

# Social Development and Production Processes and Innovation in Rural Itineraries: Tequila in The Natural Landscape

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## Abstract

The Agave Region in the municipalities of El Arenal, Amatitán, Tequila, and Teuchitlán; Jalisco, is one of the most important cultural landscapes in Mexico, due to the importance of the natural landscape and the cultural tradition that has prevailed for centuries and that identify this country.

In recent years, new heritage categories have been identified as expressions of the Genius Loci. Among the new categories of cultural heritage, mixed sites of cultural and natural value; cultural itineraries, or cultural landscapes have been identified.

Of the many varieties of Agavaceae, the Agave *tequilana* Weber blue variety seems to have originated in Jalisco. It underwent a process of acclimatization, creating an agricultural culture of pre-Hispanic origin. It is important to identify and recognize the elements that belong to the ancestral tradition of agave planting and cultivation that are still in force, in an intimate link between landscape, man, and economic activity. Economic inequalities are on the rise, especially in the sectors of small rural producers and in the artisan sector. The use of the resources of diverse raw materials produced by the tequila industry benefits in artisanal contexts to reduce costs and thus enter a sustainable cycle, giving importance to added values related to traditions and nature.

Through participatory intervention methodologies, technical and organizational developments, support is provided to artisans and small producers in the municipality of Tequila through ITESO University, Mexico, and the Beckmann Foundation, to promote integral development. Alternatives are being developed to improve production processes and product innovation, generating added value that will enable them to be more competitive and grow economically. Supporting the processes of revaluation of the traditional knowledge of artisans and small producers with stronger collective structures.

*Keywords:* social development, Tequila, production and innovation processes, participatory intervention, rural itineraries.

## Introduction

The recovery of the history of the "mezcal wine of Tequila" has been acquiring formality for only two decades, as mentioned by Gómez Arreola (2012) in the book *Tequila*, of old artisanal tavern to a global industry, and it is increasingly visible how this cultural baggage of the tequila region in Mexico has contributed important elements to the Mexican identity. In this territory, a wide wealth of testimonies is shared through a collective memory about the history of dynamics, among them those related to the distillate called "tequila", Mexico's emblematic national drink. In addition to these dynamics, there is an enormous diversity of cultural expressions that arise from the human activities intrinsic to the diverse landscapes of the region, thus being an important part of the

identity and history of this territory. The vertiginous growth of the tequila industry in recent years has not benefited the socioeconomic development of the region's inhabitants and has also increased environmental problems. Along with this industrial growth, several distinctions, such as UNESCO's declaration as a World Heritage Site and the national program of Magical Towns (Secretaría de Turismo, México) have contributed to the increase in tourism during the last 15 years. Traditional tourism dynamics have not been able to involve the population in a significant way and thus revalue the important cultural and natural heritage of this region.

For the past five years, we have been collaborating with our Western Institute of Technology and Higher Education (ITESO), in a university training space linked to social contexts through Professional Application Projects (PAP) in conjunction with conjunction with the Beckmann Foundation in Tequila, in scenarios of artisans and small producers in the region. The interventions seek to promote the integral development of our actors through dynamics of collaboration and joint construction, to advance towards alternatives that improve the living situation of artisans and small producers.

This article shows a work that has been built over five years, thanks to a team of advisors, students, Beckmann Foundation staff, and of course, without the artisans and small producers it would not have been possible to undertake a path of collective construction, innovative developments, knowledge exchange, reciprocal learning and the formation of a community fabric between the University, the Beckmann Foundation and our actors, which favors the improvement of living conditions in scenarios of inequality. (Credit will be given to the participants at the end of this text).

### Traditional expressions of the Tequila Cultural Landscape

These landscapes are made up of a territory of four different geographic areas. The main center of this territory is made up of agave fields, which were declared a World Heritage Site by UNESCO in 2005. Image 1 shows, from left to right, the agave landscape to the west, where the Tequila volcano is located, which is home to great biodiversity due to its cool mountain climate. To the east, the agave plain is bordered by the deep ravine of the Río Grande de Santiago and the Sierra de Tequila, which is part of the Sierra Madre de Occidente.



Fig.1. Agave Landscape and the Tequila region. Author: PAP "Design as a Factor of Sustainable Development with artisans and small producers in Tequila".

