

Regeneration and Preservation Practice on Dong Minority Gaobu Village of Hunan, China

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Abstract. The Dong minority communities are today, in a similar condition of many other Chinese rural settlements, deeply affected by the phenomenon of “Village Hollowing” and “Urbanization” over the last 20 years. This unprecedented exodus of rural populations to expanding urban areas, has resulted in almost vacant villages inhabited by struggling communities of mostly elderly people and children, the social and economic system has changed dramatically among Dong communities. Using the Dong Minority village of Gaobu, located along the Pingtan River in Hunan Province, China, as a pilot project, is a fully operating agricultural community with a population of over 2500 inhabitants. It has many typical architectural heritages mainly composed by 6 Drum-Towers, 2 Wind-Rain Bridges as well as other Han nationality’s buildings, a reflection of its rich cultural heritage and importance in the region.

In July, 2017, a united summer workshop held in Gaobu village, was assembled and organized by school of architecture, Guangzhou University, Chinese University of Hong Kong, Hunan University, South China University of Technology and Polytechnic University of Milan. 56 master students, PhD students and Professors attended the workshop.

The aim of the workshop is to develop an alternative and sustainable strategy to regenerate and preserve Dong Minority villages in China via architectural prototype and planning proposal, that respond to contemporary rural developments and foster minimum impact to the existing heritage of the village.

Finally, a new collective and co-operative system, incorporating multiple function was offered. Meanwhile, an adaptive planning strategy that based on the needs of the community was proposed. Concentrating on the special link between dynamic heritage and villagers will provide a better rural living for the Dong community in the future.

1. Introduction

To discuss China's rural settlements are impossible to escape the unprecedented urban development in China. In recent years, with the rapid social and economic development as well as the acceleration of urbanization, the social lifestyles in China traditional settlements have dramatically changed and the living standards have also risen sharply. Thus, the basis for the emergence and development of rural settlements has been greatly impacted in aspects such as social mechanisms, cultural contexts and architecture technology, and some problems emerged in the process of development:

The first problem is the gradual migration of rural population to urban settlements, which will result in the decline or even dilapidation of traditional settlements.

By the end of 2011, the urbanization rate in China had exceeded 50% and increased rapidly at 1-2% annually. According to the data released by the National Bureau of Statistics of China, the urbanization rate in China was 53.73% in 2013 and 57.35% in 2016[1]; the resident population in rural areas was 589.73 million, a decrease of 13.73 million from the previous year. Messmer and Chuang's magnum opus [2], "China's Vanishing Worlds," describes in a frank manner the status of rural China over 7 years and the consequences of modernization policies on the rural environment. It states that "in the next 10 years, it is estimated that there will be 280 million China rural population, who are attracted by city jobs and various opportunities, turning into urban residents." [3]

Secondly, some settlements gradually transformed into central towns and cities, in which the spatial evolution of traditional villages brought by industrial changes and population agglomeration occurs [4]. The old forms and structures of traditional settlements have been gradually dismantled, while the reconstructed forms face many problems such as land waste, loss of features, environmental destruction, construction chaos and poor architectural value of new buildings, etc.

Third, changes in family composition and lifestyles have led to the changes in the spatial use, the construction techniques and materials selection of traditional buildings, which have resulted in the loss of the original landscape attributes of traditional settlements and threatened the survival and sustainability of vernacular settlement heritage.

As can be seen from the above phenomena, the rural settlements are faced with an endangered, attenuating, mutating and disappearing condition.

The Dong community, like many other Chinese settlements, is under the profound influence of the "village hollowing" that is caused by the process of urbanization. The migration of this unprecedented rural population into the expanding urban areas has resulted in almost vacant villages the retention of only the elderly and children.

2. Dong minority settlements

The Dong ethnic minority people are one of China's 56 ethnic groups, who live in the region delimited by southwest Hunan, southeast Guizhou and north Guangxi. With a population of almost three million and a long history of more than 1,000 years dating back to the Tang Dynasty. Dong people live in a mountainous area, where the landscape of rice terraces, bamboo forests, and tea plantations is still predominantly intact. Their architecture is intrinsically connected with the land and the topography, generating a harmonious relationship between nature and man-made structures (Figure 1). In 2006, 27 Dong villages applied for UNESCO world heritage status, and in 2013 were granted tentative recognition. The report states¹: "Dong Villages are a perfect integration of humanity and nature, and they reflect the Dong peoples' principle of adapting themselves to nature for survival and development. The Dong Villages are not only an organically evolving landscape but also a continuing landscape. It has retained its positive social role in the contemporary society connecting with a traditional lifestyle, is a testimony to the evolution and development history of the Dong Nationality." Several common points and problems predominated all the Dong minority settlements:

2.1. Cluster inhabitation

The Dong minority settlement is a collection of densely populated inhabitations with small centres, showing a remarkable feature of internal contraction. The "clustered" centres of Dong settlements mainly are Drum Towers, including other public buildings like the Drum Tower plaza, and a drama stage. It is the centre of the order in this settlement and the source of the impetus for generating a cooperative settlement community. For the sake of this centre, the settlement features with clusters and centralization.

