TOWARD THE EVOLUTION OF THE TOURISM'S CONCEPTUAL SYSTEM

Abraham Briones-Juarez, Ricardo Tejeida-Padilla, Oswaldo Morales-Matamoros Instituto Politécnico Nacional, México abrahambriones2003@yahoo.com.mx, rtejeidap@ipn.mx, omoralesm@ipn.mx

ABSTRACT

The tourism is an important generator of economic spill and represents one of the main economic activities in the world. The study of this phenomenon at the present time requires a revaluation of the conceptual models that have been used for this aim, with the purpose of generating a holistic vision in its analysis.

In this paper, some contributions and applications made to Tourism from the Theory of Systems, are approached and discussed. In the end we aiming to generate a new conceptual model of the tourist system under the perspective of the contemporary Science of Systems, considering that tourism has evolved toward more dynamic and more complex postures where the elements of the system that emerge of its interior, are integrated to different scales, and show a coherent structure when they are compared with the whole.

It is concluded that the Science of Systems provides new elements and tools for the theoretical and praxiological approaches of the tourism.

Keywords: evolution, systems, tourism, paradigm of systems.

INTRODUCTION

The tourism is one of the main economic activities in the world. It generates an important investment and it can contribute to the economic growth and the social progress of the developing countries not only for its economic spill but also when favoring and encouraging the performance of activities that assist the demand of the tourists like lodging, feeding, transport, amusement, the knowledge of traditions, attractions and of the culture, among other, with the consequent generation of direct and indirect job positions; In addition it attracts national and foreign investment and it impels the regional infrastructure by means of the urbanization and construction of new and improved communication means (terrestrial, sea, air).

A great amount of foreign currencies enters the countries because of this activity, derived from the international exchanges, but also, the internal tourism that the national population practices inside its own territory, contributes to balance the national economy by means of the redistribution of the income. At the same time, for the amount of services that it requires, the tourism is a factor of employment creation of in different activities. For instance in Mexico the Tourism contributes with more than 7.7% of the national Internal Raw Product (PIB) and contributes with more than 9% in direct and indirect job positions, reason why it is one of the strategic sectors in the national economic development.

The study of the tourist phenomenon at the present time requires a revaluation of the models that have been used for this aim, with the purpose of generating a holistic vision in its analysis. Science contemplates a series of specific knowledge that explain the concrete phenomena of real life, through it, scientists understand their study object, as long as the method allows to carry out valuations with certainty of the wisdom and agree to the theoretical structure to prepare.

Science in its historical evolution has suffered transformations, passing from the traditional reductionism to the totalizing approaches, with the firm conviction of achieving transcendence in the acquired knowledge.

The study of the social science, different from the so called hard sciences, has softening elements appreciated in the systems of human activity, reason why it cannot be approached from exact sciences' characteristic scientific perspectives.

The scientifically acceptable tourism has recaptured defined theoretical structures starting from their main manifestations (economic, social, and psychological) that are shown as weak to remark their theoretical synopsis when valuing the phenomenon from the whole that embraces. The scientific thought of Tourism, should be understood from totalizing methodologies view, able to overcome the antagonism of the singular vision of a science in particular.

The prime scientific outcome, from which the tourist study can start, is constituted by its constant evolution, basic elements of the living systems that show the alignment of phenomena to the conditions of the environment, as well as its structural components.

In order to approach the epistemological problematic of the tourism, one can use the Systemic Emergent Paradigm as a methodology that provides a dialectical synthesis in the study of the composition of relating qualitative and quantitative combined elements to their different manifestations by means of constituting the aspects that compose it from a holistic optics, able to refer the phenomenon in all its possible manifestations.

Therefore it is convenient to try to approach the study of the tourist phenomenon from the perspective of the Systemic, with the intention of being able to propose a model of tourist system that shows the involved elements and their possible interactions.

This way, it is sought to analyze the theoretical currents about the Science of Systems and the Tourism with the purpose of generating a reference mark to lead us toward a model of categorization of the tourism from the systemic considerations.

