

The Cultures of Ethnic Groups in Northwest Vietnam in the Context of North Vietnam and South China Traditions and Transformations

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ABSTRACT

Northwest Vietnam is a culturally rich region, where the cultures of different ethnic groups converge and interact across different populations. This article dissects the Vietnamese ethnic groups within the context of North Vietnam and South China in relation to the development of indigenous populations and later integrated populations across 3 landscapes: the highlands, the midlands and the foothill valleys. Next, it examines the cultural characteristics of two main landscapes, namely foothill valleys and high mountains, whose agricultural modes are wet cultivation and dry cultivation with respect to their ethnic groups. Finally, it reveals the cultural similarities and differences among the populations, and concludes the trends in their modern alteration.

Keywords: Northwest Vietnam, cultural characteristics, landscapes, cultural convergence.

INTRODUCTION

THE NATURAL AND ENVIRONMENTAL CONDITIONS OF NORTHWEST VIETNAM

The concept of Northwest Vietnam has been defined differently among the community of researchers. To some, Northwest Vietnam consists of Hòa Bình, Sơn La, Lai Châu (and later Điện Biên after it had been split from Lai Châu), Lào Cai. Meanwhile the author has a different opinion: Northwest Vietnam is generally made of the two territories of Sơn La and Lai Châu (including Điện Biên); and several portions of Lào Cai, Yên Bái and Hòa Bình. According to the typology of geographer Lê Bá Thảo, Northwest Vietnam comprises the provinces of Lai Châu (including Điện Biên), Sơn La, Hòa Bình, the mountainous Thanh-Nghệ and parts of Lào Cai, Yên Bái, which serve as a “buffer zone” among Northwest and Northeast Vietnam. Here the author only defines Northwest Vietnam as consisting of Lai Châu, Sơn La, and Hòa Bình and parts of Lào Cai, Yên Bái.

Geographically, it can be said that Northwest Vietnam is formed through a complicated process and is one of the most rugged mountainous areas in Vietnam. In a general sense, it is “a land of high mountains and high grounds” (Lê Bá Thảo), a continuum of

mountains and rivers emanating from Yunnan (China) and stretching northwest-southeastward alongside the Red River Valley. The 180-km long Hoàng Liên Sơn archipelago runs across this region with Fanxipan being the highest mountain in Vietnam. Amongst the Hoàng Liên Sơn and western high grounds are basins. Stretching across Northwest Vietnam is Đà River, which is compared by Nguyễn Tuấn to a leafstalk while the Northwest is the leaf itself. It possesses huge potential for development and helps form the marvelous Northwest scenery with many wonders dotted with the settlements of different ethnic groups. As diverse as the natural conditions of the Northwest thanks to its sub-regions of varied geographic, pedological, climatic and hydrologic characteristics, its atmosphere is more continental than the Northeast and extreme weather conditions are frequent, such as snow and fog in winter and Foehn wind in summer raising the temperature to as high as 40⁰ Celsius. Its temperature range is fluctuating. Many areas such as Mộc Châu highland showcase 4 seasons in a day. According to geographers, Northwest Vietnam is not only rich in land resources, forests and flora and fauna, but also in underground resources including undiscovered assets, especially in remote and abrupt areas where traffic is difficult.

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For over a half century, the facades of Northwest Vietnam have been transformed substantially due to historical conditions, negatively affecting the ways natural resources, especially forest and land resources, are used.

Overall, Northwest Vietnam generates three distinct landscapes. First are the low basins and valleys, where reside the ethnic populations of the Việt-Mường, Tai-Kadai language groups; the mid lands or slopes where reside the ethnic populations of the Mon-Khmer language group; and the highlands or high mountains where live the ethnic populations of the Hmong-Mien and Tibeto-Burma. These landscapes themselves shape the traditions of many ethnic groups in adapting to their environment, resulting in different survival methods and cultural characteristics.

