

The Nguom Rockshelter and the Paleolithic Flake Industries in Mainland Southeast Asia

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The Nguom Rockshelter is a stratified archaeological site located in the Than Sa River Valley, Bas Thai province, northern Vietnam. The rockshelter lies on the north side of a limestone mountain, situated at latitude of 21° 47'40" North and longitude of 105° 52'40" East. The Nguom Rockshelter was first recognised as a potentially important archaeological site during the survey of the Than Sa River Valley in 1980. This site was excavated by the Museum of History in 1981, and subsequently re-excavated jointly by the Vietnam Institute of Archaeology; the Department of Archaeology, University of Hanoi; and the Museum of History in 1982 [Ha Van Tan 1985].

The rockshelter is an open area with a floor space of approximately 150 square meters. The excavated area is only 56 square meters, consists of three pits: A, B, C. (Fig. 1).

The stratigraphy from top to bottom reads as follows:

Layer 1

Surface layer, 20-30 cm thick, extensively disturbed by the villagers, mixed with prehistoric materials and modern potsherds.

Layer 2

60 cm thick, dark grey in colour, very loose. This layer encloses mainly shells of

freshwater gastropods. Stone artefacts, animal and human bones have been found. In pit A at a depth of 75 cm, two burials have been uncovered. The first is a flexed burial. The second is a double burial in which an old man is placed on the left and a young woman on the right of the grave. This burial was surrounded by stones.

Layer 3

45-50 cm thick, very loose, greyish in colour. In this layer, shells of land snails were abundant. There were also a number of mammal bones. The species were all recent, including pig (*Sus Scrofa*), cattle (*Bos sp.*), porcupine (*Hystrix sp.*), monkey (*Macaca assamensis*), hog badger (*Arctonyx collaris*). An intact lower jaw of orang-utan (*Pongo pygmaeus*) was recovered at the bottom of this layer. Stone flakes and tools have been found.

Layer 4

A band of limestone rubble comprised of weathered angular blocks ranging in size from gravel to boulders almost of 25 cm x 45 cm. Also found were stone flakes and tools in this layer. Its thickness averages 15 cm.

Layer 5

20-25 cm thick, of very light yellowish colour. The soil is composed of sand and clay. There were also mammal bones and stone artefacts in this layer.

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With reference to all the archaeological evidences, the cultural remains of the Nguom Rockshelter can be classified into 3 levels as discussed below:

Upper Cultural Level (Layer 2)

This level is characterized by the appearance of unifacial pebble core tools which were made by direct percussion. The lithic industry is represented by sumatraliths, short axes and edge-ground axes. Flake tools are rarely found. Most of the flakes are non-utilized. It is reasonable to suppose that this cultural level belongs to the Hoabinhian. (Fig. 2)

Middle Cultural Level (Layer 3)

The lithic industry in this level is represented by pebble side-choppers and end-choppers. The pebble tools here are very similar to the Sonvian, a paleolithic pebble core industry in Vietnam. [Ha Van Tan 1976] (Fig.3) But in this level many flake tools are also found.

Recently, three radiocarbon dates have been obtained for samples from this level. One sample came from the top of Layer 3. The date is $18,600 \pm 200$ BP (Bln-2691/II). Another sample was taken from the bottom of Layer 3. Two determinations are available: $23,000 \pm 200$ BP (Bln-2692/I) and $23,100 \pm 300$ BP (Bln-2692/II).

Lower Cultural Level (Layer 4 and Layer 5)

This level is predominantly characterized by the appearance of flake tools, made of fine-grained stone. A common feature of artefacts is their relatively small size. The typical flake tools were described as scrapers and points [Quang Van Cay *et al.* 1981] but the assemblage shows a lack of uniformity.

Most of the artefacts are amorphous flakes, 2-3 cm long, with marginal retouch along the sharp edges. In Pit A, 9,965 of the 10,941 flakes are retouched tools. There were also a number of true blades and blade tools (Figs. 4&5). The pebble tools are rarely found (2%).

The flake industry in this level is then the earliest of the Nguom Rockshelter sequence. Absolute dates of this flake industry are still lacking but it is clear that this industry must be earlier than 23,000 BP.

Thus, the results of the Nguom excavations indicate the existence of a flake tool industry predating the core pebble one in Vietnam.