SCIENCE AND SYSTEMS SCIENCES

The rational knowledge is derived of mankind's necessity to give answer to the events that surround them, and so it is that the philosophical method arises, along with the metaphysics and the Greek scholastic (Rodríguez, 1996), giving a controllable order to the thought that separates the ideology from the application (Werner, 1995).

The systemic thought emerges of the Aristotelian teleology of "the whole it is more than the sum on its parts", agreed in the Hegelian and Marxist dialectics that constitute the advance of the holistic vision,

overcome by the emergence of the Descartes reductionism whose proposal breaks into fragments .the whole problem in as many simple and separate elements as it is possible, generating the resolute method of Galileo where the complex phenomena are reduced to parts and elementary processes (Bertalanffy & Weinberg, 1987).

Bertalanffy (1995), introduced the idea of the organisms like systems, showing by fact that the laws of the systems behave as analogies, that is to say that formally identical laws are applied to completely different phenomena.

The General Systems Theory or Theory of the Organized Complexity, treats phenomena that cannot be simplified, that to say that cannot be reduced, it embraces the living and not alive systems through isomorphic principles, leaving intact the internal interactions, studying the system like a whole and embracing its complexity (Gich, 1981). In general, inside the system conceptualization, the authors that have defined it agree that it is a group of coordinated parts and in interaction to reach a group of objectives.

The systems approach is used to solve complex problems of the organisations from a global perspective, it carries out an analysis of the entirety of the components as well as its interrelations, and it tends toward the application of a holistic perspective (Cárdenas, 1978), it tries to reach the dialectical synthesis between the quantitative and qualitative methods, considering them as complementary and it is not only limited to the knowledge of the system but rather it promulgates its improvement (Tejeida, 2004).

Darwin's theory of evolution, postulates the living beings as a result of a slow evolution where the diverse species have derived from each other by natural selection (Bárcenas, 1982). The evolution leads to the spontaneous appearance of systems of a grater and grater complexity where not alone the complexity increases in the system but also its effectiveness (Tejeida, 2004).

EPISTEMOLIGICAL PROBLEMS OF TOURISM

The advance of the scientific research of Tourism shows leisure (playful activity, vacation or free time), as main element of its theoretical consideration. Leisure according to Bullon (1990), leads to free time or work break that according to Muneé (1986), represents the social wealth that constitutes the time in which the productive forces recover their vitality, through a playful self-regenerating of all that is human.

The use of leisure time is a psychological activity since it depends on what each individual intends. The recreation on the other hand is any kind of use that the mankind makes of its free time, whenever this use is carried out in a pleasant attitude. This way the tourism is a peculiar form of recreation (Boullon, 1990), but not its only presentation. Reason why trying to study the tourism through the use of the recreation and the free time, requires subordinating the recreation, human innate element to a specific use of the free time, which turns into an exhausting task that would not lead to its theoretical conformation.

The concept of Tourism has been approached from the practical definition deduced from the shortened interpretations emitted by the OMT (1991) that refers to the displacement of people outside of their

residence place for different reasons, fact that scorns the tourist dynamics including it in the tourist's emblem as the only element of their conformation.

The tourism has been glimpsed from the tourist's vision whose elements that validate the tourist concept, are contemplated by 1) the activities to develop 2) the existence of a displacement 3) the permanency in the visit place for at least 24 hours where a night stay should exist to be considered as the use a tourist service 3) the interaction of the tourists with the hosting community.

The debate on what is or not a tourist, derives from the previous elements, since only people that complete such condition are considered as tourists, therefore one should not considered 'a tourist' as the person that moves inside their habitual environment, consume tourist products, develop tourist activities and interact with the hosting community, however they are considered inside a tourist segment, they carry out tourist expense and act as tourists, but according to the previous considerations they should be classified as non tourist, due to the absence of one of the elements that gives them that categorization which is the displacement outside of his residence place.

The economic and social slopes have marked the rule to be able to locate the tourist issue as part of their theoretical happening, the first one with the economic science, in the offer-demand model where the tourism is an activity that generates revenues, job positions and expense with a multiplier and transformer effect on the regional development.

