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Full Length Research Paper

Criteria Design of Vernacular Gardens in Three Rural Communities of Mexico

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Vernacular gardens express features of identity, language, culture, socioeconomic status, gender sensitivity, community, also knowledge on local biodiversity. Research in Mexico regarding the design criteria of vernacular gardens in rural communities is unusual, despite the heterogeneity of the natural and social environment. Therefore, the aim of this research was to determine the factors that determine the design of vernacular gardens and the selection criteria of ornamental species in three rural communities in Mexico (San Felipe Cuapexco, Cohuecan, Puebla; Tepexilotla in Chocamán, and Angostillo in Paso de Ovejas, Veracruz). Individual interviews (n=5, Tepexilotla; n=10, San Felipe; n=11, Angostillo) were conducted. Questions were about design criteria, plant selection, and local knowledge. Data was recorded and analyzed in an Excel spread sheet. It was found not differences regarding local criteria for garden design neither plant selection among the three communities. Factors determining garden design were plant size and available space, which influenced planting location and spatial arrangement of plants. Species selection was induced by appeal for a species, such as color(s), use, and adaptability. It can be concluded that vernacular garden reflects the appreciation by women for the flowers, where recycled materials are used, and culture and local knowledge characterize each garden within each community, yet they function differently in every community due to environmental, social, economic and historical factors.

Keywords: landscape architecture; domestic gardens; local knowledge

Background

Throughout development of the human race, human being has interacted with nature to obtain benefits that enables his continued existence. In this society-nature interaction, a number of benefits such as food, medicine, shelter and

aesthetic values are provided (Chávez-Mejía et al., 1994; Toledo 2002). The form of this response to the environment is related to landscape perception and preference for green space (Özgüner and Kendle 2006), creating architectural expressions such as gardens (Fariello 2000), which are influenced by evolving cultural values (García-Albarado and Dunnett 2009).

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Gardens represent links that humans have created to reconcile themselves with the outdoor and natural world (Gross and Lane 2007), an activity spontaneously and deeply rooted in culture, because no civilization exists that does not express, even basically, this green necessity. The first signs appeared during early human societal history, expressing a desire and interest for a harmonious relationship with nature. The garden, in its conception, had a magical and religious significance, and almost all ancient cultures had their own mythical garden (Fariello 2000). As magical beliefs gave way to religious thought, the garden was developed without denying its origins or the possibility of performing other functions. In an advanced form, they became objects of visual pleasure and then, in the most sophisticated form, expressions of intellectual and aesthetic needs (Fariello 2000). This more advanced form is a way of recovering a space; "Paradise Lost from Eden" (Tejeda and De Arteaga 2009).

The phrase *vernacular garden* is composed of two words. *Garden* has Indo-Germanic roots in "*gards*", "*geard*", "*garde*", meaning close or enclosed spaces. *Vernacular* is directly related with "native of..." or "common to a location or region". It can then be treated as a connotation among cultures or styles of living for different defined places, situations and contexts. *Vernacular*, as in architecture, is a reflection of the social, cultural and spiritual characteristics of people, each born in antiquity and forged over time (Tiburcio-Verdugo 2008). Thus, landscape architecture is the result of understanding the environment, where sensitivity, tradition and cultural identity are implicit. The landscape is spontaneously constructed with local materials, for inter-generational conservation, and the capture and transmittance of these results is a testament to the understanding of nature and culture. Thus, a home-garden is designed for common people to reflect on the relationship between humans and nature, and is steeped in culture, traditions and socioeconomic conditions with various uses, thus resulting in an accumulation of knowledge that is transmitted by social learning (Fernández and Acosta 2009). However, (Ochoa de la Torre 1999), considers that there is no possible scientific, empirical or comparative research possible on the mechanisms through which people express themselves in garden design.