We are now aware of flake industries in mainland Southeast Asia. At first I mean the flake industry discovered in the Lang Rongrien Rockshelter in Krabi Province, southwestern Thailand, about 12 km from the sea shore. Prof. Douglas Anderson conducted excavations there in 1983, 1984 and 1990, and a detailed report on the Lang Rongrien Rockshelter has been published [Anderson 1990]. Nearly half of the artefacts found from the Pleistocene levels (Unit 8, Unit 9 and Unit 10) are flake tools, made of small pieces of chert, with cutting types: end scrapers, side scrapers, gouge-like implements, flake knife, graters and microblade-like flakes, retouched and utilized flakes. Radiocarbon dates for these levels ranged between 27,000 and 37,000 BP.

I want to speak more about the archaeological finds in Bailian Cave in Liuzhou, Guangxi Province, China. A large-scale excavation of this site was conducted in 1981-1982 and, as a result, a

report was published in 1987 *The Science Museum of Bailian Cave Site 1987*. The excavators informed us of two cross-sections of the East and West sides of the cave. There are 8 Layers in the east portion. Layer 1 has given a radio-carbon date of 7080 ± 125 BP (BK 82092). Layer 3 has given an uranium-series date of 8000 ± 800 BP (BKY 82239). Layer 7 has a radiocarbon date of $11,670 \pm 150$ BP (BK 82098). There are 10 layers in the west portion. Layer 2 has given a C14 date $19,910 \pm 180$ BP (BK 82097). Layer 4 has given a C14 date of $26,680 \pm 625$ BP (BK 82098). Layer 6 has an uranium-series date of $28,000 \pm 2000$ BP (BKY 82141). A radiocarbon sample from Layer 10 yielded a date of $37,000 \pm 2000$ BP (BK 82101). So, the western layers are dated older than the east ones. The second layer of the west portion and the 7th layer of the east portion link together, forming a line of partition between Holocene sediments above it and Pleistocene sediments under it.

In Bailian Cave, besides a number of pottery sherds and polished tools in the upper layer, chipped artefacts have been mainly found. The authors of the report classify these artefacts into 5 groups, ranging from the bottom to the surface as follows:

Group I

From the 5th to 7th layer of the west portion, with an abundance of small flake tools made of flint.

Group II

Shell layer, including the 2nd and 3rd layers of the west portion, containing boring pebble stone items and many flake tools almost similar to microliths.

Group III

Yellow shell layer (layer 6 of the east portion) containing mainly pebble tools and a number of boring pebble items.

Group IV

Greyish yellow shell layer, mostly containing pebble tools and a number of polished adzes.

Group V

The first layer of the east portion, containing pottery sherds.

Accordingly, we can see that the late Pleistocene layers of Bailian Cave contain mostly flake tools made of flint, although a number of pebble tools are found. In the Holocene layers, big-sized pebble tools are dominant but flake tools remain in some layers. This situation makes Bailian Cave related more closely to Nguom Rockshelter than to Lang Rongrien Rockshelter.

In a few words, we can see that the flake industry of the Nguom Rockshelter is not isolated. The discovery of flake industries at Lang Rongrien and Bailian Cave shows that these industries, together with small flake tools belonging to the Pleistocene, already existed before such pebble industries as the Sonvian and Hoabinhian and were distributed widely in mainland Southeast Asia. This might be the result from a change of the climate from a dry and cold to a humid and hot one in the whole region.

But the change in lithic technology in Southeast Asia is not so simple as represented in the various proposed models. Recently, when Moh Khiew Cave situated near Lang Rongrien Rockshelter was excavated, Dr. Surin Pookajorn, a Thai archaeologist, has found that under the flake

tool layer (Second Cultural Level) exists a pebble tool layer (First Cultural Level) [Pookajorn 1991]. It is very likely that there exists a long-time period of humid climate before this period of dry climate. So, the fluctuation of climatic conditions, and closely related to it, the change of ecological condition to Holocene are much more complicated than we have thought of.

References

Anderson, D. D. 1990. *Lang Rongrien Rockshelter: A Pleistocene-Early Holocene Archaeological Site from Krabi, Southwestern Thailand*. University of Pennsylvania, The University Museum.

