



## **A Methodology Study of the Concept of Spirituality in Tourism According to fuzzy logic**

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### **Abstract**

Studying the concept of spirituality in tourism is neither a new approach nor a study of a particular kind of tourism or simply a religious perspective to tourism. Rather, it is an indicator of spiritual contents that today's tourism is submerged in to discover and attain non-material values and the reality during the length of its journey. This research offers a new perspective in the study of the methodology of tourism studies with a descriptive-analytical approach, conjunctive view while using library documentation and a review of theoretical foundations according to the fuzzy logic methodology. The fuzzy logic theory possesses a more precise capacity to explain and analyze concepts and phenomena and also a spectral reading of phenomena that uses the binary numbers of 0 and 1 as the extreme points of reality and accepts that there are infinite points of reality between the two of them; therefore, in order to more precisely and comprehensively understand reality, one must have a hierarchical view toward the phenomena. With this approach, spirituality in tourism includes a great variety of concepts and elements that are all ambiguous and graded. These elements include reasoning and probing, religious denomination and beliefs, mutual relations, and quality of life and culture. The propositions of spirituality in tourism essentially exist in both fuzzy and spectral logic, not just with fuzzy logic because of the essential ambiguity existing in concepts and elements and their metaphysical aspects. Therefore, this study is built upon the studies related to spirituality in tourism conducted through the fuzzy logic methodologies. According to the obtained results, this important approach must be paid attention so that the great capacities of spirituality in tourism in the areas of knowledge and action can be correctly utilized.

**Keywords:** Spirituality, Tourism, Methodology, Fuzzy logic.

## 1. Introduction

In general, the methodology is a means of recognizing every science. Method refers to a collection of techniques that we use to know reality and to be safe from making mistakes (Haqiqat, 2016: 624). On one hand, tourism is a framework for the spiritual evolution that is able to emerge and be experienced in all aspects and divisions of tourism. "Nowadays, human beings are seeking the life meaning and are searching for something more than materiality; because with the modern and advanced technology, the dissatisfaction with life and the sense of daily routine motivates him to discover the cause and the way out of the crisis "(Eftekhari et al.: 2018). Religion has given one of the best tools of spiritual perception to man and has chosen tourism as a suitable tool in order to reach this goal. However, one must not search for spiritual perception from tourism only in religious tourism (Shafi'a et al.: 2017). This concept is completely flexible and dependent on the view and point of view of each person such that his definition of spirituality can be changeable. On the other hand, fuzzy logic seeks to analyze subjects that are essentially ambiguous and has a spectral and graded view toward them. So, not only it does not deny reality, but also it claims to seek closeness to reality.

In this article, the writer strives to delve into the following important issues: 1) Can spirituality in tourism essentially be studied from the viewpoint of fuzzy logic? Is the spectral and graded view of fuzzy logic a suitable method for the scientific analysis of the concept and elements of spirituality in tourism? 2) Primary studies show that fuzziness exists in relation to spirituality in tourism in regards to the numerous concepts from different approaches and have attributed this fuzziness to various elements considered for spirituality. The fuzzy logic method can be one of the suitable and beneficial study methods in this area. It must be stressed that although we are looking at the subject with a methodological approach, we do not strive to disprove other methods. Rather, we are endeavoring more to introduce a suitable method with this category and to prevent the errors of all methods based on formal logic. The main reason for doing so is that in fuzzy logic phenomena are seen in spectral form between 0 and 1 and this graded and spectral view can be a path opener in regards to the consideration of the concept and elements of spirituality in tourism in which different views exist concerning its definition and determination of its traits. This view that seeks a more precise study of spirituality in tourism with a fuzziness approach is unprecedented and is original in its kind.

However, it must be noted that in a national level, works such as “A Probe into the Types of Conceptual Approaches that Explain Religious-Spiritual Tourism in Documentary Studies (research subject: Persian scientific-research articles)” by Rastgar and Jahanian; “The Explanation of the Concept of Spirituality in Tourism Using Content Analysis” by: Imani and Khushku and et al.; “Religious Tourism, Spiritual Tourism or Tourism, and Spirituality: a Study of the Similarities and Differences through Content Analysis” by Shafi’a et al.; and also studies in the international level like “Spiritual Tourism: Religion and Spirituality in Contemporary Travel”, a thesis by Alex Norman investigate spirituality in tourism from different aspects. In comparison, the present study while taking the views of these writers into consideration, seeks to answer the following question: Can one probe into the category of spirituality in tourism with a fuzzy approach? It has been presumed that fuzziness is possible in the concept and elements of spirituality in tourism. Therefore, initially, a detailed discussion about spirituality in tourism is addressed and then fuzzy logic is reviewed. Finally, an effort is made to show the fuzziness of the concept and components of spirituality in tourism.