The social approach promulgates the social psychology that tries to refer it from the intercultural contacts (Castaño, 2005), the sociological theory that shows tourism like a social phenomenon, (Bente, Graham & Mehmetoglu, 2006), and the tourist anthropology that includes tourism inside its ethnic-cultural dynamism (Siew, Lee & Geoffrey, 2006). These approaches present tourism like a playful activity that has as main function, the one of fomenting the human understanding among people of different cultures

The epistemological problem of the tourist knowledge resides, more than in the same object, in the paradigm that studies it (Molina, 1997). The tourism has shown obstacles and continuous epistemological errors within the evolution of its theoretical knowledge, exposed in the theoretical lack pointed out by Bullon (1985), and revealed by the lack of general principles to harmonize its theoretical structure.

The tourist researcher should depart from its own knowledge, linking their experiences with the phenomenon, their rational understanding, and to be able to combine it with the knowledge of the scientific theory, to be able to propose a dialectical that leads to new and transcendent knowledge. This implies not to copy ordinary arguments, but making a dialectical rupture with the traditional foundations (Osorio & Castillo, 2006).

SYSTEMS THEORY AND TOURISM

The best way to approach tourism is through the General Theory of Systems, in accordance with Leiper, who proposes the recommendation of a systems approach as a means for the research that deal with relative general matters related to the interdisciplinary issue (Farrel &Twining-Ward, 2003).

The design of the tourist dynamics began to be develop from a particular systemic approach, cybernetics, based on it, the classic approaches are shown like the Molina tourist system, that is

explained as an open system, established by the integration of a group of parts or subsystems that are related to reach a common objective, related in turn with their environment (Molina, 1996).

For Boullon (1985), the tourist system is composed of three perspectives: to) an offer demand model that centres its interest in the operation of the commercial tourism b) a social anthropological approach that is in charge of the leisure and free time manifestations and c) inside the industrial tourism model that is interested in the massive production the commercialization and the profit. This tourist division denotes the disintegration of what should be a single system, what makes allusion to this model's inability to be able to integrate the elements and the relationships of the tourist system.

However, so much the system of Molina as well as Boullon's respond to the mechanical and organic models that locate tourism inside the relationships of exchange of information with the environment where the change is primarily endogenous even ending up changing the structure of the system.

Alfonso Jiménez (2004), takes Leiper's model as a reference to dismember his contribution framing the tourist subsystems, inside an entropic process, feedback by the homeostasis established by the exterior environment, qualitative data (motivational of trip) and quantitative (statistical) and the environment of the impacts in the local populations based on the analysis of the origin region and the destination region, which stuck the development of the systemic advance of tourism when carrying out new interpretations of already established models.

The tourist system of Osorio (2005), is a soft complex system, composed by a net of numerous relationships that have a self-organisation and evolution capacity, subject to determining external changes of its transformation, among which there is the dynamic element that determines the form of making tourism, the static element referred to the destination, the consequential element that refers the impacts of the two previous elements, these elements form the subsystems that provide evidence of the relationships that happen in the tourist system.

However, in the model, soft complex systems are not defined nor complex systems taken as a reference that are defined based on the mathematical structuring of their variables and take fractal geometry as a reference; specifically the behaviour of the mathematical variables and their stationary capacity, in a bifurcation point known as saturation of the system (Matamoros, 2004).

The above-mentioned constitutes the contributions carried out inside the research on tourism with systemic linking, although it is certain that they represent relevant advances to the study of the tourist issue, the study of the tourism in Mexico has not been developed due to the epistemological incongruity applied of the knowledge of the Systems Science and the use of the new systemic methodologies that would allow to establish a more direct approach to try to define it.

TOURIST SYSTEM EVOLUTION

The tourist system presents a constant evolution expressed in the factors of the international tourism development such as: a) the increase of the personal income, b) larger leisure times c) the revolution transportation d) technological changes e) and the freedom of travelling (Temática turística de vanguardia, 1995). The previous factors allow contemplating tourism like an economic political group that surpasses, the continental, national and regional issue being constituted in the tourism of masses

(Fuster, 1991) that has shown an evolutionary, interesting tendency, generated from the transformations of the demand, derived from the new tourist demands.