ETHNIC GROUPS AND POPULATION DISTRIBUTION

The process of development of ethnic groups in Northwest Vietnam is complicated and diverse. According to recent studies, traces of humans in pre-historic times can be found in the Northwest Territories through artifacts of the late Stone Age. The demographic structure in this region can be divided into 3 layers (excluding the Mường people of the Việt-Mường language group): first is the Mon-Khmer groups, who reside in a large area extending from North Vietnam to Laos; second is the ethnic populations of the Tai-Kada language group, with the Kada appearing at an earlier date than the Tai (save for White Tai associated with the ancient Tai); third is the Yao-Tibeto-Burma populations and in the recent decades the Hmong and Việt.

In general, regarding demographic distribution and landscapes, it can be said that the low valleys or mountain basins are where the Tai, Mường, Lào, and Lù reside, among which the Mường primarily live in the south area of Northwest Vietnam. The mid lands or slopes are where members of the Mon-Khmer language such as Khmu, Mảng, Kháng and XinhMun inhabit. The high lands are where ethnic groups of the Hmong-Mien and Tibeto-Burma live. According to the typologies of contemporary Vietnamese ethnographers and statistics, in the 6 border areas of North Vietnam there are primarily ethnic groups of the following language families: Việt-Mường (Việt and

Mường); Tai-Kadai (Tay, Tai, Nung, Giay, SánChay, Lào, Lự, Bouyei, Gelao, Lachi, etc.); Hmong-Mien (Miao-Yao), Hmong, Yao and PàThén); Tibeto-Burma (Hani, Lahu, Fula, Yi, Phunoi, Si La), and the Han group with many local populations. As mentioned above, in the cultural spheres of North Vietnam and South China the ethnic progression had soon begun at different places and scales. The main pattern of these processes is the migration of population from South China to Vietnam (and later a reverse migration) and throughout centuries, and even millenniums it has been reflected in the historical testimonies of several ethnic populations or local ethnic groups.

Nowadays, the ethnic groups of the Tai-Kadai language group in Vietnam (or the Zhuang-Dong in China) consist of 100 millions, who live in a large area in the Southeast continent of Asia. A portion of the Tai (excluding ancient Tai) and the Nùng, Giáy peoples still retain memories of their origin as they traverse across border areas. This is also recorded in ancient records and folk legends. As far as the legend of the Thai goes, their ancient homeland was where nine rivers congregate, which are named Nậm Tao (Red River), Nậm Ta (Đà River), Nậm Ma (Mó River), Nậm Công, Mậm U, Nậm Nua, Nậm Na and two other unidentified large rivers of China. This is also confirmed in the epic poet Quẩmtômường (Stories of the Mường) with regard to territories where their ancestors lived: Mường Ôm, Mường Ai, Mường Lũ, Mường Hồ, Mường Bò Tè, Mường Ốc, Mường Ác, Mường Tum Hoàng, and Mường Then. These areas dot the huge region stretching from Yunnan, China to Northwest Vietnam.

Currently, it can be said that the Tai in Lai Châu combines with the Tai in Yangsheng and Yunjiang (Yunnan, China) across the Red River to form a continuous Tai population in the east. According to ancient stories told by the black Tai, the two siblings Tạo Xuông, Tạo Ngần, descendants of their forefathers in old Tung Hoàng, took their clans across the Red River to Mường Min (Văn Chấn) and later into Mường Lò. After two or three of their generations had settled in Mường Lò and at the right bank of Thao River, under the leadership of Lò Lạng Chượng, the black Tai expanded their territories further to Northwest Vietnam and even Laos. Memories of their ancient lands are still intact and result from a process of cultural

contact. Historical memories are also common among ethnic groups of the Hmon-Mien language group (Miao-Yao). In this article I would not like to delve deeper into their origin but through historical memories would reveal the historical and cultural links between these ethnic groups as a result of borderline connections. The Hmong in Vietnam often tell of their ancestors that traversed to Vietnam for livelihood and to avoid the harsh oppression and exploitation by the Chinese court. The Hmong populations in Đồng Văn (Hà Giang) used to spread a song, which said: “Quý Châu is the home of our kin. When we were children that was where our Miao kinfolk lived. As an impoverished people, our people were illiterate so we had to migrate.”

