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Documenting and Evaluating the Restoration of Historic Gardens of Hamadan on the Basis of Florence Charter (Case Study: Nazari Garden and Home Gardens of Americans)

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Abstract

Hamedan with suitable climate has had great gardens. Unfortunately, many changes have taken place in the structure of city and many gardens have been added to the urban fabric for construction and a limited number of them have been rebuilt. Understanding the elements, reconstruction and rehabilitation of gardens should be based on scientific principles and integrated studies of the different of historical and cultural layers of gardens should be carried out. . As integrated studies on Hamadan gardens are not codified and on the other hand, the past and current situation is not documented, it is necessary to study and assess the reconstruction of their elements. This paper is based on the Charter of Florence and cataloging methods to study Nazari and American gardens in which there is an attempt to determine the spatial structure of the past and present through descriptive and analytical method in way of comparison and qualitative approach with a collection of documents, and the field work to answer these questions. What is documentation of Hamadan historical gardens to be used to rebuild them? How is the restored Hamedan garden structure evaluated on the basis of the Charter of Florence? How are different and common features found in the restoration and preservation of Hamedan gardens? The whole garden, garden characteristics - the physical structure of gardens – and garden history are document repertoires that should be taken into consideration in the reconstruction and rehabilitation of historical gardens. Studies of Nazari and American gardens show both gardens have been renovated on the present situation and not on the basis of Florence Charter. American garden has changed over time more and more. The greatest changes in both gardens according to data indexing method have been found are in the organization of the garden, building use the passage of time and the physical structure.

Keywords

Historical gardens, Hamedan gardens, Florence Charter, Documentation and restoration, Cataloging, Nazari garden, American garden.

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Introduction

Hamedan is among the cities of Iran with numerous gardens and the climatic and geographical situation increases the importance of this issue. There are found numerous gardens in Hamedan city and surrounding with different functions, with a manifestation of Persian garden pattern but a significant number of them have been destroyed, although some already exist. The past and present situation of these gardens are not documented. Therefore, it is necessary to study and assess the reconstruction of the elements of gardens. In this regard, identifying the elements, reconstruction and rehabilitation of garden should be done based on scientific principles. Since studies of Hamedan garden are not codified and integrated and on the other hand, the current and past situation is not documented, it is necessary to study and assess the reconstruction of the elements of gardens. Documentation of historic gardens needs to be done with comprehensive information to rebuild. This research aims to assess the physical structure of Nazari garden and American garden in the past and present with historical analytic approach, and qualitative method with the collection of documents and field observation to answer questions; what is documentation of Hamedan historical gardens to be used to rebuild them? How is the restored Hamedan garden structure evaluated on the basis of the Charter of Florence? How are different and common features found in the restoration and preservation of Hamedan gardens? The whole garden, garden characteristics - the physical structure of gardens - and garden history are document repertoires that should be taken into consideration in the reconstruction and rehabilitation of historical gardens?

Background

Iranian garden documenting various has been interpreted from different structural, philosophical and mystical aspects using historical documents, portraits, old photos by researchers, including Elizabeth Moynihan and Donald Vilber, Mahvash

Aalemi and Rene Peshrou. Given the value of all efforts to document the historic gardens, it must be said that because of the dynamics and the ability to change elements of the garden over time, it requires a coherent archive of documents that represent a clear picture of it in each era (Behbahani, et al, 2013: 147). Documentation method has been used in several historical buildings and gardens, among which Persepolis can be cited by Aminzadeh, B. The outcome of this research, in addition to discovering the form of ancient Perspolis, is introduction of a method of documenting the natural characteristics of the nation's history (Aminzadeh and Aqaebrahimi, 2006). Providing a comprehensive method of natural and historical data, Behbahani set out to identify and document gardens to rebuild them as in Sepahdar Ramez, and the Moshiralmamalek (Behbahani, 2013).

Hamedan gardens have been referred to in the different literature with descriptions that can be assigned to Gharagozlou manor house, by Mohammadi (Mohammadi, 2012) and other historical writings, including Zahirldoleh's books and documents written by Afshar (Afshar, 1988), Hugogrothe's writing translated by Jalilvand (Grothe, 1869), Zahirldoleh's memoirs and travelogues written by Vahidnia (Vahidnia, 2006), the Maftoun's poetry by Maftoun (Maftoun, 1999), a travelogue by Jackson (Jackson, 1937) and some miscellaneous writing.