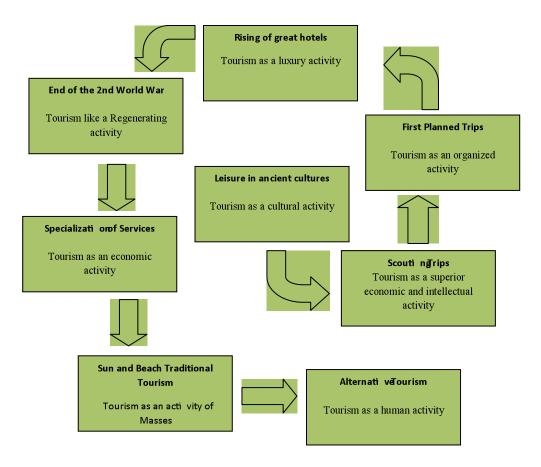


Figure 1. Evolution of the Tourist System

The traditional way of making tourism has evolved reaching all tourist areas, generating new specific segments of the market where the tourist is no longer willing to carry out an unjustified expense. It takes more and more seriously the role of preserving the environment, and grants bigger attributions to the experiences generated of the interactions with other people.

The changes experienced in the tourist phenomenon have radically transformed what could be glimpsed as the traditional tourist system, under the new perspectives, composed by the demands, the knowledge, and forms of making tourism in the contemporary world.

The evolution that is presented in the tourist system emanates of its central element, the tourist that when acquiring new experiences, in different environments, creates entropy that when being absorbed by the remaining elements of the system, is used to propitiate homeostasis contributing to its evolution and transcendence.

The tourist system as such has been transformed in different action fronts that show the evolution of the commercialization relationships expressed in the use of the web (internet) that allows the direct

interaction between the tourists and the providers of services, the approach of the tourists to know the places, regions, communities and tourist spaces to visit, allowing to compare prices, qualities, and even to try to make a judge on the degree of experiences that will have.

The evolution of the tourist system, toward the conformation of the alternative tourism (process that promotes a fair way of traveling among the members of different communities), it pursues the mutual understanding, the solidarity and the equality among the participants.

The tourist comes off of his elitist character and congregates a renovating environment and social activity, promoted by the consumers themselves, as a result of their evolutionary process where the tourists request, without any imposition, to be given the opportunity to participate in the conservation, development and improvement of the social and environmental atmospheres that surround the tourist activity (Sthepen &Neil, 1999). In its new placement the tourism creates job positions, protects the natural and cultural resources, at the same time that promotes human understanding (Meyer, 2002).

In accordance with Barreto (1996), the tourists should not carry out lucrative functions, what leaves the concept of business tourism in a difficult position since although tourists services are being used, and they can behave as tourists in their free time they cannot be considered as such, because they don't fulfill the requirement of being traveling for pleasure, they are not owners of their time and they present burden attitudes due to the pressures of the work.

The tourist concept should not come from their motivations, behavior and attitudes since these are centered in the subjective area, which would not help to dismember its concept because we would already have so many definitions as approaches for its analysis. The concept of tourist should come from a holistic perspective that will allow us to use a rational valuation for its conception.

The tourist is the main element of the tourist system that generates negative entropy that comes from their diversification, necessities, expectations and attitudes, reason why its conceptual treatment should be approached not by the causes of its displacements but for the effects that generates inside the tourist system.

The tourist like the main entropy element of the system may be specified based on their participation inside the tourist system, considering that people have the ability to belong or to stop belonging to the systems, what takes us to the following view. The tourist is that person that belongs to the tourist system and alters its operation, by means of the entropy, independently of the activities, attitudes, or perceptions that they present, tourists generate changes inside the other elements that try to understand to be coupled to its considerations, and in turn it is influenced by the other elements, for the determination of decisions in the tourist system.