Image 1 shows the harmony that exists between nature and human activity, and in turn, how this combination forms the identity of the place through its intrinsic elements. For this, it is important to be able to identify and recognize the elements that belong to the ancestral tradition of planting and cultivation of agave that are still in force in the region of Tequila after millennia, in which there is to date an intimate link between landscape, man and economic activity.

The presentation of the landscape and intrinsic elements of the landscapes adjacent to the agave landscape has the objective of highlighting the importance of these, in the territorial set of the municipality of Tequila, in which they have been an important and indispensable factor for the formation of the cultural and patrimonial identity of the Region.

### Sensory Aspects of The Agave Heritage Landscape

In the Tequila Agave Landscape, a vigorous cultural tradition has developed that has evolved over several centuries and has given rise to one of the main icons that identify this country.

Typology of the Agave Landscape: The core zone is a large valley, between the two geological features mentioned above, and is dominated by agave plantations (Image 2) because the soil is poor in nutrients and humidity, providing the right conditions for the growth of this crop. (Millán, Amador, Arjona, 2016).



Fig.2. Agave plantations Author: PAP "Design as a Factor of Sustainable Development with artisans and small producers in Tequila".

The Agave Landscape and the world of tequila, along with the customs and traditions of the state of Jalisco, such as charrería and mariachi music, also declared a World Heritage Site by UNESCO in 2005, in its Intangible Cultural Heritage Section, make up the imaginary with which the vast majority of people identify Mexico.

### *Sensory aspects of the Tequila Volcano*

In the territory of the Tequila volcano, cultural manifestations have developed that involve the transformation of the natural landscape and the creation of architectural elements of a productive nature that since ancient times have given it origin and meaning. In it, man has systematically modified the wild environment and the original flora to adapt them to the cultivation of the blue agave, giving the region an exceptional character that is complemented by the industrial facilities and traditional processes for the production of the tequila beverage.

The volcano has an altitude of 2,940 meters above sea level and due to the climatic variations during the year, it has a diversity of climates and therefore enormous biodiversity. There is a great variety of flora and fauna, of which you can appreciate in this exhibition the diversity of fungi and lichens that appear in the rainy season and color the forests of the volcano as seen in image 3. It is a world rich in colors and visual textures, which not infrequently become exquisite seasonal dishes in some traditional inn in Tequila.



Fig.3. Flora: Fungi and lichens of the volcano forests. Author: PAP “Design as a Factor of Sustainable Development with artisans and small producers in Tequila”.

### ***The sensory aspects of the Tequila Canyon***

Along the route of the ravine that belongs to the municipality of Tequila, there are several viewpoints, from which you can see both the Santiago River ravine and part of the Sierra Madre, which is called either the Sierra de Tequila or the Sierra del Salvador. From these viewpoints, you can appreciate a natural panorama with semi-tropical vegetation, fauna, and basaltic rock walls. Especially during the dry season, plum and mango plantations can be seen, which paint the canyon yellow (see image 4). In this area, several elements are considered part of the natural and cultural heritage. Because it is a region of volcanoes, there is obsidian, vestiges of pre-Hispanic constructions, tombs of origin, and manufacture of agave alcohol, and it is part of the biological and cultural corridors of Mesoamerica.



Fig.4. Representative species of the Tequila region.

### ***The sensory aspects of the Tequila Sierra***

The word tequila comes from the Nahuatl language *Tecuilan* or Tequila, which means "Place of Tributes". The landscape has been understood in countless ways throughout history, and man's gaze on the landscape has been represented through painting and photography, among other arts, but also in different ways depending on the historical and cultural context of the time. The aim is to understand how landscape photography, especially in the context of this particular project, reveals particular notions and ways of approaching our current relationship with the landscape.

The very origin of the term landscape provides elements of judgment to illustrate and make known how an objective territory is "transformed" by art until it produces a system of values that are incorporated and act as mechanisms of perception that relativize the valuation of a space. (Campos, 2003).

The municipality's natural wealth is represented by 28,430 hectares of forest with a predominance of *pine, parota, guamúchil, tescalame, guaje, guaje, plum, pitaya, oak, arbutus, oak, and mesquite, mainly*. The mineral resources of the area are deposits of gold, silver, lead, copper, opal, kaolin, and bentonite, copper, opal, kaolin, and bentonite which have been have been exploited mainly in colonial times, especially in colonial times.



Fig.5. (above) Semi-desert landscape of the Sierra de Tequila. Author: PAP "Design as a Factor of Sustainable Development with artisans and small producers in Tequila". (bellow) Jimador of Tequila, Jalisco. Author: PAP "Design as a Factor of Sustainable Development with artisans and small producers in Tequila".