The results of the previous research on documenting historical gardens show that this way makes the rebuilding of garden a scientific method by providing complete and clear documentation of the gardens. Hamedan historical garden documenting using the description given and analysis of the present status to reconstruct and evaluate is issue that has no background.

The theoretical foundation (Florence Charter)

Florence Charter regards garden as inseparable element of the surrounding environment, whether urban or rural, handmade or natural. While taking

into account the undeniable historic gardens as a part of the cultural heritage of various nations and the developing a world guide for the rehabilitation and protection is positive point of the Charter of Florence, there has not been raised any practical instructions in it . Michael Canon knows protecting intangible aspects of local culture that is associated with the physical aspect of garden possible where little trace remains of past projects, (Shahsavargar, 2012: 56-55). However, due to the fact that garden as a historic landscape is a living entity, it is necessary to take advantage of the principles and norms of Florence Charter to protect it. At the same relation, a summary of its achievements is mentioned. In Article I of Florence Charter, to approach the garden and areas for conservation and rehabilitation, historic garden is defined a combination of architecture and gardening. However, the garden is considered a historical monument in the charter. But soon in the second article, the historic garden is principally known to be architectural composition components of which are the and therefore deemed to have been alive.

Following, the conclusion has been drawn that these components are interchangeable and mortal. This point seems to be theoretically flawed because these components may be different from other parts of the garden in longevity (Aboueye, 2012, 111-110). In article eight of a cultural perspective, the cultural scape is a special example of a memorable event, a specific historical event, a famous fairy tale with an epic war or the famous visual subject. If a historical landscape should be protected, in Article 9, it needs maintaining, protecting and restoring. When the restructuring is consistent with the proposed reality, the originality of historical scape depends not only on the design and proportions of its parts but also on a decorative element or selection of building materials accepted for every part. Article 10 of the Charter, is one of the key materials for any type of intervention, including maintenance, conservation, restoration and reconstruction in the garden or any of its parts is based on simultaneous action because of the need to maintain the integrity of the whole garden.

It is clear that the integrity apart from the general concept for any historic garden is, according to the interpretation of cultural and territorial effect, interpretable. (Aboueye, 2012: 111-110). Under Article 11, since the plants are the main elements of the cultural landscape, the protection of their conditions without change will be possible through individual replacement and through long-term planning (Icomos, 1982); (Bemanian, et al, 2013: 14) In the seventh and fourteenth article, maintaining the garden relationship with its special environment, especially on its physical environment inside or outside has been emphasized (Aboueye, 2012: 111-110). In the fifteenth article, no rehabilitation work on historic gardens should be completed without a study (Ibid: 14). In Article 16 related to the garden restoration, it is stated that there should be, in the restoration work, -enough attention paid to the successive stages of evolution of the garden (Ibid: 110-111) in Article seventeen, wherever a garden is completely destroyed, or more than conjectural evidence of its landscape does not exist, no search for rebuilding the natural shape of a historic garden cannot be considered. Reconstruction taking inspiration from the traditional form and designed in conditions such as the site of the old garden or the site that no longer exists is in some way the memories creation and can no longer be classified as a historical garden. In the article twenty, since the garden is a good place for the establishment of quiet games as a daily activity, separate land adjacent to the historical garden must be designed so that without prejudice public demands to protect the garden or landscape are satisfied.

Article Twenty-four states that a historical garden is a part of society legacy requires constant attention in the field of qualified people of their survival (due to its nature). Appropriate training of individuals who may be historians, gardens, and landscape architects is necessary and taking care of them by botanists in order to ensure regular production of plant species is necessary in any situation. (Icomos, 1982); (Ibid: 14). According

to points in Florence charter, the structure recognition of the garden should be concomitant with all the physical environment and structural, cultural and historical aspects of garden and its surroundings in relation to each other. The present study using inventoring seeks to examine different aspects of the comprehensive model to identify and document historical gardens); (Behbahani, et al, 2013: 147).