Vernacular gardens in rural communities are normally rustic, constructed by the residents for aesthetic purposes, contemplation and utilitarian as food and medicinal herbs. The structure of vernacular gardens varies from place to place and is influenced by the environment such as climate, soil and cultural factors (Soemarwoto and Conway 1992). These are located close to homes for safety, comfort and special care. Their structure includes locally adapted species and others that are complementary to the home. Vernacular gardens are characterized by using simple technology, low capital input, and their management

is based on local knowledge and resources (Ruonavaara 1996). They are built without any apparent design, by people with attachment for nature, and with different world-views and forms of cultural expression.

The vernacular gardens have a particular identity, and is reflect of local language, culture, gender sensitivity (Crouch 2003), social class and micro-community elements such as the difference between front and rear (Kirkpatrick et al., 2007). The gardens are intimately connected with the "gardeners" and their own identity (Kiesling and Manning 2010), where the act of gardening alone is an emotional activity (Brook 2003).

In Mexico, rural communities still keep their cultural roots. (Chi 2007), notes in the gardens the presence of certain plant species related to cultural aspects such as food, medicinal use, families' relationships with other people and with the environment they inhabit. Here, the study of associations between gardens and culture is linked to the social sciences. It represents the understanding of ritual practices related to cultural development and the effect of culture on aesthetic judgment, a logical relationship between garden and culture (Conan 2003). (Leszczyńska-Borys and Borys 2002), more broadly attempt to relate the development of landscape culture with society. They pointed out that such examinations not only study a garden, but also a series of gardens and landscapes, and their creations and changes within a defined time scale. Throughout history, gardens have not only in their styles, but also in relation to biodiversity and cultural contexts (Torres 2005).

Some studies show the garden as reflecting nature, wildlife or recreation/culture; reflecting the social and natural sciences. This combination of approaches lies within the definition of "environmental psychology", described as "the scientific study of the reciprocal relationships between human beings and nature, with special emphasis on the conservation of nature" (Saunders 2003). In the broader field of conservation psychology, psychological mechanisms underlying individual differences in preferences for natural settings have increasingly become the focus of theoretical and empirical studies (Kaltenborn and Bjerke 2002; Koole and Van den Berg 2005; Özgüner and Kendle 2006; Van den Berg and Koole 2006; Jorgensen and Tylecote 2007).

Some ethnoecological studies indicate that, globally, the distribution of biodiversity matches with the distribution of cultural and linguistic diversity (Balee 1994). Such investigations suggest that rather than eroding local biodiversity, traditional forms of management and local ecological knowledge contributes to the generation and conservation of biological diversity, through the manipulation of plants, animals, habitats and ecosystems (Harmon 1996).

Local ecological knowledge is key to the effective management of natural resources, contributing to human

welfare, rural economic development (Pieroni and Price 2008) and human health (Etkin 2000) in poor rural areas. This relationship between society, nature and human need is reflected in rural environments through the design of vernacular gardens.

Investigations into vernacular gardens are limited and most are focused on urban and large formal gardens rather than the typical gardens found in rural communities. Thus, the objective of this research was to determine and compare factors contributing to the design of vernacular gardens in three rural communities of Mexico.

METHODS

Rural communities studied

This research was conducted in three rural communities: San Felipe Cuapexco, Cohuecán, Puebla; Tepexilotla in Chocamán, and Angostillo in Paso de Ovejas, Veracruz. These communities are placed in the areas of influence of campuses Puebla, Veracruz and Córdoba of Colegio de Postgraduados. These communities were chosen by the following criteria: a) ecological knowledge and biodiversity, b) management and conservation of natural resources, c) types of natural environments and contexts, d) forms of perceiving the importance of local floral communities present in the communities, and e) socioeconomic and environmental variability in the three regions. Below each of this rural communities is described:

a) San Felipe Cuapexco, Cohuecán, Puebla

This community is geographically located in the municipality of Cohuecán in the state of Puebla. It is bordered on the north, east and south by the state of Morelos and on the west by the municipality of Actopan, state of Hidalgo. It is located at 18° 48'0" LN and 98° 40' 60" LW, at 1,700 masl. The climate is temperate-humid with an average temperature of 19 °C. The population is 629 inhabitants, the average level of poverty is high with low social development. The community has no indigenous population (INEGI, 2010), agricultural activities dominate, and artisanal activities focus on the production of clay pots and pans using rustic means of production.