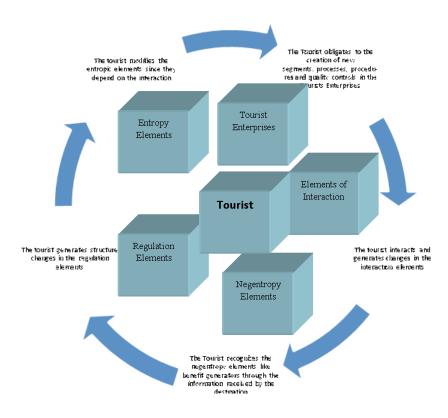


Figure 2. Tourist definition diagram inside the Systems Science

DESIGN OF THE MODEL

The general postulates of the Systems Method and its methodologies, as well as the Domain of Science Model by John' Warfield were considered for the design of the model (Pacheco & Cruz, 2003). In a summarized form, the steps and development of the methodology are shown next:

- 1. Object of study or problem: To outline the elements of the tourist system.
- 2. To visualize the concepts like a mental representation of the reality inside the psychological Cosmo vision: We can understand this stage like the part of the interaction and mental construction on the study concepts, enlarging our understanding of reality. This happens when we interact and think of such concepts and we relate them with our cosmo vision.
- 3. Importance or value for humanity. For this work the importance resides in establishing the elements of the tourist system.
- 4. Systemic Cosmo vision: The reconstruction of the concepts is given in this stage until reaching an approach to a theory with a holistic vision. A way to reconstruct the concepts is changing some original attributes. Changing some original attributes of the existent tourist systems, their order and disorder elements are established.

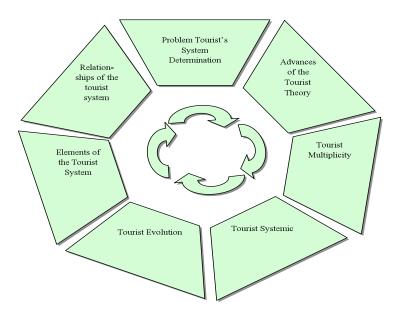


Figure 3. Systemic cosmovision of the tourist system

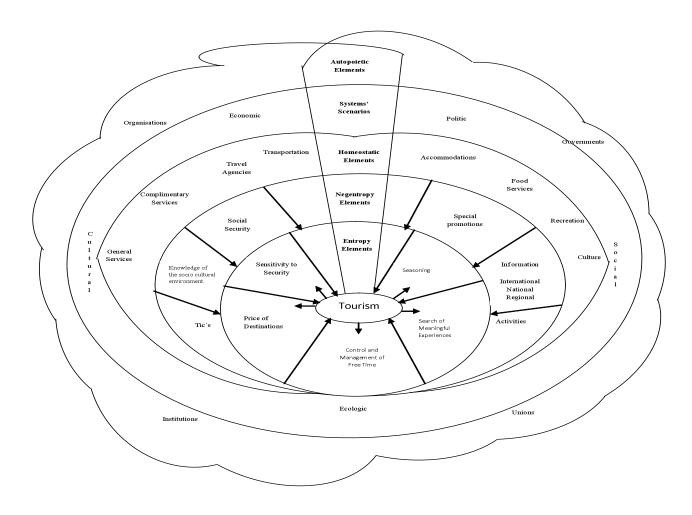


Figure 4. Tourist System

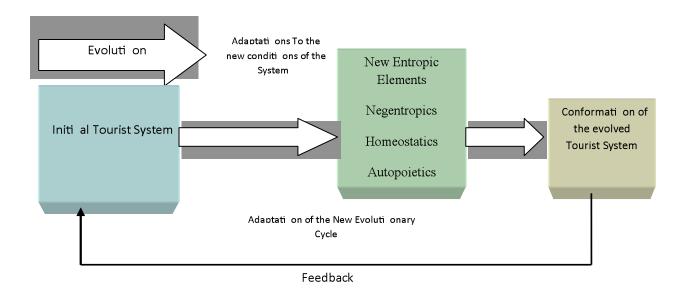


Figure 5. Evolved Tourist System Model

Considerations of the model

According to the elements and their interrelations the following principles are proposed:

The tourist system has entropic elements defined by the vulnerability of the phenomenon to the social, political and economic events.