And this scientific method is used in other countries according to the law of Florence Charter in order to document historical gardens (Ibid, 2011: 148) usually argue. The first time Michael Conan presented the cataloging method to document the historical gardens of France (conan, 1985). Based on this methodology, data collection and study of documents, historical documents, travelogues, old images and field data through the identification and listing of the status quo of the garden are done and by analyzing these studies, data layers required for consistent documentation of historic gardens are provided (bid., 2011: 148); (Table1) .

Review and assess of the historical gardens of Hamadan on the basis of the Florence Charter and cataloging method

• Geography Hamedan

Hamedan is located at latitude 34 degrees 47 minutes (47 and 34 North) and longitude 48 degrees 31 minutes (31 and 48 East), on the slopes of Mount Alvand in Hamedan northeast, and has an elevation of 1,800 meters above sea level. Alvand mountain

range is the natural border city of Hamadan with Tuyserkan, and its highest peak (Klaghlan) is to a distance of 12 meters south of the city, 3574 meters high (Azkaei, 2009: 13). This mountain range, on the one hand, reduces the intensity of the winds in Hamedan and on the other hand it is a great source of water supply thanks to the snow. In addition to the advantages, Hamadan is located on the plain at the foothill of the mountain and has a beautiful natural landscape and is a good guide to move in harmony with nature.

• Gardening In Hamedan

As a result of the archaeological excavations of the hill known as Hegmataneh streams of water in the streets from the Parthian and Sassanid remains of an urban fabric are visible which unmistakable indicator of water systematic hierarchy and gardening is.

Geographers of the fourth century AD knew the great city of Hamedan at an area of (7.5 x 7.5 km) to have the fort and parish (Suburbs) with four iron gates, houses of clay and fountains, springs, and many gardens that the old building (Hegmataneh organ or Saro) in the middle of city underwent the destruction (Zarei.,2012,61). In the later centuries all of the authors in the field of historical geography paid attention to the agricultural development in this province.

The large gardens have also been mentioned to be inside and outside the city of Hamedan.

Hamadan, during the Qajar period in 1851 AD had a range of about 4 × 2.5 km. Water flow of Moradbeyg

Table 1. The data collect recording in cataloging. Source: Behbahani, et al, 2011.

recording Name	Characteristics
Garden whole Garden indicators Garden History garden physical structure garden order garden Composition the garden use perspective	Garden name – historical era- The old names, Garden Position, Garden Current performance. Symbol and pattern of Garden, Garden importance Maker garden, Reason of building garden, Primary performance and historical documents slope, Design ground, Topographic, geology, water resources Plant order, Water order, Architectural order, Spatial order The current plan, Primary plan, old and new Pictures, Sections building Uses in the early, Different and current periods landscape Type the surrounding garden, Determining angles of view from the garden and out, And from the outside in garden

divided the city into east and west (Mehryar et al., 1999, 53). One of the primary reasons that regard the city of Hamedan as a habitat is the presence of Bakhter Rivers and olusjerd that emanates from the valley Moradbeyg (Zarei, 2012: 59). According to old documents and books available, Hamadan has had numerous canals, aqueducts and springs (Jackson, 1937: 175).

One of the Qajar era explorers Sir William Jones wrote that in Hamadan, there were numerous streams flowing, and the plains, orchards and villages spread everywhere, (plants and greenery are abundant than anywhere I've seen so far) quoted by the (AZkaei, 2001: 450). This process was continued until modern times when as a result of changes in the political and social developments gardens underwent destruction. The historical gardens were changed and a few of them survived in the passage of time. As a result, gardens in the city, with differences moved to the outer city and especially the slopes of Alvand Mountain.

• Introduction of case studies

Garden Nazari and American homes with different situations, are located in the southern city of Hamedan. The reason to select these two is that these two gardens in this study, were changed during the reconstruction and attention to the changes is very important. Information in the gardens is examined from cataloging records.

A) Nazari Garden

Nazari garden is one of the historical gardens built in the late Qajar and early Pahlavi. The garden is located in University Square, Street Qazvini – Nazari juncture. In the past, it was the residence building of England ambassador in Hamedan. (Fig1).

Based on the information inventory of physical structure, the position of the garden is completely paved and the main source of water is through irrigation aqueduct in the east side of the garden and at present it is done through well water. Based on the inventory information on plants order, trees located along two main axes north-south and east-west axis, including: walnut, almond, cherry, pine, mulberry are

in according to Hamedan climate and there has been no change in them yet, but vegetation plots before reconstruction by a person called Tajolmolook, had boxwood, rose, wild tulips, During the renovation of the garden, changes have been made in them.