## **2. A Review of the Theoretical Foundations of the Study**

### **2.1. The Meaning of Spirituality in Tourism**

In order to better explain the concept of the spirituality of tourism one must refer to its history. After moving around for a long time, man concluded that staying in one place can provide the chance for benefitting from more opportunities for him. This settling down in one place gradually was intensified to such an extent that after the Industrial Revolution, human life became limited to cities and workplaces; nevertheless, the essence of relocation and inclination to do so is something that is essentially present in man’s nature and irrefutable. This need to relocate caused a profound transformation to be formed in man’s lifestyle that is precisely the starting point of “tourism“ at which the concepts related to that came into being as an interdisciplinary science (Shafi’a et al.: 2017). Therefore, tourism can be counted as one of the products of modernity that has many material and immaterial advantages for people and governments.

Nowadays, it can be claimed that tourism is one of the relevant industries of the present age and because of the close relationship between the different aspects of contemporary human life. Thus, it has received much attention from different sciences. In this regard, different definitions have been provided for tourism. However, with the purpose of benefitting

from this article and grant access to a definition and understanding of the subject of tourism, perhaps the most beneficial and comprehensive definition is the one proposed by Eric Cohen. According to this definition, a tourist is a voluntary and temporary traveler who goes on a journey in hopes of taking pleasure from a diverse and new experience during a two-way, relatively long, and non-repetitive trip ('Azizi and Lutfi, 2010:91). Ultimately, the title of tourism can be applied to the act of the tourist because through a physical act, tourism ends in touring; i.e., a movement from one point and a return to it after the course of a process. Hence, this touring depends not only on the physical relocation of people but also on the experiences that are formed for people before the journey, at the start of the travel from the origin, sightseeing at the destination, and return to the point of origin. Since traveling leads the tourist to seek meaning, tourism can be construed as a form that produces spirituality (Ambrose, 2011). In addition, in the area of tourism, a primary look at spirituality considers it as one of the motivational factors of traveling and considers a tourist as a person who is interested in spirituality and goes on religious journey and pilgrimage in order to perceive a transcendental feeling. However, the two categories of religion and spirituality with all their similarities also have considerable differences with one another. Despite the general and particular relation between religion and spirituality, religion can be considered as being solely focused on people's internal holiness; whereas spirituality has a transcendental formation and is multi-faceted of which religion is considered as only one element. Therefore, each of the types of tourism has the capacity for the contemplation and realization of a level of spirituality, which is intensely dependent on the appeals and views of the tourist (Vargheese and Prahbu, 2009; Haq and Newby, 2012).

In general, it can be stated that since all human behavior is under the influence of religion in general, tourism and certainly the concept of spirituality and also the relation between these two is also not exempt from this rule. Nowadays, from the most excellent of human relations to seeking an existential meaning, from man's transcendental aspect to personal views and behaviors that explains the feeling of attachment to a transcendental aspect or something higher than oneself, all can be covered in the spectrum of the concept of spirituality. In a general view, it can be stated that spirituality is among those human values that give meaning and purpose to human life and triggers specific methods of life in this world and is also the cause for the connection between man and himself, others and the whole of existence (Imani Khushku, Shahrabi Farahani and 'Araqi, 2017). Perhaps, this view is because of the fact that some writers have considered the

concept of tourism as a spiritual or holy trip that is essentially related to the famous work of Turner regarding the process of rituals such as a pilgrimage. According to these scholars, participating in spiritual rituals or going for pilgrimage has three levels. At first, a person goes through the level of separation and distances himself from his normal or “unsanctified routine”; he then enters the level of “liminality” or a state of anti-structural “holiness” in which the structure and routine of normal life is destroyed and everyday responsibilities and commitments lose their importance and new relations are formed between people based on their being at the same level. Turner refers to these conditions as “communitas” in which a particular type of feeling of attachment between participants is formed; in these conditions, free and spontaneous activities take the place of structured everyday behavior that might not be acceptable from a social point of view in the homeland’s normal environment. Ultimately, people must pass through the level of “re-integration” so that they can return to the normal structured existence of their homeland. (Sharpley, 163).

The spiritual approach in tourism refers to an activity in which a person – regardless of the real reason for travel - voluntarily leaves the sphere of everyday life and visits a particular place with the intention of discovering meaning or spiritual perfection that is possibly “religious, holy, or an experience that is in the heart of nature (but in a spiritual context)” (Laderlah, Siti Anis, et al., 2011:188). In reality, “the purpose of spiritual tourism is exploring the elements in life that are beyond oneself and help in the interaction between one’s body, mind, and soul. These elements can be related or unrelated to religion” (Rastgar and Jahanian, 2016: 106). Spirituality can be like an umbrella that covers different types of tourism and results in the formation of a sublime feeling and pure values. Therefore, spiritual tourism is not a particular type of tourism, but rather indicates a spirituality that a tourist plunges himself into in order to attain immaterial values during the course of the journey (Imani Khushku, Sabbaghpur Azariyan, and Shafi’a, 2017: 108-109). Thus, according to the views of tourism researchers, the present-day (modern) tourist is considered to be more aware and experienced than tourists in the past who sought to establish a connection to nature and elevate the immaterial aspects of their lives. Therefore, the present-day (modern) tourist goes beyond tangibles and seeks to discover the reality of life and perceive the real meaning of phenomena and his adventuresome and exploratory spirit provides the groundwork for the acquirement of intellectual experiences (Cathy, HSU et al., 2008).