b) Tepexilotla, Chocamán, Veracruz

This is a small community located in a high mountainous region at 1480 masl at 18° 58'56" LN, 97° 05' 17" LW. It is located on the shores of the Metlác River, west of the municipality of Chocamán, Veracruz. The climate is temperate-humid with an average temperature of 19 °C. It is characterized by cloudy-forest, bordering to pine-oak forest to the north, and with the cliff-canyons of Pico de

Orizaba. The town is situated on an archaeological site with vestiges of pre-Hispanic Olmec, Mexico and Nonoalca cultures from the Mexican plateau. Tepexilotla has 135 inhabitants, the level of poverty is high, its social development is low, and it does not have an indigenous population (INEGI, 2010). Its primary economic activity is agriculture, emphasizing the cultivation of coffee, sugarcane, maize and livestock. Tepexilotla is characterized by its high biological diversity, which contrasts with the existing low level of socioeconomic development.

c) Angostillo, Paso de Ovejas, Veracruz

Angostillo is located in the municipality of Paso de Ovejas, Veracruz, in the Sotavento region, at 187 masl, 18° 56'56" LN and 96° 31' 05" LW. The climate is tropical sub humid with an average temperature of 25 °C. The community has 660 inhabitants, but no indigenous population. The poverty level is high and its social development is low (INEGI, 2010). Its main economic activity is based on agriculture, emphasizing the cultivation of maize and livestock. The characteristic ecosystem in the municipality is low deciduous forest with a great diversity of flora and fauna (Gobierno del Estado de Veracruz 2006).

Collection of data

Methodologies used were based on participatory research using ethnoecological approach. Data was collected using interviews addressed to each garden owner (the study subject) of each garden (the study object) to prevent participants from influencing the information provided by other interviewees and to meet criteria selection and design of their gardens. The hierarchical level studied was at household, focusing on the garden and the type of sampling was non-probabilistic, a "snowball", based on the opinions of people from the community having gardens and like gardening. A total of 26 interviews were conducted with housewives (10 in San Felipe Cuapexco, 11 in Angostillo and 5 in Tepexilotla), because they were responsible for gardening care.

The interviews were conducted during November 2011. Interviews consisted of visiting each of the owners registered and to obtain the information through an interview guided, with questions such as: What does the garden represent?, What is the purpose of the garden within the home?, What are the common names of the plants and their uses in the garden?, What are the criteria for species selection?, What are the common names of plants selected and their uses?, What are the benefits obtained from the garden?, What are the selection criteria for plants?, Where were the plants obtained and What were the garden management practices?. Interviews took place in the gardens which were visited.

Analysis of information

Data analyses were based on the review, categorization and analysis of all information from interviews, where they were ranked and categorized to observe frequencies for each community. Information among and within communities was examined.

RESULTS AND DISCUSSION

Interview profiles

In the three communities, gardening activity was particularly of married women. The average age of interviewee from the three communities was almost similar: Angostillo (53) years, Tepexilotla (48) and Cuapexco (47). Therefore, people who have space for such activities are middle-aged. In the three communities, there is a gender gap in garden management. Women are responsible for the aesthetics, weeding, watering, planting and species selection; while men perform heavy activities such as slashing, hauling, land preparation and, in some cases, bringing plants home. This coincides with findings by (García 2000), who noted gender differences in garden tasks. In Angostillo, 20% of the women mentioned *“my husband bring home “coditos”, seeds or plants from other places, and some are pinched unseen and hidden in their pockets”*.