Although the main disposition of the Vietnamese ethnic groups is comb-like dwelling, in Northwest Vietnam the populations are distributed unevenly among landscapes, especially in the highlands and midlands. This has been part of the ethnic progression (migration and territorial conflicts among ethnic groups) and the customs and lifestyles of ethnic groups. In 2009, the Lai Châu population was 320 thousand with the density of 35 people/km²; the ratios of Điện Biên, Sơn La and Hòa Bình were 459/48, 1007/71 and 820/175 respectively.

ECONOMIC, CULTURAL AND SOCIAL FEATURES

Because of the differences in their living environment and historical development, despite sharing common features of Northern mountainous inhabitants, the ethnic groups possess their own independent characteristics. The economic, cultural and social features of each landscape are described below.

First of all are the valleys. Based on the studies of valley culture we temporarily refer to it as *the culture of mountainous villages and hamlets* (bản mường). This model is unique to the Northern mountainous regions, and especially to the Mường, Tai, Tày and Tày-Nùng. A valley is created through geologic dynamics near high mountainous areas with plenty of rivers and streams. This is the most useful area for wet rice cultivation. As such, an economic characteristic of this area is wet rice fields combined with a complex system of irrigation, which is different from the way wet rice is cultured in the plains.

Associated with wet rice cultivation, the irrigation systems in the valleys are rather unique. There is the *mường, phai, lái, lin* (trench, dam, aqueduct, trough) system of the Tai or dyke, trench, and water tunnel system of the Mường. However, this system applies not only to fields but also milpas, diversifying the irrigation methods. In addition, the inhabitants engage in cattle-raising, handicraft, hunting, fishery, forestry and foraging. Within a geographical unit as large as a valley, the inhabitants merge into a mountain hamlet, and hamlets in turn combine to create villages (mường) with a strict hierarchy. Before, in the Mường region only a homogenous populace existed, but later other groups migrated there although the Tai and Mường populations still dominated. As they progressed by further exploring a valley, they created large fields and huge villages, for example, as the Tai saying goes ‘*first Thanh (Mường Thanh), second Lò (Mường Lò), third Tác (Mường Tác), and fourth Than (Mường Than)*’; the Mường says ‘*first Bi (Mường Bi), second Vang (Mường Vang), third Thàng (Mường Thàng), and fourth Động (Mường Động)*’. In this case, *mường* is equivalent to a field, a valley and certainly related to the role of local leaders. These features are what create the cultural characteristics of different ethnic groups in both tangible and intangible senses. The Mường have made a list of items for their valley culture: buffalos wearing bamboo tocsin, dogs climbing steps, yams, melientha wild vegetables, bitter bamboo shoots, honey, cooked rice, stilt houses, carried water, grilled pork chops, and days in and months out.

But alongside rice fields, milpas are used for cultivation and diverse forestry resources are gathered by the valleys’ inhabitants, diversifying their material and spiritual world.

As for the inhabitants of the midlands (primarily the Mon-Khmer), their main economic activities primarily involve milpa cultivation. Historically they were said to have created wet rice fields at an early time but due to historical difficulties, they had to shift to milpa farming. Despite being sufficiently experienced in milpa agriculture, especially with the system of slashing, burning, dibbling and sowing seeds, due to low productivity their livelihood has become impoverished and shifting cultivation is common. The Tai have declared *they rely on*

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water while the *Xá* rely on fire to reflect the agricultural differences among these two groups.

In the highlands, regardless of many challenging natural conditions, the inhabitants (the Hmong Yao and Tibeto-Burma) have devised many unique cultivation techniques that combine both dry and wet farming methods. They have created a rather grand system of terraced fields on the mountains.

A variety of cultural features exist among the Vietnamese Northwest ethnic groups. This can better be seen in their houses, costumes and cuisines; their viewpoints on familial and communal relations; their forms of social organization, etc.

However, acculturation between the ethnic groups has strongly developed, which can be clearly seen through their linguistic and economic activities. The dialects of a portion of the Mon-Khmer community, especially the sub-groups of Xinh Mun, La Ha, Ó đu, are not automatically influenced so strongly by the Tai language.