Ha Van Tan 1976. The Hoabinhian in the context of Vietnam. *Vietnamese Studies* 46:127-197.

HA Van Tan 1985. The Late Pleistocene climate in Southeast Asia: New data from Vietnam. *Modern Quaternary Research in Southeast Asia* 9:81-86.

Pookajorn, Surin 1991. Recent evidences of a Late Pleistocene to a Middle Holocene archaeological site at Moh Khiew Cave, Krabi province, Thailand. In *Récentes Recherches en Archéologie en Thaïlande*. Bangkok: Université Silpakorn, pp.166-171.

Quang Van Cay, Trinh Nang Chung, Ngo The Phong, Bui Van Tien 1981. *Than Sa: Nhung di tích của con người thời đại đồ đá* (Than Sa: Vestiges of Stone Age Men). Hanoi: Vien Bao Tang Lich Su.

The Science Museum of Bailian Cave Site 1987. 柳州白蓮洞洞穴科學博物館、北京自然博物館、廣西民族學院歷史系：〈1987年廣西柳州白蓮洞石器時代洞穴遺址發掘報告〉，《南方民族考古》1:143-160.

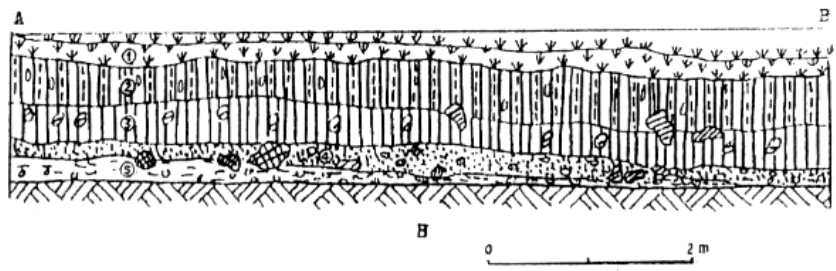
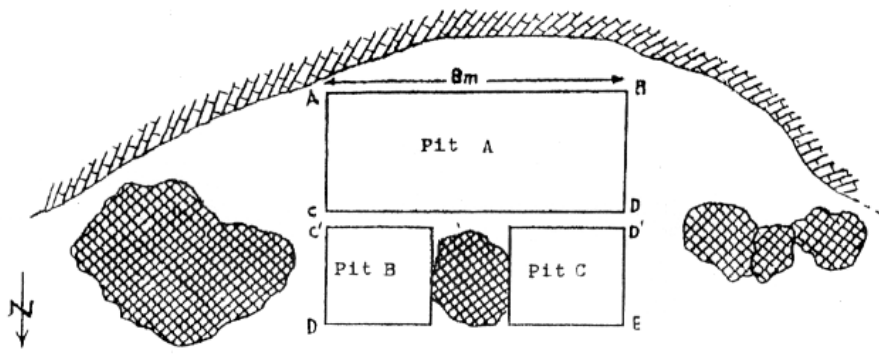


Fig. 1 A. Floorplan of the Nguom Rockshelter, showing areas of excavation.
 B. Cross section of Pit A.
 Nguom石窟示意图