Approximately 80% of the interviewees in Angostillo mentioned: *“Now young people, including our children, do not like plants or performing any activity related to gardens.”* In Cuapexco, 50% of the women mentioned: *“My children rarely help in this activity because they have go to school.”* In Tepexilotla, all family members performed certain activities related to the management and beautification of the garden. In this community, men showed an interest in the use, management and propagation of some native plant species from their community. In Angostillo and Cuapexco, women were in charge of the garden. This phenomenon is due to different causes; in Angostillo it is related to urbanization; men leave the community to go to work. In San Felipe Cuapexco, men work in agricultural activities on their land, and this prevents them from helping in certain tasks. Most frequently mentioned is that *“gardening is an activity for women.”* In Tepexilotla, men help in this work, simply because they like this activity and that their ancestors instilled in them the desire for such pleasure. In addition, they organize their activities in the field and this organization leaves them time for other activities at home. (Van den Berg and Koole 2006), agree that garden design is strongly influenced by gender, age, and purpose of the garden.

Garden size in the three communities was variable. On average, for San Felipe Cuapexco, gardens were 3-8 m², in Tepexilotla 2-5 m², and in Angostillo 4-10 m². The factor explaining garden size is that Tepexilotla is a community in a mesophyllous mountain forest where there is abundant vegetation, while the other two communities “bring nature home” because they are communities where vegetation is not abundant in their environment. Plants grown in the garden and intensively managed with family labor meet the needs for subsistence, medicine, economics, embellishment, harmony and aesthetics. (Fernández and Nair 1986), note that such gardens involve a deliberate management of multipurpose trees and shrubs in intimate association with annuals, perennials and agricultural crops. In the gardens studied, including ornamental plants shows that gardens are an extension of home gardens where medicinal plants are mixed with herbs. That is, garden function determines the form and diversity of plants in close relationship to cultural and socioeconomic assets (food, ornamental, medicinal, herbs) and benefits that can be expected (economic, aesthetic, comfort). This form and function is a result of the working relationship between the natural and social community within each community. (Freeman et al., 2012), mention that gardens have different functions, and vary in size depending on family structure and age.

Garden significance and its benefits

For the families studied in the three communities, gardens primarily represent “ornaments of the house”, which were reflected in the “love of flowers”. In San Felipe Cuapexco and Angostillo, the garden is a symbol that serves to differentiate one house from another, a symbol that generates emotion. Some interviewees mentioned: *“I like to watch my flowering plants”*, while another stated that *“the garden is a living being, I feel as if someone is accompanying me”*. In Tepexilotla and Angostillo, respondents indicated *“having a garden is funny and entertaining”*. There are different perceptions of what represents a garden, depending on the interests of each person, with no noticeable difference among the three communities, showing primarily that gardens are luxury adornments for the house based on flower appreciation (Figure 1). Attractive gardens provide a certain prestige to families.

(Dewaelheyns et al., 2008), described a garden as piece of private land, enclosed or not, located on property containing a house and used for non-commercial or professional purposes. Thus, gardens are private open spaces belonging to a house. In this study, gardens are small multi-purpose spaces that *“adorn and provide a sense of luxury to the home”*. The space is small and quiet where flowers of many colors and shapes, aromatic herbs,