Garden space and lawns end of the north-south axis has changed and now they are an office building and parking lot.

The garden architecture for order water is seen as flowing water in rivers and standing water in various forms in front of the mansion and swimming pool in the garden. Octagonal pond in front of the building has been refurbished to its original shape, swimming pool located on the east side of the garden has been covered and by changing the furrow irrigation system is not applicable in the garden and irrigation is done now through the well to traditional system (Fig 5).

In architectural order of garden, pavilion located on the east side of the garden is the most important element, and the building entrance through two axes is associated with the pavilion. In repairing structural elements including the entrance pavilion there are not many changes in the mansion, but some decoration was added during the reconstruction of the mantion. Two main axes, east-west and north-south, pavilion, pond and garden and entrance are the main elements that have been refurbished and restored to their original shape and changes in the



Fig. 1. The location of the Nazari garden in an aerial photograph of year 1956. Source: The Cartographic Center of Hamadan.

structure of the garden on the part of south side paths and the path routes have occurred (Fig 5)

It seems that based on composition inventory, there are not changes in relationships of garden elements, plans, sections and elevations and the only change has been removing the additional steps in the north pavilion added to it in previous use. What is more than anything about the building of this garden has been considerable emphasis on the first floor (Fig2). Evidence suggests that garden uses might have changed over time. It was, at the beginning, location of English consulate residing in Hamedan transferred later to Mehri the daughter of Amirtouman, and finally Fatali Khan Nazari bought it. The garden was used as a residence place by Nazari family. And since 1993, the garden has been used for training and Islamic Azad University's School of Architecture is located in place (archive Hamedan Cultural Heritage and Tourism Organization, 2013).

The view of the garden takes place through the east-west axis and surrounding colonnaded pavilion in the garden and planting trees in this axis helps shading, perspective and strengthens perspective (Fig 3,4).

B) Americans' home garden or Nourmahal

This garden is one of the most beautiful historical gardens located at 30 meters Ammar street, behind the apartments of Janbazan. Position of garden is outside the city and the urban sprawl has made it become surrounded by residential places. In the Qajar era, it was used as a hospital and clinic but is now used as a public park (Fig 6). Based on historical information of the physical garden, Hugo Grothe and Zahirodolleh's memories can be noted. In the evening we were invited by American clergymen and went to school. School conditions, training and behavior and services were very interesting. It is more than twenty years that the school has been opened for 50 students in Hamedan [50 boys and 100 girls]. Solarium is very well and ten to 20 patients are operated there. (Vahidnia, 2006: 47).

Elsewhere in the logbook Hugo Grothe states that

after crossing the busy street market and traversing the eastern neighborhood of the city that is located at the foot of Mount Alvand and their homes are in large gardens, we reached the US Mission of Americans within a large garden and has a 30-bed hospital, an operating room and a pharmacy (Grothe, 1869).

Based on information of the physical structure, water is the main element of Iranian garden, including gardens of Hamedan. Garden water has been originated through the fountain. Southern Hills is in the area has drinking water springs filling small Hasyll, and its water was used to irrigate Nourmahal garden trees (Zand, 2008, 82). Now the garden irrigation is done through wells. The garden ground has been studied with topography and field studies show that changes were in the early bed and based on the status situation it has been restored. (Fig7) the documents show that the water organization of the garden had been in the pond in front of mansion and the the hesyl one located in the south side of the garden and the water flowing in the streams. The studies show that in garden restoration, there have appeared different changes in irrigation system, the garden hesyl has been destroyed, the pond in front of mansion restored in the previous form is not applicable and water axis in front of mansion along with ponds are designed based on the status quo.

plant order of garden indicates that vegetation of south has been added to urban texture and the north side of the garden has undergone a lot of changes. In the first, plots of the reconstruction of the garden had more cohesion with the surrounding pavilion, and reconstruction of plots has been made on the status quo. Based on the field studies and aerial photo, the garden vegetation consisted of dense nut trees with some others compatible to climate such as almond, apple, peach and berry which have not been paid attention to in reconstruction and some adorning trees have been planted, instead (Fig 9).

