Vnew numeric (10,2);
BEGIN
- Select the course of SpecialCourses table
select into VREG * from SpecialCourses Where
idcourse = new.idcourse;
- Select the amount paid for each course in
detail receipt
vrec into select * from ReceiptDetail Where
new.folio and CNS sheet = = new.cns;
- Increase student payment
Vnew:= + vrec.subtotal vreg.TotalReceived;
- Upgrade TotalReceived
SpecialCourses update September TotalReceived
= Vnew Where idcourse = new.idcourse;
return new;
END;
`LANGUAGE` plpgsql `;
```

Next we have the necessary trigger for the creation. The definition of this command makes reference to the function defined before it is done.

```

- Eliminating the trigger case.
Drop Trigger TgIncreaseReceived
PaymentSpecialCourse ON CASCADE;
- Creation of the trigger, whose name is
TgIncreaseReceived. This is triggered after
- To make an insertion in the
PaymentSpecialCourse table, for each row there
is inserted
- TotalIncrease must run () function.
TgIncreaseReceived CREATE TRIGGER FOR AFTER
INSERT ON PaymentSpecialCourse
EACH ROW EXECUTE PROCEDURE IncreaseTotal ();
- See the total collected for the course before
payment
select * from SpecialCourses;
- Inserting Data into PaymentSpecialCourse, the
student pays for the course!
insert into PaymentSpecialCourse values (200,
1, 75);
- See the total collected for the course after
payment
select * from SpecialCourse;

```

This is the DecreaseTotal () function, whose task is to decrease the total collected. It is written in the language called plpgsql, and should be copied using the postgres user account.

Finally, now we build a trigger for when someone had paid a course and decides to cancel it. In this situation the total raised should decrease.


```

DROP FUNCTION DecreaseTotal () CASCADE;
CREATE OR REPLACE FUNCTION DecreaseTotal ()
RETURNS trigger AS `
DECLARE
VREG record;
vrec record;
Vnew numeric (10,2);
BEGIN
- Select the course of SpecialCourses table
select into VREG * from SpecialCourses Where
idcourse = old.idcourse;
- Select the amount paid for each course in
detail receipt
vrec into select * from ReceiptDetail Where
old.folio and CNS sheet = = old.cns;
- Decreases the payment of student
Vnew:= vreg.TotalReceived - vrec.subtotal;
- Upgrade TotalRecieved
SpecialCourses update September TotalReceived=
Vnew Where idcourse = old.idcourse;
return old;
END;
`LANGUAGE` plpgsql `;

```

```

- Eliminating the trigger case.
Drop Trigger TgdecreaseReceived
PaymentSpecialCourse ON CASCADE;
- Creation of the trigger, whose name is
TgDecrease Collected. This triggers
- After making the deletion of a record in the
table PaymentSpecialCourse for each
- Inserted the line should run DecreaseTotal
() function.
CREATE TRIGGER TgDecreaseReceived
PaymentSpecialCourse AFTER DELETE ON FOR EACH
ROW EXECUTE PROCEDURE DecreaseTotal ();
- See the total collected for the course be-
fore payment
select * from SpecialCourses;

```

```
- Deleting data PaymentSpecialCourses it, re-  
ceipt is canceled!  
Delete from PaymentSpecialCourses Where sheet  
= 200 and CNS = 1;  
- - See the total collected for the course  
after payment  
select * from SpecialCourses;
```

ADDITIONAL WORK

Modifying the trigger to fulfill the following condition: The student Juan Perez decided last minute that will attend two extracurricular courses, “Java Basics” course is 75 and “Advanced Programming Stored Procedures” that is course 100. So he is going to make the payment and the cashier on the same receipt (folio 600) charged the two courses. What changes must be made program that increases the total collected? And in which the decrease?

- On the surface the two functions do much of the same. Can you optimize your work? In other words, making a single function that is capable of controlling both the increase and the decrease of the total collected.

REFERENCES

- Douglas Korry y Susan Douglas. (2005) *PostgreSQL A comprehensive guide to building, programming and administering PostgreSQL databases. (2nd. Edition)*. Sams
- Elmasri, R.; Navathe, S.B. (2002) *Fundamentos de Sistemas de Bases de Datos. 3ª Edición*. Addison-Wesley
- Garcia-Molina, Jeffrey Ullman y Jennifer Widom. (2008) *Database systems: the complete book*. Prentice-Hall.
- Momjiam Bruce (2001) *PostgreSQL Introduction and Concepts*. Boston: Addison-Wesley Logman Publishing Co. Inc.
- Silberschatz Abraham, Henry Korth y S. Sudarshan. (2006) *Fundamentos de Base de Datos (5a. Edición)*. España: McGraw-Hill
- The PostgreSQL Global Development Group. (2015) *Manual de PostgreSQL*. Disponible en www.postgresql.org

BOOK REVIEW:
COMPETITIVENESS
OF TOURISM DESTINATIONS.
CASES OF APPLIED RESEARCH
IN MEXICO

Jorge Trujillo Rincón
investigaciones.turisticas@unach.mx

Applied Tourism Research Centre (CITA) UNACH



This publication marked the opportunity for the Centre of Applied Tourism Research (CITA) of the UNACH to conduct its first study in the context of the 44 competitiveness agendas of tourist destinations selected by the federal government and the state governments which conferred with higher education institutions of the various states of Mexico.

The document contains the participation of 23 academics from 11 institutions that provided material for the same number of book chapters that reflected in some way applied research on the abovementioned agendas, highlighting the destinations of San Miguel de Allende, Leon and the capital Guanajuato; Mexico City; Hermosillo, Sonora; Villahermosa, Tabasco; Cuernavaca, Morelos; Aguascalientes, Aguascalientes; Tuxtla Gutierrez, Chiapas; Cancun, Riviera Maya and Cozumel, Quintana Roo; Tlaxcala, Tlaxcala, and Manzanillo, Colima.

The text begins with the contribution of Dr. Aurora Pedro Bueno, Researcher at the University of Valencia, Spain, who, while Chairwoman of 2014 Chiapas Tourism, wrote a dissertation on the issue of competitiveness in tourism.

This is followed by a series of contributions that reflect the experiences expressed by scholars regarding the application of the same methodology for conducting competitiveness diagnostics to each of these territorial realities that have a wide range of attractions, services, products, activities and tourist experiences that highlight two issues: first, whether it is possible that the territory is subject to the guidelines of public policies and to the criteria for maximizing the financial benefit or pure demand preferences, or rather, it is a competitive factor that can mean a comparative advantage, competitive advantage or a cooperative advantage between the various actors in local, regional or national tourism; and second, that the methodology intended to allow comparison among all destinations, implies a “straitjacket” that should be applied by categories to make it calibrated among peers (beach resorts, capitals, and “magical towns”).

The ways to address each of the destinations and the scope of each chapter are the responsibility of the academics who signed onto each of these. Their claims are based in the fact of problematizing about their theoretical, methodological and instrumental components; the great absence of quantitative and qualitative information about destinations on a local scale; the procedures used and the creativity for margins of action among the different types of destinations; while at the same time the challenges of implementing the agendas and their management. The results of this unprecedented exercise articulated by the Federal Government are still to be seen, through the Ministry of Tourism, the governments of the States, through their Ministries of Tourism, and the Universities that as responsible for its development.

Check out the full book:

http://www.campuscita.mx/files/RDS/repositorio/2014/COMPETITIVIDAD_DE_DESTINOS_TURISTICOS_FEBO415.pdf