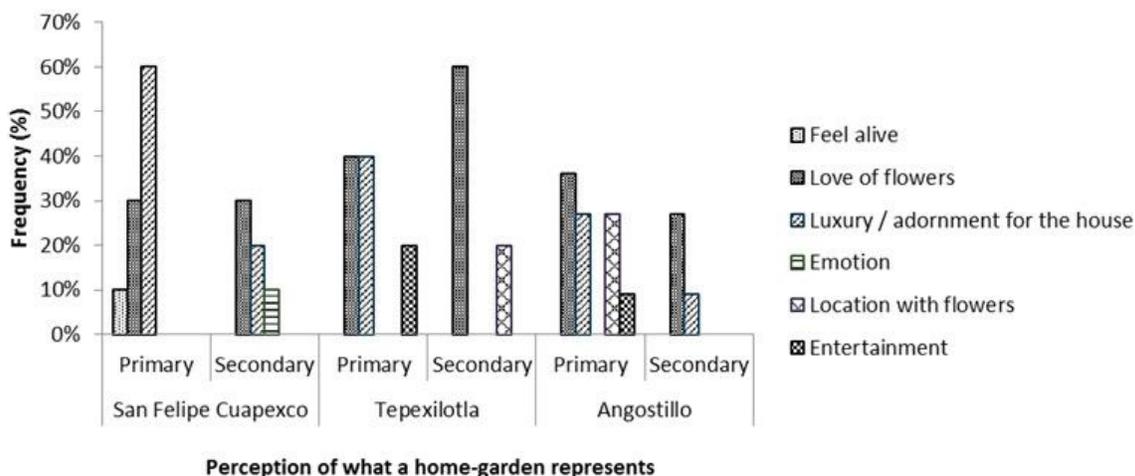


Figure 1. Comparing the meaning of gardens in the three communities studied.

vegetables and fruit, are used for family subsistence, auto consumption or sale for economic income or barter with neighbors in the same or other communities.

The gardens studied are limited to areas of waste materials, where women transformed their dreams of living with nature, "*reflecting the existence of women*". In such spaces, people find shelter among the trees, where they can relax, and breathe fresh air and satisfy their desire to play. The flowers and trees provide beauty, pleasure, joy, companionship, fun, tranquility and pleasure, with delicate and subtle aromas and provide fruits and attract diverse fauna (butterflies, hummingbirds). The home-gardens in these rural communities also contain experience, knowledge, culture, and are spaces for relaxation and social interaction with neighbors by exchanging species. Although preference for gardening, and home-garden size, design, location, materials and number of species vary from garden to garden within a community, but in some cases they are similar and share floristic diversity. In such cases, certain preferences are communicated among neighbors, or one neighbor may have a better garden that produces greater satisfaction and admiration by others.

(CABE Space, 2004), notes that gardens add value to a home. According to the International Society of Arboriculture, a house with a garden is worth more admiration than a house without a garden. A house with a garden has a visual appeal that comes to the attention of any individual, providing personal satisfaction by bringing together the separate elements of a landscape to create a beautiful garden. As one interviewee mentioned: "*I am delighted and proud that people tell me, what a beautiful garden!*" Others mentioned "*the garden is the hallmark of a house and represents a woman's love of flowers*". Unlike

urban areas where gardens are very small, static and have low biodiversity, rural gardens are created by preferences of women. It is also a gathering place for family and friends, who interact and spend leisure time by drinking a soda, talking or eating. Moreover, in rural communities, the garden is seen as a place of fun, hobbies, and a place where women are released from the stresses from domestic activities. It is also a place where women express their emotions (anxieties, fears, joys, and sorrows) by interacting with their plants. (Gross and Lane 2007), note that positive memories of childhood are often linked to the family garden, and some women expressed positive family memories, especially during childhood and youth.

Criteria for local garden design

Local criteria for vernacular garden design among the communities were not different, and focused on plant size (70%) and available space (80%). The design of gardens in Tepexilotla and Angostillo were close linked on the presence of backyard animals that were bred for daily subsistence. In San Felipe Cuapexco, the presence of animals is not a local criterion for garden design, because the animals were in pens or away from the gardens, and if they did leave they were often too timid to disturb the plants or were immediately scared back inside (Figure 2). In all three communities, the primary criteria of plant size and available space are closely related, because they determine the form and shape of the garden. Yet, garden style was informal, characterized by a more natural appearance, implying a wild aesthetic, allowing the garden to fully grow. Such is the case of vernacular gardens, which highlighted by the apparent lack of design, because