Obviously, when spirituality and tourism are explained alongside each other, in reality, a bridge is formed between these two categories (i.e., spirituality and tourism). Therefore, the elements of spirituality related to tourism must be identified (e.g., religion, ethics, health, and spirit) and link this bridge possible in regards to the immaterial concepts of culture, history, living environment, and humanizing environment. Tourism, with a superficial perspective, has been reduced to gaiety, eating, drinking, a good means of travel, etc. In comparison, the connection of this bridge can bring about definitions like comfort, awakening, reaching understanding, to be stirred to thinking, transformation, etc. Accordingly, spiritual subjects that can transform tourism from a physical form to a spiritual and elevated context depend on the essence and kind of tourism based on purpose, intention of the tourist in attempting the travel, the readiness of the tourist for receiving concepts and deliberation upon them, the presence of fellow travelers, spirituality facilitating helpers, and individual and collective needs in order to receive immaterial contents (Shafi'a et al.: 2017). However, since the intended components are usually not completely mentioned and sorted in the works related to spirituality and tourism and each researcher is addressed a part of these instances and each is accompanied by the definition of some of the components of spirituality in tourism, to attain a comprehensive understanding and a complete study of the constituent elements and parts of spirituality in tourism, it is necessary to pay attention to the collection of definitions presented by the researchers in regards to the aforementioned topic. Some examples of that are studied as follows:

1. "Spirituality in tourism or a view of spirituality from the perspective of tourism consists of deep and profound effects in the relationships that are formed in a person during a journey in society, the environment, and himself that prepares the ground for more transformation, review, and development of a person" (Ibid).

2. Some researchers consider travel and tourism to itself be a spiritual subject whereas others believe that spirituality in tourism only includes those excursions that result in the creation of holy values and a sublime feeling. This feeling depends on two determining factors. The first factor is the motivation for travel; the modern tourist goes on a journey with more developed intentions in order to achieve more exalted needs. Coles emphasizes that man is always restless in seeking the answer to why and understanding where he has come from, where he is going, and where is the final destination and is always pursuing new experiences, interaction with new people, and establishing a connection with the environment in order to

give meaning to his life. The second determining factor of spirituality in tourism is the experience gained from traveling that is achieved if immaterial experiences occur and end in the creation of a sublime and holy feeling in a person's consciousness. However, identifying spiritual experiences is a very difficult business because spiritual experiences are very different from other types of experiences because they are unable to be controlled or assessed. As a result, such experiences create a connecting point between spirituality and tourism is the existence of spiritual intelligence in man. Spiritual intelligence is a sign of man's desire to travel and of the adventurous spirit of a tourist. Howard Gardner (2011) in his book, "Multiple Intelligences", indicated the paradigm of spiritual intelligence and its emergence after the perfection of emotional and social intelligence. In the definition of spiritual intelligence, he describes the movement and vibrancy that is formed in man so that he can understand the whys of existence. Moreover, he addresses that spiritual intelligence is constantly encouraging a man to establish more connections with others so that they answer the teleological questions of his consciousness. Here tourism is recognized as one of the facilitating tools in increasing the effectiveness of emotional intelligence. A person in motion seeks to find meaning and awareness, gain immaterial experiences, create sublime values, and find an identity and physical and spiritual health (Imani Khushkoo, Sabbaghpur Azariyan, and Shafi'a, 2017: 112).

3. According to Imani Khoshkhoo et al. (2017: 121), since different types of tourism are achieved through motion and relocation, it is actually accompanied by apparent movements. However, in order to achieve the potential meaning and spirituality in it, either serious resolution for reasoning or effective channels for the transfer of profound concepts is required. Such channels surpass numerical, historical, narrative and simply apparent information and go into philosophy or reasons that provide connections between this information.

4. Based on Imani Khoshkhoo et al. (2017: 123) arguments, spirituality in tourism is a multi-faceted concept that can be explained through the meaning, elevation, and mutual understanding attained by the journey. Reaching elevation can be attained in a physical or spiritual form and is not necessarily limited to religious aspects. Meaning is achieved through reasoning and admonitions from the tourist's encounter with the system of tourism. In this system, people, cultures, mindsets, sanctified values, identities, and tourist attractions are the elements of achieving this level of meaning and understanding. Since multiple interactions are established between the tourist and nature, society, individual and supernatural aspects

in tourism, the correct understanding of special, pure, and even normal but notable contents provides the potentiality of formation of spirituality. Besides, realities, religion, natural order and coordination, role models and lifestyles, culture and moral values, establishing effective relations and understanding new concepts are assumed to be sub-components in attaining mutual understanding. Table 1 categorized the components of spirituality tourism.