A system of values can be derived from the picture of regional and ethnic cultures of Northwest Vietnam:

- The attachment to one's birthplace and fatherland has become a tradition in the process of national protection and construction.
- Industriousness, creativity, and high communality are valued. The socio-cultural life is attached to and in harmony with nature, as reflected in high-quality handicraft products, suggesting the cultural creativity of each ethnic group.
- An abundant amount of folk knowledge created through successive generations with regard to production, livelihood, and environmental protection is a valuable asset for each of the ethnic groups, constituting its identity.
- The bonding between members of a family and a community creates a strong sense of cohesiveness in their life.
- National pride, high self-esteem, honesty, curiosity, trustfulness, and hospitality are prized.
- The folk cultural feats are diverse and rich.

- Each individual culture has a distinct regional flavor; acculturation among ethnic groups frequently occurs, boosting mutual understanding among regional and local ethnic groups.

CULTURAL INTERACTION AMONG ETHNIC GROUPS IN THE BORDER AREA – NATION AND ETHNIC GROUPS

The Northwest border area is vital in the process of development of Vietnam as a nation and a union of ethnic groups. This region can be said to be an extremely important intersection, if not most important for the Sino-Vietnam intercourse in a diachronic sense. This intercourse is first of all the result of historical and geographic conditions. Throughout millenniums, the border region is where the *dilemma* in international relations is found: on one hand are political and border *disputes*, on the other are economic and cultural interactions on a regular if not *permanent* basis. It is a fact.

Millenniums of history have seen not a few of contradictions at the border region but intercourse is still an inherent need for each ethnic group and each nation. The tradition of 'selling far siblings to buy near neighbors' is embedded in the Vietnamese perception of acculturation. This acculturation, which has been continuous in the history of Vietnam, derives from an internal desire of each ethnic group and is thus *non-mainstream*.

The border area has always been a sensitive issue in the cultural interactions and relations among ethnic groups, as the founder of Le dynasty in Vietnam put it: "Border defense has to be taken into strategic considerations; national protection must be coupled with a long-term vision" (Lê Lợi's lines). Yet this area has also served as a hub for cultural interaction and in the history of Vietnam, Sino-China cultural intercourse has played an important role in the process of integration.

The border area connecting North Vietnam and South China possesses many features as a result of interactions. First of all is its geo-cultural space as mentioned above. As far as interactions through this area are concerned, the Sino-Viet cultural intercourse has been primarily and in a macroscopic sense (ideologically, politically and linguistically) the product of the Việt and Han ethnicities. However, it is necessary to also include other socio-economic interactions

through commercial activities and the homeotic relations within a *supra-ethnicity* shaped by national and multi-national relations.

With regard to the Sino-Vietnam border area, these relations manifest in several features, because many ethnic groups not only share historical relations but also kinship ones, and till now they have managed to maintain their cultural identities despite seemingly asymmetrical political institutions.

In a large Sino-Vietnam border space, trade flows had occurred at a very early time through a system of border crossings and *unsanctioned* fairs that became essential. As a Vietnamese proverb goes:

A man has to know how to play *tốtôm* To drink Mạn Hảo tea and read Kiều story written in Nôm

This proves that trade relations via sea lines were created at an early time. It was not because of magic that at the end of 19th century, a French merchant named J. Duipuis opened a trade route across the Red river in order to connect Yunnan-Hanoi-Hải Phòng with the South China Sea, later expanding it to the Pacific Ocean; and the Điện Việt railway was created over a century ago. It can be argued that despite its position as the center of the Northern plains, Hanoi has been the intersection of many trade routes, with the Red River being an important historical incentive to this inclination.

This route can be said to have been created at a pre-modern time, but in fact, it was founded thousands of years ago as an international cultural route through such a particular border area. Not a few cultural similarities among the Vietnamese ethnic groups can be pointed out through border interactions, which I had not been able to cover in previous studies.

As far as cultural interaction in the Sino-Viet border area is concerned, language plays an important part in this process. As is already known, this area is where many ethnic groups from both countries assemble.

Therefore, bilingualism and multilingualism have become noticeably common. All the ethnic groups living and engaging in economic activities there are fully aware of these phenomena, which derive from the reality of economic-cultural exchanges. Beside conventional tongues, regional and ethnic

dialects play an important role and serve as a conduit for cultural exchanges.