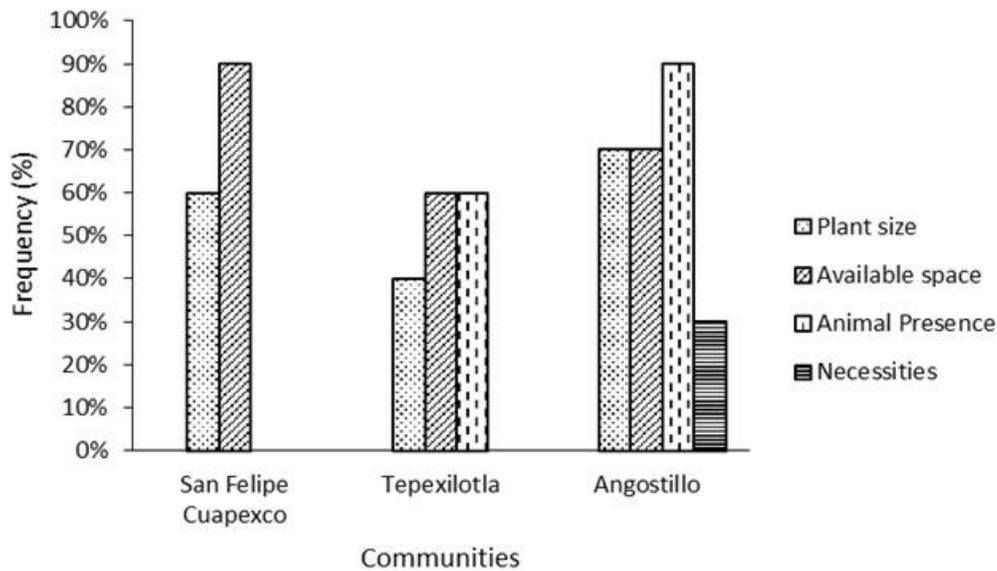


Figure 2. Comparing local criteria for the design of vernacular gardens in three rural communities.

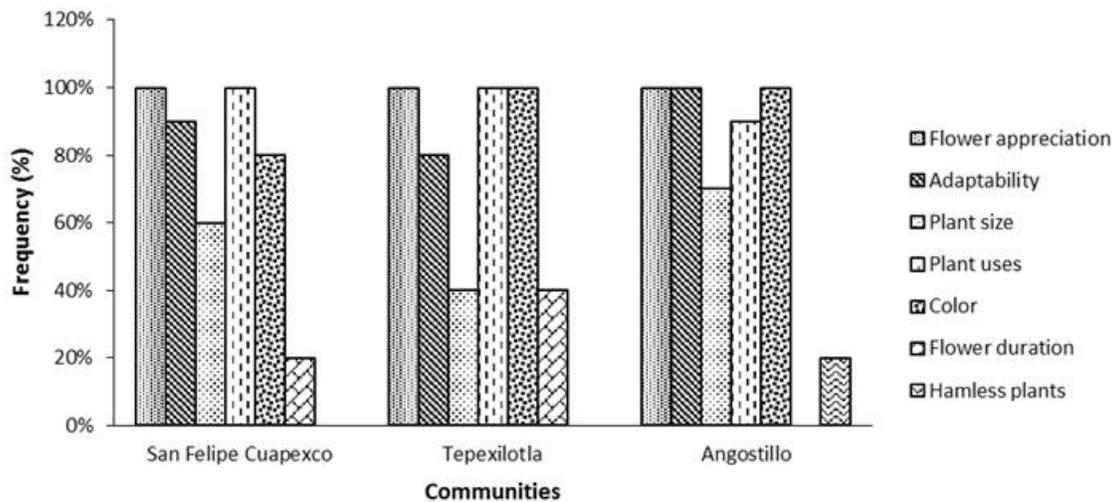


Figure 3. Local criteria for species selection among the three rural communities.

plants grow naturally, forming “a jungle” where there is no apparent arrangement. To the expert eye, this would seem formless and without equilibrium. However, for the respondents, each plant was distributed by them, has a particular use, specific use and a particular place. In contrast, some gardens are characterized by their clean appearance, and are neat and tidy.