**Table 1. Components of Spirituality in Tourism Studies**

Concept	Aspects	Components	Sub-components
Spirituality in tourism	Attaining elevation	Soul	Self-esteem Self-knowledge Self-actualization Positive thoughts
		Physical	Tranquility Physical and spiritual health Quality of experience
	Finding meaning	Learning and advice	Attaining an awareness Perceiving differences Changing the mindset Perceiving holy values
		Reasoning and Probing	Finding identity Cultural understanding
	Reaching a mutual understanding	Supernatural	Reality of phenomena Philosophy of creation and events Religion and religious beliefs Denomination Pilgrimage and establishing a sublime connection
		Natural	Order and coordination Oneness with nature
		Social	Mutual relations Lifestyle Quality of life Cultural Moral values
		Interpersonal	Effective relations New concepts

Source: Imani Khushkoo, Sabbaghpu Azariyan, and Shafi'a (2017: 122)

One can view spirituality in tourism from several different levels. The first angle is understanding its meaning by using intellectual tools, contemplation and taking lessons based on narrations, activities, and events occurred during the journey. This vital level can be explained through a mutual understanding in relation to nature, the supernatural, social, and interpersonal events that result in the formation of a new perception and

view. Ultimately, such a meaning leads to attaining elevation through spiritual perception or benefitting from personal and social factors in order to attain tranquility, safety, and self-esteem. Therefore, spirituality can be considered as one of the existing aspects in many types of tourism that are formed through searching, establishing new connections, intellectual refinement, and deliberation. Since the health and elevation of the soul directly affects an individual’s physical and bodily states, its physical effects such as physical recovery, health, and attaining quality in life are also considered among the spiritual outcomes of tourism (Imani Khushku, Aabbaghpur Azariyan, and Shafi’a, 2017).

Spirituality includes various aspects because man seeks different aspects of spirituality in his life. He is searching for his identity and feeling in life and thus sinks into amazement and wonder and searches for meaning (Jarratt, 2013). In this way, the elements of spirituality can be summarized as follows (Table 2).

**Table 2. The Components of Spirituality in Tourism**

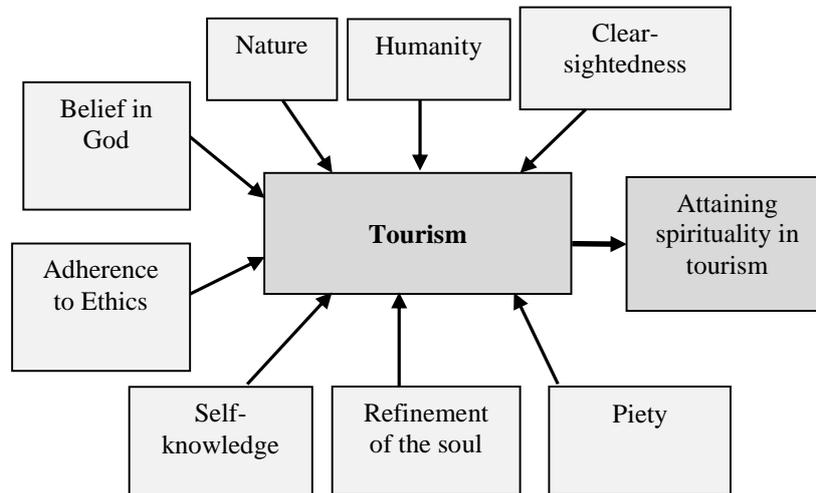
The Components of Spirituality in Tourism according to Jarratt	
Sense of awareness	Now and present Balance Flow (movement) Focus
Sense of mystery	Amazement and wonder Imagination
Sense of value	Yearning and hopelessness Unlimited goodness Close relations Meaning

Source: Jarratt (2013)

According to Table 2, the sense of attaining awareness, the sense of mystery, and the sense of value are among the components that explain spirituality in tourism. Feelings and states like being in motion, focus, amazement, imagination, a sense of meaning, close relations, and a sense of yearning and hopelessness are immaterial or spiritual factors of man’s existence that can be found in travel. Nevertheless, spiritual components cannot be limited to these components because immaterial aspects are very extensive and studies can only address a part of or a small range of them.