In some recent decades, the Vietnam-China bilateral relations have been strengthened, further boosting interactions in this area and they will certainly become even more robust once the economic corridor is opened up. Therefore, common studies on this issue become absolutely necessary in light of the needed cooperation, interaction and mutual development between the two countries.

However, the impact of national policies has to be taken account when it comes to cross-border ethnic relations. Despite many similarities, Vietnamese and Chinese border policies are not entirely the same. Some studies have likened China's "border's enrichment, citizen's prosperity" policy with Vietnam's 135 Program, but in reality, the objectives of these two are different and connected to their respective national policies. Furthermore, uncertainties surrounding the Chinese ethnic relations in recent years, such as the issues of Xinjiang, Tibet, the Uyghurs, secession, and the migration of some ethnic groups, produce certain impact upon the Vietnamese ethnic groups.

Ethnic cultural relations in the Sino-Vietnam border area are specific and built on a long history through both official and unofficial channels, on whose transformation their intensity depends upon. The harmonious merging of these two channels paves the way for and facilitates the development of existing and potential cross-cultural relations. Moreover, cross-border cultural relations, cross-border marriage, cross-border migration, ethnic and religious issues, and external impact are becoming consistent in the context of globalization, which will undoubtedly affect the current ethnic relations in the Sino-Vietnam border area.

REFERENCE

- [1] Assoc. Prof. Dr. Lâm Bá Nam, University of Social Science and Humanities, Vietnam National University
- [2] Trần Văn Bình (editor-in-chief): *Văn hóa các dân tộc Tây Bắc thực trạng và những vấn đề đặt ra* (The cultures of northwest ethnic groups: the situation and relevant issues). Chính trị Quốc gia Publisher, Hanoi, 2004, p. 22.
- [3] Hoàng Hữu Bình: *Các tộc người ở miền núi phía Bắc Việt Nam và môi trường* (Ethnic groups in the mountainous areas of North