### **Intrinsic elements of landscapes**

The agave landscape exemplifies the continuous link between the ancient Mesoamerican agave culture and the present. It is generally considered that from the second half of the 16th century, agave distillate emerged, initially known as "mezcal wine of Tequila", a mixed-race beverage produced by the Spaniards arriving in New Spain and the inhabitants of the region (Gómez Arriola, 2012).

Throughout history a landscape is constituted by agave fields, distilleries, haciendas, and towns is an exceptional example of traditional human settlement in its use of the land that is representative of the specific culture that developed in Tequila and turn has formed an important part of the Mexican identity.

The most emblematic intrinsic elements that have developed over time are for example the image 5b. of the *jimadores*, which to date safeguard ancestral knowledge about the maturation and growth of the agaves and the art of *jimado*. To this day, the tequila industry depends on this harvesting activity, which is carried out traditionally through this intangible heritage, a wealth of knowledge inherited for generations as an essential part of the history of this territory. The "*weberiano*" agave plant contributes to the agave landscape with its unique colors, shapes, and visual textures in the form of furrows, textures, visual geometries, and aromas that are unique in the world. Thus we can link it with the elements of identity that nature provides us with for product design innovation.

### Social development factors

The last record of the SECTUR (2012) regarding statistics on the number of tourists per year is 220,000.00 in Tequila (town of Tequila), before the current situation there was an influx of tourists of about ¼ million visitors per year that cause a considerable economic spill in the town of Tequila, from which benefit, in a very large percentage, the large tequila houses. These have proven tourism strategies to channel the majority of tourists to their facilities, in addition to having agreements with bars and establishments that are integrated into their behavioral dynamics, of a traditional type of tourism, which does not favor dynamics that integrate the population of Tequila.

The majority of artisans and small producers work largely in the informal sector with little access to government support. Most of them live in precarious conditions, they are marginalized in a globalized world, in which those who do not have internet, computer, and vehicle to move around, have few possibilities to grow. Economic inequalities are increasing, especially in the sectors of small rural producers and in the artisanal sector. The use of the resources of various raw materials produced by the tequila industry benefits artisanal contexts to reduce costs and at the same time opens the possibility of generating strategies for sustainable practices. By using these raw materials in products, added values are generated that are intimately related to traditions, intangible heritage knowledge (or not to repeat, it could be popular knowledge), and the nature of the region.

For several decades, UNESCO has tried to place at the center of the discussion on the preservation of intangible heritage, the importance of promoting and protecting people's creative traditional knowledge, and the importance of this sector for socio-economic and cultural development, especially in developing countries.

The Convention on the Diversity of Cultural Expressions by UNESCO in 2003 recognizes "*the importance of traditional knowledge as a source of intangible and tangible wealth... its positive contribution to sustainable development...*" (UNESCO 2003). (UNESCO 2003).

However, achieving efforts between international, national, and local levels to generate strategies that promote the socio-economic development of creative populations is extremely complex, since to date it is still mostly an informal sector that operates very precariously.

The needs of artisans and small producers are very complex. Their life context is marked by mobility difficulties as well as by their limited access to the globalized world due to the lack of

digital, organizational, and administrative tools, a situation that hinders economic development and growth. The Secretariat of Economic Development (SEDCO) in Mexico is supporting the artisan sector through some financing projects from a technical point of view and the rescue of traditional techniques, as well as from a focus on entrepreneurship, itineraries to cultural landscapes with the Secretariat in the sense of exchanging knowledge about the processes of social intervention with artisans and it will be seen shortly what level of formality this collaboration requires.

### Methodological design

Within the framework of our Professional Application Project "Design as a sustainable development factor for artisans and small producers in Tequila," we rely on the following methodologies, which allow us to build relationships and actions with stakeholders through participatory intervention and construction collective, within the constructivist paradigm", Most of the methodologies used are qualitative in nature, only when necessary in some contexts, specific documentary research is generated to understand -for example- the historical context of a place or to learn about traditions in terms of specific craft techniques or about cultural and intangible heritage values.

We have collaborated with the Secretariat in the rescue of traditional techniques and the promotion of entrepreneurship in craft communities collectively. A methodology that emerged from the discipline of education serves to organize learning in terms of its participation structure, created by Barbara Rogoff, presented in the chapter: *Learning through intense participation in communities in the book Socialization, languages, y Cultures infantile*, (De León Pasquel, 2010). (See image 6a.)