In other studies, they have endeavored to consider tourism to be a spiritual and holy journey and address the question of what role sanctity can play in the modern society and non-religious world of the present age (Collins-Kreiner and Kliot, 2000). In this spectrum, the level of access to

meaning and concepts and self-knowledge can create a realm of different types of tourism; where material tourism can also provide effects of spiritual comfort. Among the documentation, elements like belief in God, humanity, nature, clear-sightedness, adherence to ethics, self-knowledge, refinement of the soul, and piety have been emphasized. These elements all have been taken from the teachings of the heavenly religions and can have an impact on tourism and guide it toward religious and spiritual tourism. The result of such an establishment is a form of spirituality in tourism that will be stable and real because it has risen from religious tourism and in a way is its immediate result. Accordingly, the examples of spiritual tourism from a religious point of view can be presented in the following form.



**Figure 1. An Example of Spirituality in Tourism according to Islamic Tourism** (Imani Khoshkoo, Pourjam Alavijeh, and Nadalipour, 2015: 361)

All components of this vast universe are constantly in a state of traveling in their essence and life toward the real focus of their existence, which is the existential threshold of the Eternal God. Man, like other responsible creatures in the world, must realize his journey of spiritual perfection and have direct responsibility in this matter. The journey of perfection is the process for reaching spiritual maturity or perfection and includes many levels. Traveling is the key to opening the inner and outer aspects of the wayfarer, to the treasure trove of divine secrets, to the source of perfection, knowledge, courteousness, lessons, health and blessings, to opening hidden temperaments, to recognizing friends and experiences of the ages, and to reaching the level of the perfects (Qabadi, 'Araqi and Shohrabi Farahani, 2017).

## 2.2. Fuzzy logic Theory

Fuzzy logic seeks to form the “Theory of Information-fuzzy Collections and Control “. This approach was formed by Lutf ‘Ali Rahim Ughlu ‘Askarzadeh, known as Professor Lotfi Zadeh (an electrical engineer and professor at the University of Berkeley, California) in 1965 in the area of new calculations.<sup>1</sup> The word fuzzy means imprecise, unclear, and ambiguous (floating).<sup>2</sup> Essentially, the required knowledge for many issues is manifested in two distinct ways: a) objective knowledge like mathematical models and equations and formulas that have been previously formed and used for solving usual issues of physics, chemistry, or engineering and b) personal knowledge that is somewhat linguistically described and explained, but there is no possibility of making them quantitative with the help of traditional mathematics. This type of knowledge is known as Tacit Knowledge. Since both types of knowledge are required in practice, fuzzy logic tries to make them compatible with each other in an organized and mathematical way. In general, in software sciences, fuzzy logic goes beyond the “zero and one” values of the logic of classical software and opens new doors for the world of software sciences and computers. This logic also utilizes the unlimited and floating room between the numbers zero and one in its logic and argument and challenges it. Fuzzy logic is an unlimited logic that was inspired by human approximate reasoning (Vahidian Kamyad, 1999). This theory seeks to present a real picture of the world by taking into consideration all its complexities. However, it does not try to resolve the ambiguity of issues and rather seeks to analyze issues that are ambiguous in essence. Initially, there was much resistance in accepting this theory, a part of which arose from an incorrect understanding of fuzzy logic and its use. Because of its capacity to compete with human skills and its systematic approach in circumstances and areas of ambiguity, fuzzy logic seems a natural technical tool for assessing the continuity (Phillis and Andriantiatsaholiniaina, 2001). In reality, the assessment of continuity refers to the fuzzy’s assessment of phenomena. This logic is a scientific tool for modeling a system without a detailed mathematical description of qualitative and quantitative data (Phillis, Andriantiatsaholiniaina, Kouikoglou, 2009). But, the necessity of proposing this theory in human sciences in general and in regards to spirituality in tourism, in particular, is because it can present a more precise

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<sup>1</sup> This logic has roots in Russell's scientific ideas. Bertrand Russell considers the permanent ambiguity of data as a relatively incredible philosophical reality. He emphasizes the important of paying attention to the issue of ambiguity in the Theory of Knowledge (Bertrand Russell, Logical Atomism, translated by Jalal Paykani, Tehran: Elm Publication, 1<sup>st</sup> ed., 2010, p. 8)

<sup>2</sup> Fuzzy is in contrast to crisp and rigid.

explanation and analysis of concepts, phenomena, and components. For example, subjects such as religion, ethics, health, and spirit have an accompanying ambiguity that shows a wide spectrum of circumstances during analysis.

According to methodology, fuzzy logic came into existence as a result of the censure of the intellectual tradition that preceded it and is an endeavor to find a solution for two-valued epistemological deficiencies (Sa'i, 2014: 113). One of the problems of two-valued epistemology is the generalization of particular true instances upon all phenomena. This approach is incapable of narrating scientific realities with all their details. However, this problem can be handled using fuzzy logic (Ibid: 119). Fuzzy logic, in contrast to Aristotelian Logic that only judges each proposition with the two choices of true or false, lays out the medial exclusion principle and speaks of the propositions that are between these two realities; i.e., spectral and graded. Fuzzy logic claims that throughout the world, not one phenomenon can be found that is a hundred percent true or a hundred percent false; therefore, everything is relatively true or false. In reality, most of the subjects that seem to be true are relatively true (Kosko, 2000: 17-18). The development of Binary Logic (true or false) in social sciences exists as an epistemological foundation in the empiricism methods of Positivism, Skepticism, Interpretationism, Relativism, and Critical Rationality, and Epistemology results in the development of ontology and two-valued methodology.