The personal and social security constitutes the bases on which the tourist makes a purchase election.

The tourist system, finds its balance in the destinations that try to clean up their image as safe destinations.

In tourism free time is valued in terms of knowledge, experiences, and satisfactions, what determines in turn how they will decide to spend the new free time.

The Tourist is the main entropic element of the tourist system whose participation favors changes in the other elements at the same time that it is influenced by them.

The elements of negentropy of the tourist system produce information, and structuring of the system, that are useful to propitiate firstly its survival and invoke its development.

The handling of electronic information systems (Tic's), creates negentropy at the time that the options, of making and consuming the tourism are considerably increased.

The identification of the tourist segments and the determination of activities according to their necessities, cooperate to balance the tourist system.

The knowledge of the socio cultural environment to visit, favors positive information to the system.

The stationary demand, generates fluctuations in the prices, therefore the stability of the system depends on the capacity and sustentation of the linking elements (tourist companies).

The elements of tourist linkage (tourist companies) are able to create like every organisation, elements of entropy and negentropy by their own, therefore they are considered as direct modifiers of the tourist satisfaction, homeostasis creator.

The linking elements need to improve their goods and services with the purpose of directing their product to create positive entropy reflected in the increase of their revenues and quality of services.

The elements of tourist interactions include the crisscross environments that are considered, to the moment of the tourist experience, and that in general determine the behavior and evolution of the system.

The regulators conform the supra system, able to implement the changes according to the evolutionary aspects of the tourist system in legal, productive, social, cultural matters and in the generation of new knowledge.

Each element of the tourist system is subordinate to a regulator.

The evolutionary element of tourism is the one of greater transcendence to consider its future states and conditions

The main element of the tourist evolution this constituted by the tourists that when returning to their origin place, evolves and influences in the evolution of the remaining elements, presenting bigger impact in the linking elements (tourist companies) and in the regulating elements, (unions, organisations, governments and institutions) tourist.

CONCLUSIONS

Next, in a synthetic way, some of the discoveries that have been found in the course of research are described, as well as some preliminary conclusions:

The tourism is an open system, customizable, and dynamic integrated by entropic, negentropic and homeostatic elements that determine its condition in an evolutionary phase.

The tourist system is conformed by all the elements that are presented in its manifestation, they create alteration situations in its interior, and aim to establish a balance, while the consideration of tourism like a series of isolated knowledge, a group of dismembered policies, or a group of diffuse procedures, they belong to a social, economic or managerial part different from the one constituted by the tourist system.

The tourism seems to evolve toward the social, environmental, and economic reconciliation, manifested in its sustainable considerations and reflected in the demands of the tourists to respect those

environments, therefore it is a suitable tool to propitiate the social, and economic development, the care for the environment and the cultural invigoration.

The linking elements (tourist companies) have the internal capacity of being self regulated, and of balancing the tourist system, at least in terms of what the satisfaction of goods and services concerns, the levels of worldwide competition cause the necessity to respond favourably to the tourist evolution captured in the reference frame.

The tourist companies should consider the role that the human element plays in the process of tourist economic transformation, reason why they should be focused in the creation of real scenarios, to satisfy their demand, since the human factor is considered to be the essential element of the tourist system.

The objective of the tourist system is to provide visitors with the suitable conditions to take a trip, in consequence the reconciliation in the actions of the regulating elements, meaning the participation of the governments, the unions, the institutions and tourist organisations, should result in combined efforts to develop the tourist system, and not in disperse actions that hinder its development.

The main mission of the tourist regulators responds to propitiate favourable homeostatic changes, developers of the system, in legal, productive, environmental, social, cultural and educational matters whose commercial, economic bureaucratic barriers or of different nature hinder its function to the degree that their lack of actions have a negative impact in the tourist system.

The governments, unions, organisations, and institutions of quick answer, generate favourable conditions for their internal tourist environments, due to their quick action to identify the elements of improvement and to carry out their developing function of the tourist system.

The tourist evolution allows glimpsing the integration of the economic, political environmental and social environments of the tourist issue through its manifestations, generated trough the history of its conformation.