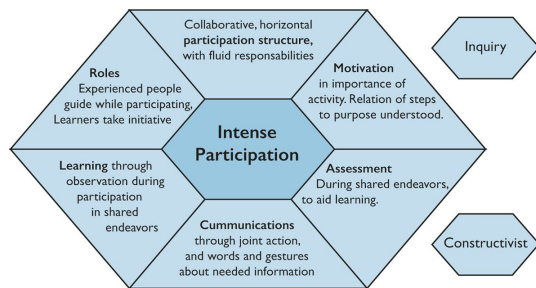
From our university intervention process, several methodologies are proposed, which try to promote learning processes through informal involvement in communities through "intense participation in communities". An important characteristic of this methodology is the horizontal and collaborative construction. Although the text refers to contexts in indigenous communities, focusing on children, we found much affinity in terms of the structure and organization of the rural communities with which we work. Intense participation in communities involves people of all ages and therefore becomes a good opportunity to promote learning in different dimensions, in the actors, students, teachers, in addition, it promotes reciprocal learning among all the participating actors.

Similarly, decision-making is done collectively. Henry Sanoff, architect and educator at the University of North Carolina (USA) has been dedicated to community design or community architecture, designing methodologies about participatory design. Its application has been basically in the development of community architectural and urban projects; however, we consider that they have elements that are valuable for our case about the intervention through design, in a participatory manner in the context with artisans. Henry Sanoff (2011).

In this way he confirms that participatory work promotes collaborative environments and moves between professional and cultural boundaries, which involves all participants in collective decisions, thus building community. According to Sanoff, the following steps must be included to achieve a democratic participatory process: participatory and deliberate democracy, the generation of shared participatory objectives, strategic planning with a common vision based on the promotion of participation as well as achieving consensus in decisions.

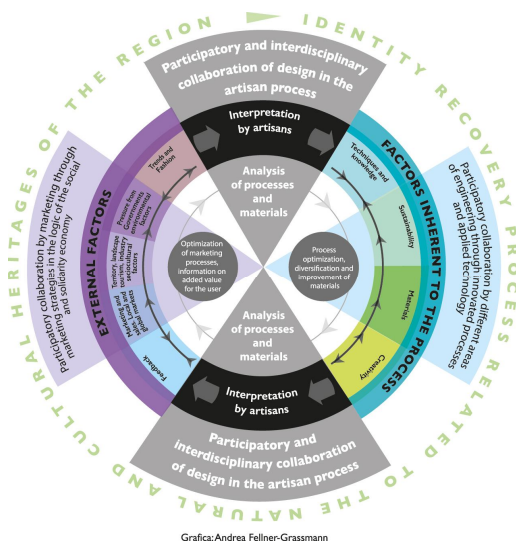
These methods and strategies are designed and adjusted according to the condition and needs of the group, it is a process that is built together with the actors, for the design of improvement alternatives. An important issue has been the process regarding the recovery of identity elements, from which it is intended that the actors build (or reconstruct) their identity from their contextual reality, especially from their natural, cultural and social environment. This generates opportunities to create added value to their products and services to be more competitive in the region's tourism market. For the development of innovative products, the results obtained in the previous phases are used, involving and respecting the knowledge of all participants. It is a process guided by the methodology of participatory intervention in communities, through which all the participating actors are an active part during the processes, promoting dynamics that favor the exchange of knowledge and finally the self-management of our actors.

Finally, the following graph shows a synthesis of these complex processes described above, which are detonated along this path. It also shows the interdisciplinary construction during these processes and the presence of the processes of recovery of aspects of identity-related to heritage values as a factor of differentiation and development.



© B. Rogoff.

a



Grafica: Andrea Fellner-Grassmann

b

Fig.6. a) Multifaceted traditions for the organization of learning. Mejía Arauz, Rogoff, Paradise, Correa-Chávez, Angelillo (2010, p.108). b) Design methodology as a development factor. Author: Andrea Mónica Fellner-Grassmann. Spanish version.