From an epistemological perspective, this theory is based on two principles. First, the end of the principle of the impossibility of contradiction, which means that (according to fuzzy logic) an event can be the instance of two contradicting matters; i.e. an instance of A can, to a certain extent, be an instance of  $\sim A$  and to the same extent can be not an instance of any of those two contradicting matters, for example, it can be somewhat A and to an extent  $\sim A$  (Hoseinzadeh, 2008). Second, everything is gradational. This gradation is explained in two focuses: 1) in terms of reality and 2) in terms of understanding perception (Hoseinzadeh, 2009).

From an ontological view, the central factor in tourism is the understanding of instances as a composed whole and consider this whole as a collection. Finally, the degree of membership of these instances in this collection was studied in a fuzzy logic the whole degree of membership was determined through the gradation process. In this cognitive system, all social, political, and economic institutions will follow the principle of uncertainty, which is known as entropy. In fact, entropy is the indicator of

disorder in a system. In general, fuzzy entropy calculates the level of fuzziness in a fuzzy collection and determines to what level a collection is fuzzy. When a collection is fuzzy, the components connected to it will possess approximative limits. Therefore, the collection, in the same manner, will possess approximative quantity and ambiguity. Fuzzy entropy delves into the calculation of these very levels (Kosko, 2011: 154).

In a fuzzy system, the truth or falseness of a proposition is supposed to be a fuzzy subset of an interval between 0 and 1 and value exists between true and false. The propositions of this value are uncertain and are imprecise in terms of true and false. Linguistic values are considered completely true in between and completely untrue as values in the interval between zero and one. As a result, the truth or falseness of propositions is always accompanied by levels of uncertainty and epistemological propositions have a calibrated essence (Sa'i, 2014: 123).

In fuzzy ontology, realities are like a composed whole that is known as fuzzy Configurational Ontology. A composed whole is a structure that is created by combining the three aspects of reality; i.e., uniqueness, diversity, and generality. In the fuzzy cognitive system, like a collection, the combination of parts possesses a fuzzy identity. Based on the fuzzy cognitive system one can accept the two-valued assumption, according to which in every social event the two characteristics of historical uniqueness and generality are combined. In the fuzzy cognitive system, apart from categorical distinctions, the degree of membership of instances is also classified in a fuzzy collection. In relation to these two characteristics (i.e., uniqueness and generality), a third value (i.e., diversity) plays the role of the middle point. Diversity gives phenomena a typological essence and separates instances into types, subtypes, and mixed types (Sa'i, 2014: 127). Therefore, according to the fuzzy cognitive system, social realities have a fuzzy essence and occur based on the three principles of uniqueness, generality, and diversity.

In general, the uncertainty in fuzzy logic rises from three conditions: 1) the weakness of knowledge and human tools in recognizing the complexities of a phenomenon and issue, 2) the inexplicitness and lack of transparency that rules over events and issues that have special characteristics, and 3) the relation of uncertainty to people's judgment about occurrences and issues that have an inexplicit essence (Khademi Zare' and Fakhrzad, 2013). Enric Trillas and Eciolaza, in explaining this idea, consider it to be a continuation of Wittgenstein's<sup>1</sup> idea, where he

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<sup>1</sup> Ludwig Josef Johann Wittgenstein

believes that the “meanings of words depend on the way they are used in language” (Trillas and Eciolaza, 2015:1).

The fuzzy membership function is one of the important concepts that holds importance in the fuzzy Collection Theory. According to this function, if the degree of membership of one element in the collection is equal to zero, that member is completely out of the collection and if the degree of membership of one member is equal to one, that member is completely a part of the collection. Now, if the degree of membership of one member is between zero and one, this number shows the level of gradational membership.

It must be once again reminded that fuzzy logic emphasizes the existence of reality and its gradation and this by no way means the acceptance of relativity. In this logic, it is highlighted that “everything is a matter of degree”.

### **3. Methodology of Tourism, Spirituality and fuzzy logic**

As mentioned earlier, tourism is a way of forming a spiritual soul that is able to manifest and be experienced in all aspects and types of tourism (Shafi’a et al.: 2017). Moreover, it was explained that religion has given humanity one of the best tools of spiritual perception and tourism has chosen tourism as a suitable means of achieving this goal (Shafi’a et al., 2017). Therefore, the important matter here is that although essentially the concept of spirituality has many applications, not all of them are in one range and level and essentially placing them in one range is a mistake. For example, the reply to the question of which application is a part of spirituality in tourism and which is not, might not be that easy and depends on the different approaches through which we defined spirituality in tourism. What is certain is that spirituality in tourism is gradational and spectral in its applications and also in the gradational concept. Moreover, the reality of spirituality in tourism can be better understood with fuzzy logic because it has a spectral and gradational view and can be more precisely probed and analyzed. In this regard, one must note that spirituality in tourism in concept and application that is accompanied by self-ambiguity, which shows a wide range of circumstances during analysis.