Vernacular gardens in the three communities are ecological gardens, as mentioned by (García 2007), because they are attractively landscaped with low maintenance costs; since family labor is used, the use of local materials and cultural practices are traditional. The

species used are adapted to the conditions of their local environment. There is high biodiversity of flora and fauna; aesthetic vernacular gardens create dynamic landscapes because they are self-regulated, and change season of the year.

Local criteria for species selection

Figure 3 shows that the main plant species in the garden are chosen by flower appreciation (100%), use (96%), color (93%) and adaptability (90%). The size of the plants determines their location, with “large plants placed away

from the house, and small plants near the house in pots or in the ground, depending on the environmental requirements of shade or sun the plants required". In Angostillo, species selection depends on "which plants do not negatively affect our home". The type of flower is not a limiting factor for species selection. In San Felipe Cuapexco, interviewees mentioned that "a tree near the house provides shade and cooler temperatures, and we do not need a fan". In Tepexilotla, interviewees mentioned that "We do not have trees in the garden, because water accumulates under the fallen leaves, causing rot or other negative plant effects". In Angostillo, if you have trees around it is because "they provide fresh air and shade; and we can come to sit under them to refresh". Although the selection criteria are the same, the use of plants is different due to different environmental conditions in each community, which determine the adaptability and size of the plant; as well as the social, economic, historical and cultural factors, which bring different structures, forms and functions to gardens. In fact, (Gross and Lane 2007) and (Kiesling and Manning 2010), point out that gardens are a place of escape to release the stress of everyday life; they reflect identity and belonging, connections with nature, relationships, social life and health (physical and mental).

Some interviewees mentioned: "there is no woman who does not like flowers" and others said "we like plants because they are the joy of a home; a house without flowers is not pretty, so we do not select color, all colors we like and we like plants that we can see from wherever they are sown". The predominant colors were: primary (red and yellow), secondary (green, purple and orange) with some tertiary (yellow-green), and neutral colors (white). The selection of plants in each community was determined by the knowledge and experiences of locals. Some women mentioning that "We do not have some plants because they dry or die, and this prevents that are not in the garden, although we like".

Utilitarian purposes

Most respondents mentioned that "the garden is designed for utilitarian purposes..." to provide for certain ornamental, nutritional, medicinal, economic, safety and comfort needs. Although there was no overall use of gardens for recreation or relaxation, ornamental shade, or diversion. Different parts of their total home ground were used for these purposes. Thus, sometimes there is no physical separation between a garden and home garden. The frontal area between the house and street is an area of public visual access, suggesting the house should present a good view because it provides beauty. The space at the rear of the house is generally private, for food crops, animal husbandry, and some domestic activities. (Malor 2002), notes that the front yard is a place for display and respect. In the past –in these communities- spaces

around the house were used principally for growing plants of utilitarian importance, whereas today ornamental plants are gaining ground.

Gardens are mainly located in the front of houses, while plants for consumption are cultivated at the rear. In San Felipe Cuapexco and Angostillo, gardens in front are designed to enhance views of the houses. Those in the back are used for domestic activities such as washing, raising animals, or providing for agricultural activities. The back of houses is more for household use, and a good presentation is not the priority. In Tepexilotla, the gardens are located on one side of the house and fully fenced to prevent animals from eating or damage the plants: "Here the animals wander freely in the community and this should strengthen the security of the plants".

In San Felipe Cuapexco, interviewees mentioned that "we have plants that provide some economic or nutritional benefit". However, in Angostillo, it was mentioned that "more than a benefit, we have plants that we like to see flourish". Thus, in one community, utilitarian criteria prevail, while in another the criteria are more ornamental and aesthetic; due to the economic and social contexts of each community. In San Felipe Cuapexco, which has an average degree of marginalization and high social underdevelopment (INEGI, 2010), there are more utilitarian needs (food, medicine, spices, from an economic and ornamental base) from the same species because they are used for family subsistence and as a means of obtaining household income. Yet, in Tepexilotla, with an average degree of marginalization and high social underdevelopment (INEGI, 2010), the criteria exceed those for ornamental, because the flowers are used for altar bouquets, funerals, vases, and for the church. As well, the community is located in mountain cloud forest, with sufficient vegetation for survival, including those from plantings. In Angostillo, there are more ornamental flowers as this is a semi-urbanized community where they want to integrate or bring nature at home.