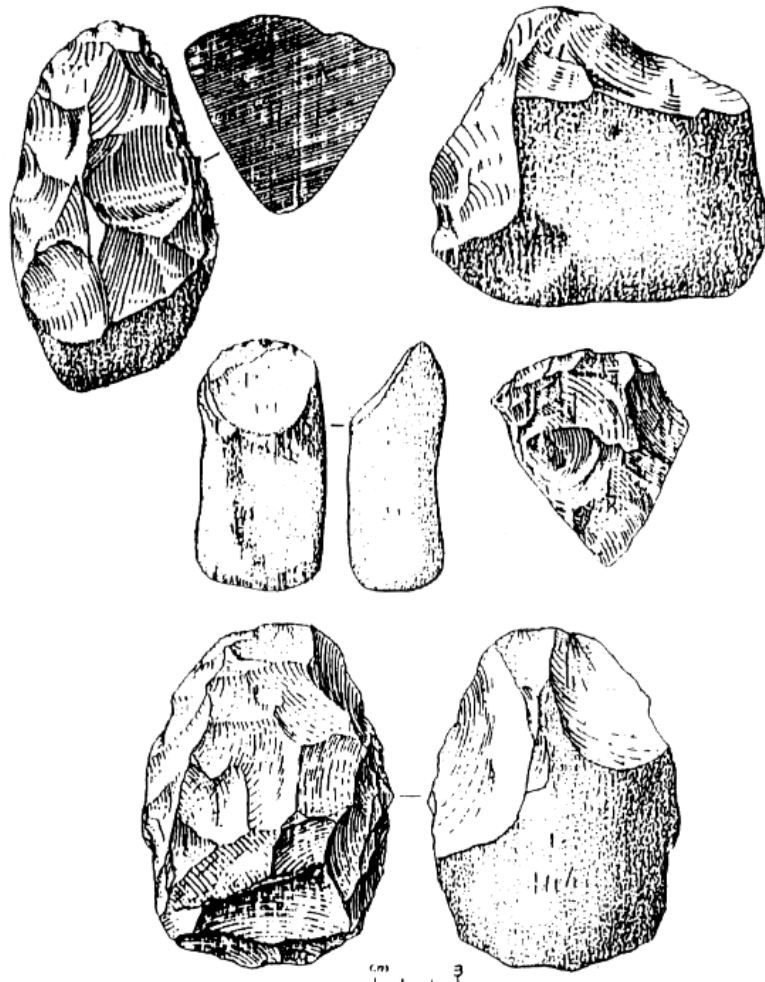


Fig. 2 Pebble tools from upper cultural level of the Nguom Rockshelter
石窟上層出土的石器

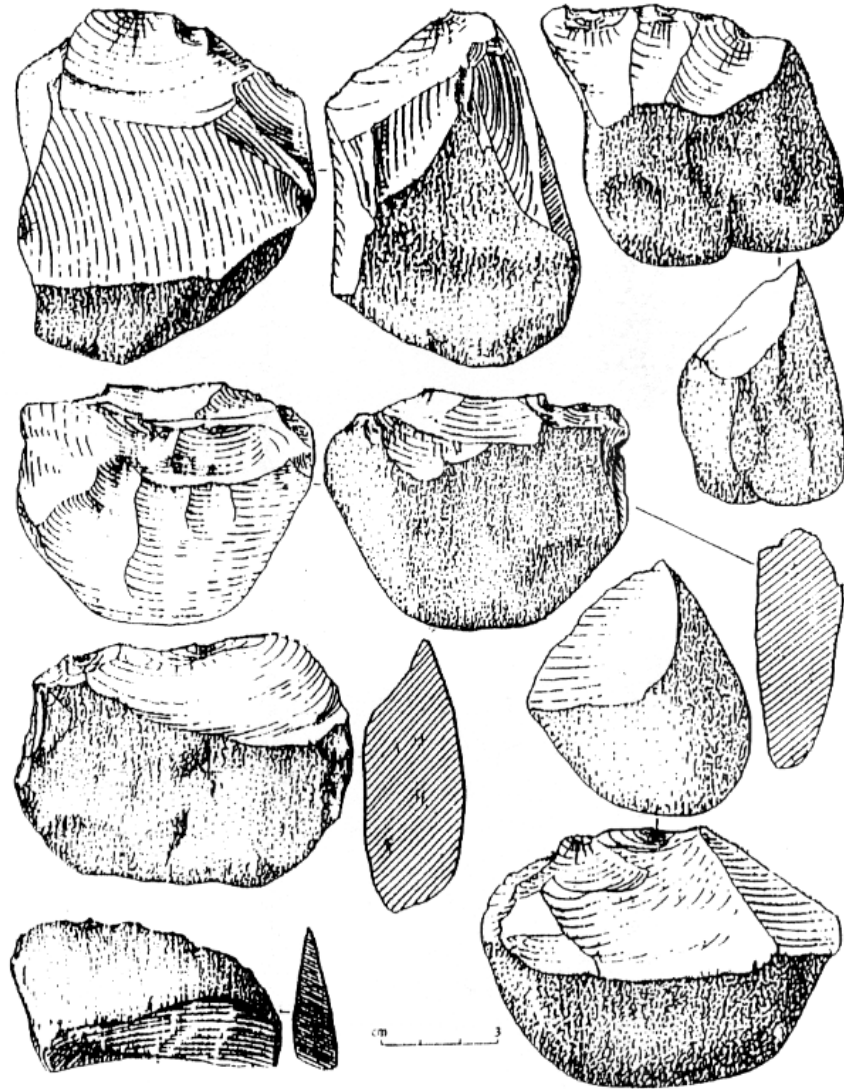


Fig. 3 Pebble tools from middle cultural level of the Nguom Rockshelter
石罅中層出土的石器