According to the information inventory of architectural order, pavilion is the only element with little changes having been done and is being restored. Spatial order of garden, based on changes in



Fig. 2. The western elevation of the Nazari Garden mansion in Hamadan. Source: Archive Administration of Cultural Heritage, Handicrafts and Tourism Organization of Hamedan, 2013.



Fig. 3. A view of west elevation and the entrance portal in Nazari garden. Photo: Hatefi Shojae, 2013



Fig. 4. A view of west elevation and the entrance portal in Nazari garden. Photo: Hatefi Shojae, 2013



Fig 6. The location of Americans' home garden in an aerial photograph of year 1335. Source: The Cartographic Center of Hamadan.

the order, plot and definition of the axes of motion has changed a lot and its restoration has been done on the basis of the status quo.(Fig 8).

Based on composition information inventory, given that the pavilion is the only element of garden with little changes taken place in, plans, sections and views show the current state of the pavilion. The building combines a central part of a columned porch or passageway in the mansion with a garden view pile of wood and brick columns. This visual perspective of building has been designed and implemented, however, it is clear in color and flavor of vernacular architecture. Based on the user information inventory, Zahirodolleh in his memoirs initially referred to

hospitals and training clinics in the garden and then American Mission accommodation in Hamadan. After this period, according to field studies, garden is assigned an attendant by the municipality to maintain it Hamadan. Now the garden site is considered for public use repurposed as Sarai

neighborhood .

The pavilion reconstruction is in progress. Results of materials collected by catalogues of garden based on inventorying and documenting are shown in Table 2.



Fig. 7. Water axis front mansion of Americans' home garden. Photo: Hatefi Shojae, 2013



Fig. 8. A mansion South elevation of Americans' home garden. Photo: Hatefi Shojae, 2013

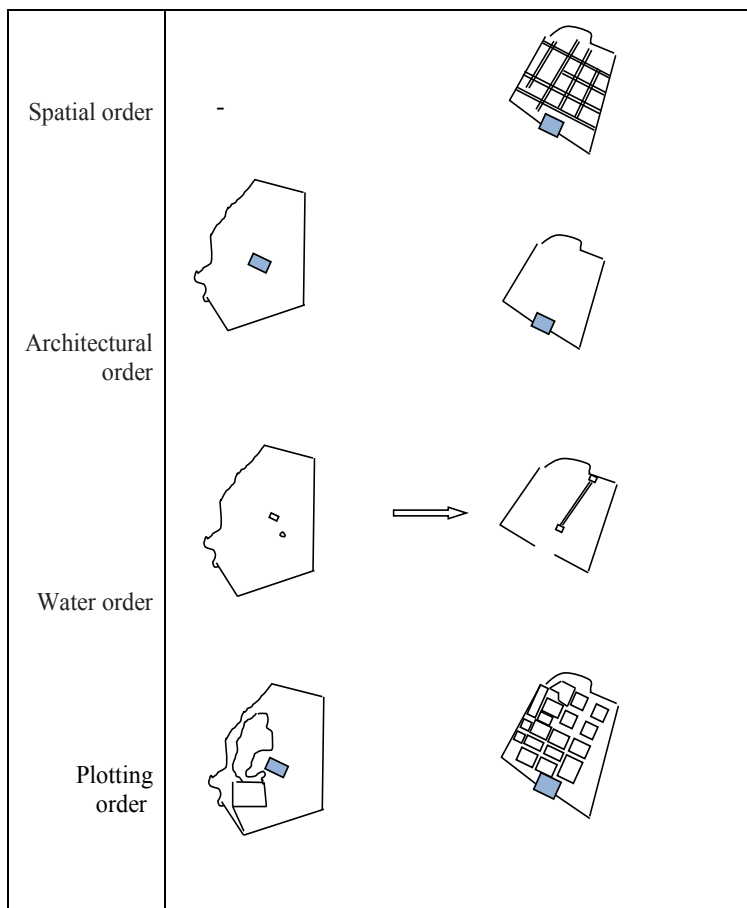


Fig. 9. Layers of order in American home garden. Source: Map: Archives Administration of Cultural Heritage, Handicrafts and Tourism Organization of Hamedan Province (Analysis of the authors, 2013).