The documented applications of the Science of Systems in tourism that have been found have been incongruous with the advances that this science has had. Prove of it is the categorization of tourism using primarily the cybernetic model of first level of the 50's or incomplete or mistaken approaches to propose tourist systems. This obeys the lack of a modernized and deep knowledge of this Science. The Systemic Science provides a new research method, and useful tools for the theoretical and praxiologic study of tourism.

REFERENCES

Bárcenas, A. (1982). Introducción del método científico en biología., CECSA, México.

Barreto, M. (1996). Turismo de negocios un concepto polémico, *Estudios y perspectivas del turismo* 5 (3) http://barretto.floripaturbo.com.br/negocios.pdf 09/09/2008.

Bente H., Graham, M. & Mehmetoglu, M. (2006). *Little Norway in Spain From Tourism to Migration.*, Finnmark University College, Norway.

Bertalanffy, L, (1995). Teoría General de los Sistemas., FCE, México.

Bertalanffy, L. & Weinberg, G. (1987), *Tendencias de la Teoría General de Sistemas*., Alianza Universitaria, Madrid.

Boullon, R. (1985). Planificación del espacio Turístico., Trillas, México.

Bullon R. (1990). Las actividades turísticas y recreacionales., Trillas, México.

Cárdenas, M. (1978). El enfoque de Sistemas, Estrategias para su implementación., Limusa, México.

Castaño, J. M. (2005). Psicología social de los viajes y el turismo., Thomson, Madrid, España.

Farrrel, B. & Twining-Ward, L. (2003). Reconceptualizing Tourism, *Annals of Tourism Research* 31(2): 274-295.

Fuster, L. (1991). Historia general del turismo de masas. Alianza Universitaria, Madrid, España.

Gigch, V. (1981). Teoría General de los Sistemas., Trillas, México.

Jiménez, A. (2004). *Una aproximación sistémica al turismo: implicaciones para la multi y la transdisciplinariedad.*, Universidad del Caribe,

http://www.sectur.gob.mx/Congreso_de_Investigacion/ponencias/Alfonso%20Jimenez.pdf 21/02/08.

Matamoros O. (2004). *Modelos Mecánicos de la Dinámica Fractal del Mercado Petrolero*., Tesis. E.S.I.M.E.–Zac. IPN.

Meyer, D. (2002). Turismo y desarrollo sostenible., Universidad Externado de Colombia, Colombia.

Molina, S. (1996). Conceptualización del turismo., Limusa, México

Molina, S.(1997) Turismo, metodología para su planificación., Trillas, México.

Muneé, F.(1986). Psicología del tiempo libre., Trillas, México.

OMT Organización Mundial de Turismo (1991).Conferencia internacional de estadística de turismo y viajes,Ottawa, Canada.

Osorio M. & Castillo M. (2006). *Ensayo teórico metodológico del turismo*., Gicome, Toluca Estado de México.

Osorio, M. (2005). La teoría de los sistemas aplicada al turismo, *Revista virtual arbitrada pensado turismo*, http://pensandoturismo.com/template.php?archivo=osorio.htm 05/05/07.

Pacheco, A. & Cruz, C. (2003). El conocimiento: La (re)construcción de un concepto. *Ciencia y Desarrollo*, 168, enero-febrero.

Rodríguez, J. (1996). Curso de Filosofía. Editorial Alhambra, México.

Siew, I. Lee, J. & Geoffrey, N. (2006). *Tourists' intention to visit a country: The impact of cultural distance*., Graduate School of Management, University of Western Australia.

Stephen, W. & Neil, J. (1999). *Ecoturismo impacto tendencias y posibilidades*., Síntesis, Madrid España.

Tejeida, R. (2004). Los conceptos de entropía y evolución en la administración: La Teoría Exelixica de las Organizaciones, *Administración Contemporánea, Revista de Investigación*, 1(2): 1:39.

Temática turística de vanguardia (1995) *Turismo, transportes y telecomunicaciones,* tomo II fundación Miguel Alemán, México.

Werner J. (1995). Aristóteles., FCE. México.