#### **3.1. Fuzziness of Spirituality in Tourism in the Area of Components and Sub-Components**

It seems that fuzziness is not simply summarized in the concept of spiritual tourism; rather, it can also be seen in its components and sub-

components sort of more boldly. By referring to Table 3, to provide a precise and real criterion for spiritual components like self-esteem, self-knowledge, self-realization, and positive thoughts, they should be studied spectrally and fuzzily because, for example, self-esteem cannot be considered equal in everyone. For example, A has an intermediary degree, B is close to the degree of “zero”, and C is in a degree inclined to “one”. Similarly, in physical components that include tranquility, physical and spiritual health, safety and quality of experience (Imani Khushku, Sabbaghpur Azariyan and Shafi’a, 2017: 122), it seems the fuzzy method, with a spectral and gradational view, gives a more precise and closer explanation to reality and provides the possibility of a better comparison. Fuzziness is also helpful in the educational and advice component of spirituality in tourism. In this way, sub-components like achieving awareness, perceiving differences, changing mindsets and perceiving holy values, like other discussions of spirituality in tourism, are better understood with fuzzy logic. Using this method in intellectual components and probing spirituality in tourism, which has the sub-components of discovering the identity and cultural understanding, gives us a more correct understanding in relation to the subject. Similarly, a spectral and gradational view can help us more effectively and precisely in supernatural components including the reality of phenomena, the philosophy of creation and events, religion and religious beliefs, faith and pilgrimage, and establishing a trans-sensory connection in regards to occurrences and different and sometimes conflicting understandings and the lack of a correct understanding of people’s inner aspects. Therefore, we can be free of incorrect judgments and apparent comparisons, although this important matter is more tangible in natural components like harmony and order and unity with nature. Using fuzzy logic and a gradational and spectral view in social components – which include mutual relations, lifestyle, quality of life, culture, and ethical values – is more practical and scientific and can provide us with better standards for evaluation. In the end, in interpersonal components with the sub-components of effective relations and new concepts, a spectral view provides us with a more profound and wider insight. According to Jarratt, one of the components of spirituality in tourism is a sense of awareness, which has sub-components like now and present, balance, flow, and focus. As can be seen, this component among the experiences of spirituality in tourism also does not have a unified and equal standard and, depending on different elements, a wide range of this component can be seen in different experiences. In Jarratt’s view, one of the other components of spirituality in tourism is a sense of mystery, which has sub-components like amazement and wonder and also imagination.

This component can also be different and gradational in every experience of spirituality in tourism. So, it cannot be said that, for example, in this experience, we have a hundred percent of this component and thus this experience possesses spirituality and another experience has zero percent and lacks spirituality. In reality, spirituality is always in a gradational form and each has a share of it. Ultimately, Jarratt mentions the component of the sense of value that possesses the sub-components of yearning and hopelessness, unlimited goodness, close relations, and meaning. This component along with its sub-components is not constant and equal in different spiritual experiences in tourism and rather has different and various degrees. As an example, the topic of meaning is not experienced equally in all travels and can be perceived depending on conditions, circumstances, culture, and numerous other factors. Regardless of the mentioned components and sub-component, in regards to the essential ambiguity, which is affected by the immaterial realm and exists in the concept of spirituality in tourism, whether we accept these components or not, fuzzy logic still seems to be the best and most precise method for the analysis and explanation of this important matter. The reason for this claim is that this technique reduces the ambiguity of the matter as much as possible with a spectral view and helps us in a better and more profound understanding of the reality. In general, physical and spiritual components, education and advice, reasoning and probing, supernatural and natural, and social and interpersonal can be better, more precisely, and more scientifically probed and studied using the spectral view of fuzzy logic.

#### **4. Summary (A Hypothetical Case Study of Utilizing fuzzy logic)**

Spirituality in tourism explains a spirituality that a tourist is not seeking but rather is immersed in, in achieving immaterial values during the course of the journey. From this view, spirituality in tourism includes a wide range of concepts and components that are not the same according to the views of different thinkers. But, in a certain and obvious way, they all are ambiguous and gradational such that they do not have one and equal meaning in a concept and there are great and notable differences in their conceptual definitions. In addition, although perhaps they can be placed in one group, they can also not be reduced to a single completely corresponding meaning and concept. Secondly, in terms of application, they have many applications that do not come under one range and level and essentially placing them in one range is a mistake; like reasoning and probing, religion and religious beliefs, mutual relations, and quality of life and culture, or components like