- Vietnam and environment). Khoa học xã hội Publisher, Hanoi, 1998, p. 23.
- [4] Lê Bá Thảo: *Thiên nhiên Việt Nam* (Vietnam's nature), Giáo dục Publisher (6th edition), 2008, p. 37, 77. In his work *Văn hóa vùng và phân vùng văn hóa ở Việt Nam* (Regional cultures and the regional distribution of cultures in Vietnam), Ngô Đức Thịnh defines one of the 7 cultural regions in Vietnam as consisting of Northwest Vietnam and the mountainous North Central region, integrating a geo-cultural perspective as in Lê Bá Thảo's typology. He also divides this cultural region into two sub-regions, the Northwest and the mountainous North Central. See Ibid, Youth Publisher, HCM City, 2004. According to the map of the Socialist Republic of Vietnam, Bản đồ Publisher, 2008, Northwest Vietnam comprises Lai Châu, Điện Biên, Sơn La, and Hòa Bình.
- [5] The complexity and diversity of natural conditions in the Northwest are also reflected in its sub-regions. Therefore traffic in this region is hindered by eclectic terrains and rough rivers and mountains. On the other hand, it provides the region with great potential as it can be exploited and conquered for the sake of national development since 1975 with the Hòa Bình hydropower plant being the prime example.
- [6] Due to unsustainable food consumption and slash and burn agriculture, 15 hectares of land forests were used to develop 6 hectares of milpa, 5 hectares of cassava plantation, and 3.5 hectares of corn plantation. Not to mention other organized phenomena such as immigration, the construction of public works (hydropower plants, irrigation structures, forest fires, and the exploitation of forestry resources).
- [7] It is not convenient here to go deeper into the complicated process of ethnic groups forming in this region.
- [8] According to Prof. Phạm Hồng Quý, China's Guangxi Ethnography University, the China-Vietnam borderline is 1.000km long and a host to many ethnic groups, which according to the demographic distribution of China can be split into 13 groups: Zhuang, Tai, Bouyei, Miao, Yao, Han, Di, Hani, Lahu, Gelao, Kinh, Hui, Pu Lang. The Mang group is unidentified. According to the Vietnamese typology there are 26 groups: Kinh (Việt), Tày, Nùng, Tai, Sán Chay, Giáy, Lự, Bouyei, Hmong (Miao), Yao, Pa Then, Lahu, Qabiao, Hani, Fula, Lachi, Yi, Mảng, Phunoi, Sĩ La, Khmu, Gelao, Hoa (Han), Ngái, Sán Diu, Chams) (some groups such as the Chams have recently appeared – LBN).
- [9] Other noteworthy local sub-groups are: Tày (Thổ, Ngạn, Phén, Thu Lao, Pa Dí) residing in all the border provinces; Tai: Tai Dam and Tai Kao in Lai Châu, Lào Cai; Nùng: Xuông, Giang, Nùng An, Nùng Phần Slinh, Nùng Lôi, Nùng Quý, Nùng Đín, etc. in all the border provinces; Giáy (Nhắng, Dắng, etc.) in Lào Cai, Lai Châu, Hà Giang; Lự (Lừ, Nhuôn) in Lai Châu; Hmong (Green, Black, Hoa).
- [10] From Nguyễn Chí Huyền-Hoàng Hoa Toàn-Lương Văn Bảo: *Nguồn gốc lịch sử người vùng biên giới phía Bắc Việt Nam* (The historical origins of ethnic groups in the border areas of North Vietnam, Ibid, p. 179).
- [11] For example, the Hmong came to Vietnam at a later time and thus usually lived in areas of high terrain where cold climate and opium poppy cultivation were allowed. Some Khmer inhabitants originally lived in Northwest Vietnam, but as soon as the large Tai population began to settle in the valleys there, they moved to the midlands for better cultivation. Their memories are also mentioned in their disputes with the Tai and the Tai in return are accustomed to conducting the Ghost Ritual during their *Xên bản* festivals.
- [12] I have written about this elsewhere. See Lâm Bá Nam: *Văn hóa bản mường – văn hóa thung lũng* (Cultures of the mountainous and valley peoples).
- [13] When studying valleys and the wet rice cultivation of the Mường, we hypothesized that this system dates back to ancient Vietnam or the times of the Việt Mường, who lived at the foothills in Ba Vì and adjacent areas. The Vietnamese later upgraded this system and operated it in the Red River Delta.
- [14] This hierarchy is called *Cun* or *lang đạo* by the Mường and *án nha* or *phià to* by the Tai – the village rulers hold tremendous power in both sovereign and spiritual senses, and control their citizens through selected ownership and land allocation: 'A village must have a *tạo* (ruler) as a field must have a system of trenches' as the Tai said, and 'to be the child of your parents when young and of your *cun* and *lang* when grown up' as the Mường said.
- [15] Harnessing natural fortunes is one of the traditional economic features of the ethnic groups in mountainous areas in general, which I have to leave aside for the moment. See also: Lê Ngọc Thắng-Lâm Bá Nam: *Cây trồng trong đời sống người Thái – nghiên cứu trường hợp người Thái ở bản Noong Đức, xã Chiềng Sinh, Sơn La* (Crops in the livelihood of the Tai – the cases of Tai people at Noong Đức village, Chiềng Sinh commune, Sơn La). Journal of Ethnology 4th issue-1986.

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- [16] On this issue see also LêNgọc Thăng-LâmBá Nam, *Bản sắc văn hóa các dân tộc Việt Nam* (The cultural characteristics of Vietnamese ethnicities), Văn hóa Dân tộc Publisher, Hanoi, 1990.
- [17] The cultivation methods of the inhabitants in highlands and midlands can be illustrious here. An objective standpoint has to be made on the dibbling and sowing seeds or slash and burn techniques, which previous studies have already provided. See further G. Condominas: *We have eaten the forest...* and many other studies on local or ethnic knowledge.
- [18] Card game using a deck of 120 cards and played by five people Duipuis was a merchant that started his career in Hankou in 1861 as a trader, and later opened up the Hankou-NinhHải (currently HảiPhong, Vietnam) sea route and transformed the sea of HảiPhong into a transitional destination for his goods. He used this route to supply weapons for the French forces in their occupation of HảiPhong at the end of the 19th century. See also: Gilles Raffi, "Hảiphong, Origines, Conditions et Modalités du Développement jusqu'à 1921", Doctoral Thesis, Paris, 1994.

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