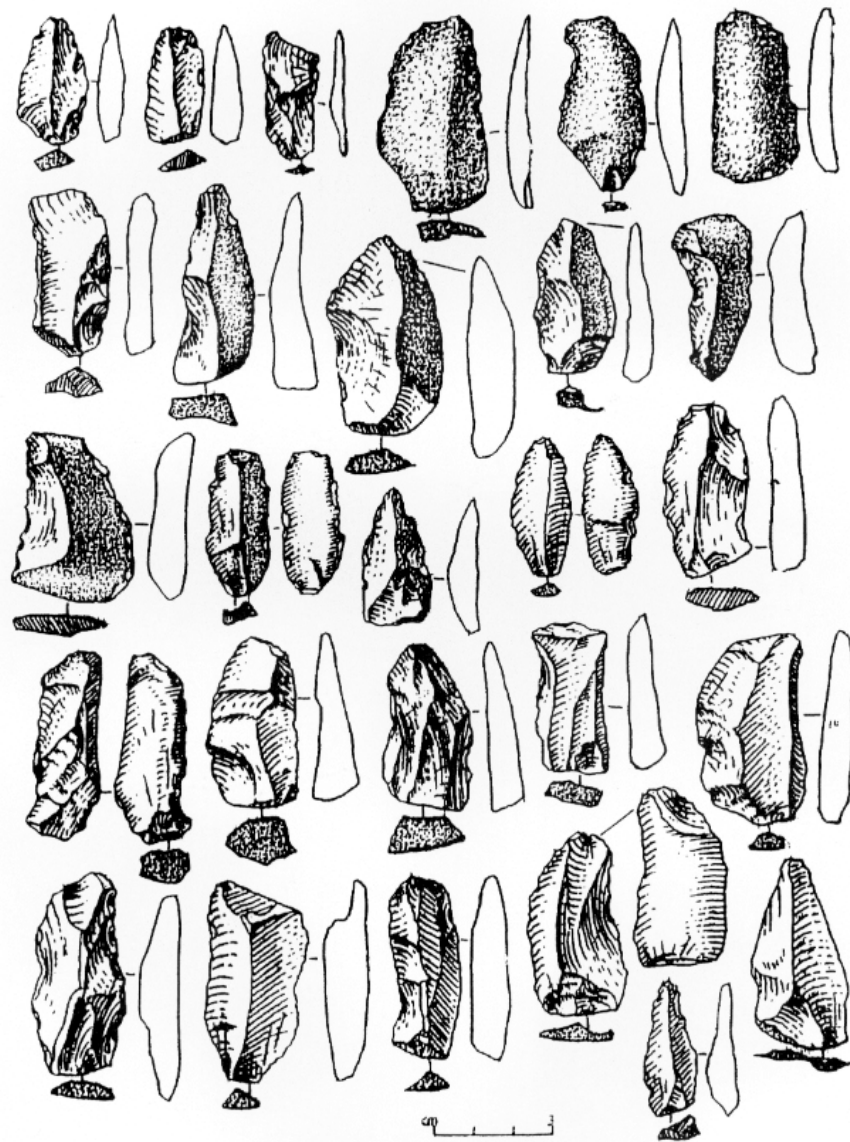


Fig. 4 Flake tools from lower cultural level of the Nguom Rockshelter
 石洞下層出土的石器

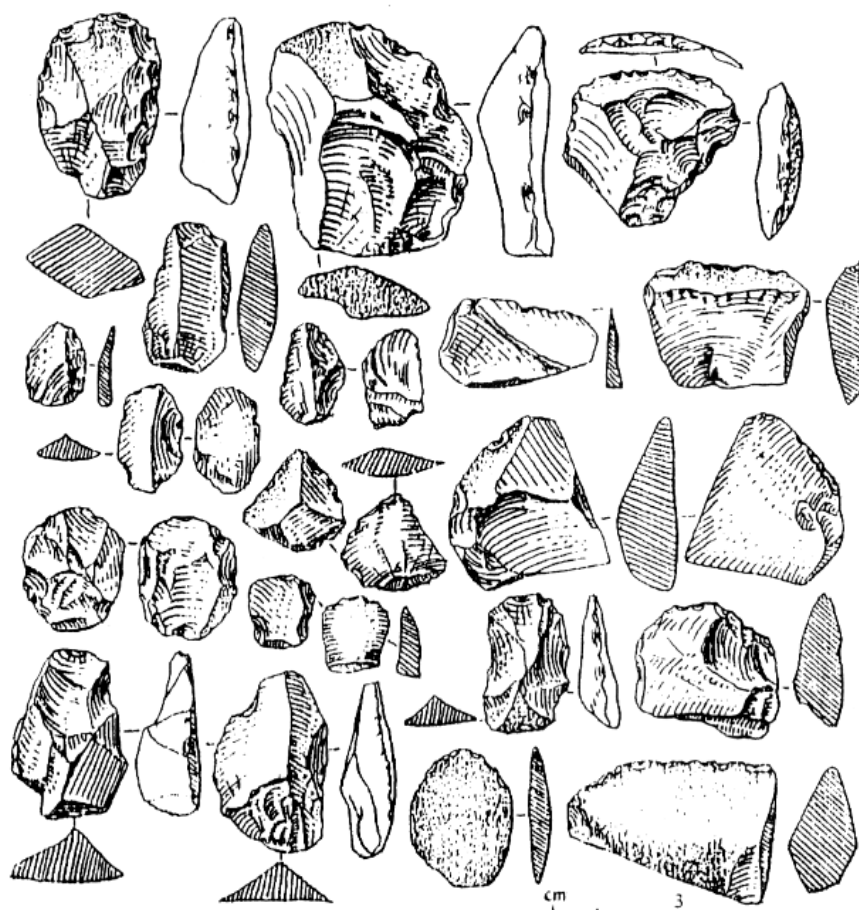


Fig. 5 Flake tools from lower cultural level of the Nguom Rockshelter
石洞下層出土的石器

Nguom石窟及東南亞大陸的 舊石器時代石片打製業

何文璽

【摘要】

Nguom石窟位於越南北部Bac Thai省，發掘工作於1981-82年間進行，挖掘面積為56平方米，約佔整個石窟面積三分之一。該處文化堆積可分五層：第一層為地面表層，現代擾土與史前遺物並存；第二層有淡水複足軟體動物的介殼、石器、動物與人類骸骨，並發現兩座墓葬遺存，其中一座為合葬墓；第三層有大量的介殼及蝸牛殼，一些猴、牛、豬、豪豬及豬獠等近代哺乳類動物的骸骨，石片和石製工具等；第四層亦見石片及石製工具；第五層有哺乳類動物骸骨及石製器具。