## Conclusions

Faced with the current pandemic situation, we realize that the structural problems of our society have become even more acute, which makes us commit ourselves even more to prioritize processes of revaluation of the agro-food heritage and its cultural expressions as a testimony of the social construction of ancestral practices and knowledge of the country and the region of Tequila in the state of Jalisco. It is urgent to increase the conditions to achieve greater involvement of the inhabitants of the region in the development of their territory. It will be important to reevaluate the role they play through their practices and knowledge in this reality, on which a large part of the tequila industry depends to date. In this Professional Application Project, several strategic proposals have been put forward to promote a development that is capable of reducing existing inequalities through social development using sustainable, collaborative, and self-managing processes.

We have realized that even with a heritage declaration for this territory, it has been difficult to achieve an integral development in which collaborative strategies are generated through which it is possible to take into account the actions and knowledge of the inhabitants of the region, especially as a factor of development for all. This requires new approaches to conservation and social development actions. The vertiginous growth of the tequila industry has put in the shadow these patrimonial and cultural values of the people and it has not been possible to put in the center of the look just to this native population with its needs and problems. In addition to this, the natural heritage recognized by UNESCO is being neglected by economic activities unrelated to the vocation of the territory. Thus, it will be a great commitment to generate strategies that can promote comprehensive actions towards inclusive sustainable development attached to the 2030 agenda.

According to statistical data processed by the National Institute of Statistics and Geography (INEGI) during 2019, 5 447 591 economic units are identified in the country. These are classified in 20 sectors of which manufacturing has relevant participation in the national economy; contributing with 11.1% of the country's economic units (INEGI, 2019 b). The manufacturing industries sector represents an important space from the viewpoint of the discipline of strategic design as a factor of economic, social, and environmental development. The country's manufacturing industry comprises economic units engaged in the processes of mechanical, physical, or chemical transformation of materials.

To meet the inherent challenges of contemporary lifestyles, understanding it as a complex framework in which different social realities coexist in a territory, it is necessary to think about the participation of the productive sectors in socioeconomic development from a different perspective than the one we currently respond to. Hence arises the approach of an educational offer that proposes the development and application of strategic design thinking articulating five fundamental principles that give value to productive organizations in a contingent world: people-centered; with an ecosystemic vision from a circular economy thinking; interdisciplinary and transdisciplinary; providing innovation value and, with a critical awareness of civilizational transitions.

Beyond the predominant productive sectors and formal representation of the country's economic units, there is a sector of small producers that participates in what is known as solidarity economies. The main objective of these is to promote the activity of local producers who are associated with "consumer cooperatives" and in "fair and solidarity trade" schemes.

Faced with these complex contemporary needs and challenges, it was decided two years ago to design a postgraduate program at ITESO. Master's Degree in Strategic Design and Social Innovation proposes the integration of a strategic design perspective focused on people; with an

ecosystemic vision; interdisciplinary and transdisciplinary; with awareness of civilizational transitions and providing innovation value through products, services, processes and/or experiences. From this perspective, the postgraduate program is positioned as a different and complementary educational offer with related programs of the Jesuit University System (Study Plan 2020, MDEIS).

The reality of the social and productive context of the region and how the university acts before them from different academic departments and university centers is a clear example of how a community is built and how the productive capacities of the region and the country are consolidated in the sector of the survival of local productive sectors, which are presented before the creation of new trade agreements.

The current condition and prospects of the world economy project particular nuances to be taken into account to achieve the Sustainable Development Goals set out in the 2030 Agenda, with a particular focus on poverty, inequality, and the impacts of climate change. This obliges the country's most dependent on global economies to consider the following challenges:

- Strengthen productive capacities of the country from relevant and sustainable growth.
- To build the capacities of local productive sectors through fair trade schemes and solidarity economies.
- Overcome the challenges of the sectors that participate in international markets through export schemes.
- Transition to a society of responsible consumption.
- Mobilize the productive sectors to take care of the environment in their production and distribution processes.

The professional activity of Design lived its first stage in the Bauhaus, where design was thought within a modern movement sustained based on functionalist-rationalist thinking. In the late 80's David Kelley (founder of the Design School at Stanford University) first proposed Design Thinking and one of his most lasting contributions has been the evolutionary and continuous development of Design Thinking towards the most recent methodology, People-Centered Design. In 2008 Tim Brown, the founder of IDEO, delves deeper into Design Thinking and founds IDEO.org, a non-profit organization focused on people in poverty and vulnerable communities. A quote from Tim Brown describes the new Design paradigm: "Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success" (IDEO, 2015).

*"It is time to contribute to creating a different world, where design and innovations are at the service of people, in connection with nature and favoring a fairer and more equitable society."* (MDEIS Plan, 2020)

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