Overall, three aspects were important for households in selecting plants, 1) plant characteristics, 2) plant utility, and 3) plant prominence. There needs to be more research on identifying the health benefits of "rural gardeners" in rural communities. Finally, these gardens can be categorized as vernacular gardens because the local criteria in the design of the gardens are a function of local and cultural knowledge that women have gained from experiences or transmitted from previous generations. Garden beautification works because women select local elements such as stones, wood benches, artificial flowers, buckets, pewter or earthenware pots, tubs or plastic bottles, ceramic ducks, headboards, toilets, sacks, mesh and other material that permit garden beautification, distinctive from others in the same community and among communities. (Westmacott 1992), identifies three main functions of the garden in rural areas: 1) their contribution to subsistence,

2) their usefulness as an extension of the kitchen, and 3) their use in entertainment, recreation and the view. Bricks, bottles, old tires, pots and containers, including washing tubs do not escape the eyes of women that are gardening. They all combine to create and recreate gardens.

In Mexico, the functions of vernacular gardens in rural communities are very similar to those mentioned, besides women maintain their gardens to beautify their homes to show the community the presence of a woman in the house, including reused or recycled waste material that would give beauty to her garden. As well, they demonstrate the ability of imagination to do something useful with a useless object, conferring an ornament to their garden or home.

In Angostillo, women placed stones, painted white with lime, around their garden to enhance the presence or position of the garden, along with broken pots. Traditionally, on the day of the Holy Cross (May 3), a cow's skull is presented to ask for "a beating to the tree with a belt or machete" so that it will bear fruit. People talk to trees saying "If you do not provide fruit you will be cut down", and they said that this always works. For ornamental plants that do not blooming, they arrange artificial flowers to put them to shame, thus providing their own flowers. Another custom is to arrange flowers to form the shape of stamens and arrange their plants that do not produce flowers for the same purpose.

Local knowledge acquired by women through family tradition or from the surrounding environment has allowed them to manage gardens and incorporate techniques learned over time, including continuing to try new ways of maintaining and improving their gardens. On the eyes of the society a garden well attended it can be said that the owner is socially active, hardworking, fighters, organizers, and educated, increasing their social networks. All of this wealth of acquired knowledge they transmit to their children. In other words, gardens in different countries have their own identity, whether they are English, Dutch, Italian or American. In a way, gardens reflect an association with culture, type of materials and climate adaptation. Some benefits from gardening directly improve the health of people (Walsh et al., 2001; Hartig et al., 2003; Milligan et al., 2004; Tzoulas et al., 2007), by, for example, helping to reduce the risk of the onset of dementia (Simons et al., 2006), and reducing the risk of coronary heart disease, type II diabetes, hypertension, osteoporosis, anxiety, depression and certain cancers (Park et al., 2009). That is, each vernacular garden has a local connection with its social and environmental contexts, community location, use of biodiversity, plant arrangement, use of garden space, and how people perceive nature.

CONCLUSIONS

Vernacular gardens have a very particular and are specifically designed by women. They result from the interaction of their owners with the environment, their needs, culture, worldviews, aesthetic and religious influences, as well as the use of local materials, providing an alternative means of supporting the family economically and nutritionally. That is, a vernacular garden is designed for common people to reflect a harmonious relationship with nature and is steeped in culture, traditions and socioeconomic status to meet various human needs. Vernacular garden design is determined primarily by plant size and available space that determine the location of the species in the garden. The local criteria influencing plant species selection are a strong appreciation for flowers, color, plant and flower use, adaptability and plant size. Although local criteria for garden design and species selection are apparently similar, environmental, social, economic and historical factors in each community determine the shape, structure and function of garden as well as the spatial arrangement and aesthetic presentation of the species in each garden.

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