sense of awareness, sense of mystery, and sense of value. Furthermore, in methodology, the fuzzy logic theory emphasizes that in order to understand reality more precisely and comprehensively, one must have a spectral and gradational view that in relation to spirituality in tourism, the discussion of its uncertainty and ambiguity is proved by using its components and sub-components. Moreover, in each experience, it can be shown, measured, and placed under spirituality in tourism. However, how this spirituality can exist and at the same time has a level of spirituality in it is different and distinct in relation to other experiences. The fuzzy logic theory – considering that it has the ability to more precisely explain and analyze concepts and phenomena and also that it is a spectral view of phenomena – can provide the researchers of this area with a new outlook. For instance, according to Jarratt, one of the components of spirituality in tourism is the sense of mystery, which has the sub-components of amazement, wonder, and imagination. These components, in turn, can also be different and gradational for each spiritual experience in tourism. So, one cannot state that, for example, in his experience, we have this component a hundred percent and therefore this experience has spirituality and another experience has zero percent of it, and therefore lacks the spirituality. In reality, spirituality is always gradational and possesses a particular degree of it and the actualization of experiences of zero or a hundred are almost impossible in the world. Hence, it exists is a range of different and medial levels. Fuzzy logic that can help us to give a more correct explanation of spirituality in tourism by abstaining from a black and white view and rather paying attention to the issue that for the better explanation of spirituality in tourism we must use the gradational view of fuzzy logic. In this way, we can give a more correct judgment in regards to concept, components, and amount of spirituality in tourism. For a better understanding of the matter, in a hypothetical way, we can classify three different experiences as A, B, and C for our claims in the discussion of spirituality in tourism and classify them between the two binary extremes of 0 and 1 (Table 3).

**Table 3. A Hypothetical Classification of the Experiences of Spirituality in Tourism (0 to 1; all numbers are hypothetical)**

Tourism Experiences	Components of Spirituality in Tourism	Sub-Components of Spirituality in Tourism	Scale (from zero to one)
Journey A	Sense of awareness	Now and present	10/100
		Balance	60/100
		Flow (movement)	20/100
		Focus	70/100
	Sense of mystery	Amazement and wonder	40/100
		Imagination	10/100

	Sense of value	Yearning and hopelessness	60/100
		Unlimited goodness	30/100
		Close relations	10/100
		Meaning	80/100
Journey B	Sense of awareness	Now and present	30/100
		Balance	40/100
		Flow (movement)	10/100
		Focus	60/100
	Sense of mystery	Amazement and wonder	80/100
		Imagination	70/100
	Sense of value	Yearning and hopelessness	30/100
		Unlimited goodness	20/100
Close relations		10/100	
Meaning		40/100	
Journey C	Sense of awareness	Now and present	60/100
		Balance	30/100
		Flow (movement)	70/100
		Focus	50/100
	Sense of mystery	Amazement and wonder	20/100
		Imagination	40/100
	Sense of value	Yearning and hopelessness	10/100
		Unlimited goodness	60/100
		Close relations	80/100
		Meaning	30/100

As can be seen, all the above experiences and kinds can be instances of spirituality in tourism but this does not mean that they share the components of spirituality equally. Accordingly, it can be said that each has a share of spirituality due to different factors and they can be divided into levels between zero and one. This means that our perception that one experience lacks spirituality and another is a hundred percent example of spirituality is not so correct; rather, it is wise to say that each experience possesses a degree and share of spirituality and includes a wide range. Therefore, according to methodology, fuzzy logic, in regards to the concept of spirituality in tourism and its components, can be a suitable method for the study and evaluation of this subject.

## 5. Discussion and Conclusion

For a more correct understanding, a phenomenon and have a more scientific and more comprehensive analysis of events and issues, using a method suitable to the subject can give us a more profound perspective. In this article, an effort was made to present a suitable method to study

spiritualism in tourism by initially studying the concept of spiritual tourism and its components and thereafter by studying the fuzzy logic Theory. This study revealed that fuzzy logic with its spectral and gradational view to phenomena, concepts, and applications can help us in achieving a more correct understanding and more profound insight in relation to the topic. Based on the findings of this article, the propositions of spirituality in tourism are not only able to be studied with fuzzy logic; rather they essentially have a fuzzy and spectral logic due to the essential ambiguity that is present in the concepts and components because of the supernatural aspect. Therefore, in performing studies related to spirituality in tourism, one must pay attention to this important issue. In this way, the great capacities of spirituality in tourism can be benefited from in the areas of knowledge and action in the correct form. Certainly, the concept and components of spirituality in tourism are all gradational (between the absolute extremes of 0 and 1) and a researcher of this field must not neglect this important matter. Therefore, the fuzzy logic method can be beneficial and useful alongside other methods for the analysis and evaluation of the scientific study of the components of spirituality in tourism.

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