Table2. Analysis of Hamedan gardens sample on the basis of cataloging method. Source: authors, 2013.

	Samples of Hamedan garden	
	Nazari garden	Home garden
Garden whole(Garden name – historical era- The old names,.....)	Nazari, late Qajar and early Pahlavi, University Square, Street Qazvini, Cultural Heritage Organization	Americans` home, 30 meters Ammar, Qajar era, Nourmahal, public park
Garden indicators(Symbol and pattern of Garden, Garden importance)	-	Mission accommodation in Hamadan
Garden History(Maker garden, Reason of building garden,.....)	residence building of England ambassador	, Hospital and training clinic, recordings of Hugo Grothe and Zahirodolleh`s
garden physical structure(slope, Design bed, Topographic,...)	flat, aqueduct	In all three cases, changes were made in the renovation of the garden
garden order(Plant order, Water order)	In all three cases, changes were made in the renovation of the garden	Plan, sections and Composition of the garden is unchanged
garden Composition(The current plan, Primary plan,...)	Plan, sections and Composition of the garden is unchanged	Therapeutic -recreation- Residential – public
the garden use (building User in the early period,....)	English consulate residing, educational and administrative, Residential	The best landscape of the surrounding, Due to location of garden on a hill and four sides
Perspective(landscape Type the surrounding garden)	The best landscapes of east-west axis and four sides of the pavilion will be Done	Done

Discussion and conclusion

Understanding and documenting historical gardens, context for the restoration and protection is provided. With the help of inventory method, a comprehensive study of historical documents, field studies and the current situation surrounding garden takes place in which different layers of garden can be determined to show structural model. In this paper, two gardens, Nazari and American Home in Hamedan based on cataloging method were studied so that the protection procedure is evaluated on the basis of the Florence Charter. The inventory information shows the physical structure of Nazari garden has not changed and source of water was aqueduct in the past but is now a well. By order of plants, trees located along two main axes of south- north and east-west axis has not experienced changes, but plot vegetation has changed. Landscaping and lawn end of the north-south axis have gone away and office building at the site is added. Architectural order of water, octagonal pond in front of the building has been refurbished to its original shape, the pool located on the east side of the garden is covered and in two parts furrows of garden are seen. based on architectural order, the repairing garden building elements including the pavilion and portal have not experienced changes, but while rebuilding, some decorations were added. According to composition information inventory, it seems that changes in the relations of the garden, plans, sections and elevations of the palace have not been done. The garden use has changed over time as seen in the different residential, educational and administrative functions. In the Americans Garden, in addition to the southern part of the site added to residential context, there have been many changes in the layout of the garden. the source of supply water in the garden was spring and is now well and many changes have occurred in the context of its topography. Based on order information inventory, the reconstruction of the garden has created large changes in irrigation system and the pond in front of mansion does not apply and the water axis before the mansion with ponds are designed on the basis of the status quo. The plant order shows that plot integration and vegetation have been destroyed and streaming the garden is based on the present situation while new trees and decorative trees have been added. Pavilion is the only element of the garden undergoing no change in reconstruction. The spatial order of garden has had a lot of changes and the stream definition is based on the present situation. According to composition inventory, there are no changes in the relations of the garden, plans, sections and elevations of the mansion. The mansion was used as an infirmary, then it became residential and now it is a park. The analysis carried out indicates that in Nazari garden there were fewer

Table 3. The adaptability of Hamedan gardens sample on the basis of cataloging method. Source: authors, 2013

	Samples of Hamedan gardens	
	Nazari	Home garden
garden order(Plant order, Water order,architectural and spatial)	**	****
garden physical structure(slope, Design ground, Topographic,water resources...)	**	***
the garden use (building User in the early period,...)	***	***

changes and the historical evidence which was collected can be documented for the whole of garden, garden characteristics, garden history, and structure physical structure to reconstruct the garden. The results suggest that the restoration of the gardens and orchards are not on the basis of Florence Charter but gardens are restored in terms of the present situation. Table 3 evaluating the importance of Florence charter and cataloging method in restoring Hamedan gardens show that the greatest change has been around the garden organization, mansion use over the time and physical structure of the garden in different eras.

Endnote

1. Hesyl means the original and the term has become common in popular culture.

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