據堆積內容顯示，Nguom石窟遺存可分為三個階段。上文化層(第一層)的出土物包括以錘擊法單面打製的小型礫石工具，以斧類為代表；石片數量很少，且多未經加工；此文化層應屬和平文化範疇。中文化層(第三層)以礫石打製的砍砸器為代表，石片工具數量有增加。下文化層(第四及五層)的最大特色是出土物中有大量小型石片器，所用石片紋理幼細，刃部

邊沿有磨礪痕跡，器型則以刮削器及尖狀器為代表，亦見石礮器，但極少礫石器，且大部份石器皆經修飾。此文化層年代最早，距今至少23,000年。據遺存顯示，年代越晚，石片的應用越少，而礫石器則相對地增多。由此可推斷出越南地區的礫石文化之前必存在一個石片文化。

然而，Nguom石窟遺存所顯示的石片打製業並非孤立例子。泰國Lang Rongrien石窟遺存中亦有類似發現，從更新世文化層出土的石器中，有過半數是以石片加工製成。據中國廣西柳州白蓮洞遺存研究所得，其舊石器時代石片打製業的發展軌蹟與Nguom地區更加接近；其更新世晚期遺存中有大量以燧石片加工打製的石器，而新生世遺存壁間中亦見石片器，但仍以大型礫石製品居多。此發現反映出東南亞大陸各地的礫石文化之前，即更新世時代，的確存在著一個以打製石片為主的文化。