¹ Refer to the website: <http://whc.unesco.org/en/tentativelists/5813>.

2.2. *Collective society*

The Dong's settlement has reflected explicitly the characteristics that settlement is a combination of lands and production mode, which there are buildings owned by all, like bridges and the gate, and buildings belonging to inner groups (family), like Drum Towers, Sa-Altars and Drama stages. As a symbol of the clan, Drum Tower has signified the kinship in the settlement and family identity in a materialized way. Besides, the collective could be found in the residential buildings, i.e. the Ganlan wooden house in the two-story front porch. The semi-open space in this residential building forms a collective space system together with the public buildings such as Drum Tower, Wind-Rain Bridge, and Kuan Plaza.

2.3. *Living heritage*

In Xing Ruan's book "Allegorical Architecture: Living Myth and Architectonics in Southern China" He outlines the fundamental relationship between architecture and the identity of the Dong community. "It is architecture that 'speaks' to them, and it is an architecture that is primarily for its inhabitants. The built world indeed is the extension of their body and mind; their experience with architecture is figurative, and their understanding of the built world is allegorical." [5] At present, the family unit and social ritual still plays a vital role in the Dong community. Dong society is organized around the concept of Kuan, which is a form of hierarchical social organization, with a common ancestor or elder at its core. Daily life and social ritual develops through the collective space, functioning as a type of social unit (Figure 2), where important or everyday events such as public gatherings, debates, official announcements, chatting as well as resting are all held.



Figure 1. Harmonious coexist with the nature (shot by Shiruo Wang)



Figure 2. Social space in the Drum Tower(shot by Ling Cai)

Inspired by Michel de Certeau's seminal work "The Practice of Everyday Life" which considers the modes of social behaviour by individuals and groups, including resistance to new "imposed" patterns of behaviour[6], as critical in the production of a collective sense of culture we borrow the idea of resistance theorized by Certeau to research the practical procedures of how the Dong Minority community could reactivate its long lasting social customs so that they would become relevant in a contemporary setting.

3. Prototype and its practice

After several field trips to the Tongdao County in Hunan Province, both local community and the authorities expressed a keen interest in the research and introduce to the village of Gaobu (Figure 3) as an example a village in need of regeneration. Gaobu village is located along the Pingtan River in Hunan, with a population of over 2500 inhabitants. It has 6 Drum-Towers, 2 Wind-Rain Bridges as well as other Han nationality's buildings, a reflection of its rich cultural heritage and importance in the region. Gaobu and other 5 villages (Yanglan, Pingtan, Hengling, Yutou, Zhongbu) along the Pingtan River basin, are included into the UNESCO world heritage tentative list in 2012.

The project undertaken in Gaobu village is not the succession of study on Dong architecture history or technics, but to retrospect and record the village history and status, to explore the specific relationship between architecture and collective society through investigation and practice. The methodology is based on an alternative regeneration approach of "Adaptive Re-use" [7] and about the compatible as well as reversible relationship between new and old, engaging and transforming the Dong Minority's existing rich social heritage in order to reconsider and enhance collective life and work experience which will provide a better rural living for the whole Dong community for years to come.



Figure 3. Gaobu village(shot by Binxin Chen)

3.1. The knowledge of prototype

The notion of the "prototype" is here inspired by the work of the architect Cedric Price who in his urban project of 1997 entitled "Magnet" ²proposed a series of temporary projects that would provide public amenities and stimulate new patterns of public engagement in the city. Price's theoretical position relies on "magnets" being facilities with inherent possibilities of change, growth, and adaptability compared to buildings. Price argues that architects often see buildings as a cure for social problems, a role he believes they are singularly ill-suited to, as they are: too slow, too solid and too late. Furthermore, the architectural prototype is here conceived, as opposed to the prevailing use of the term in the architectural field where it is commonly associated with digital fabrication, as a context-sensitive designed project that serves as a working model for the implementation in numerous analogous situations. The prototype

² Refer to the website: <http://www.architecturefoundation.org.uk/programme/1997/magnet-cedric-price>

as a paradigm encourages a rethinking of existing ecosystems in order to produce and incorporate novel expressions as well as new performances.

As mentioned above, Drum-tower, Wind-rain bridge, Sa-altar are the main architectural elements formed the social space, in addition to the street, well, Han temple could form a collective space through the cooperation between nature border (hills and brooklet) and architectures (Figure 4). Therefore, Prototype has been always existed and played a dominating role in the attribute of space, which is a core element to stimulate the specific area to a vivid social space.

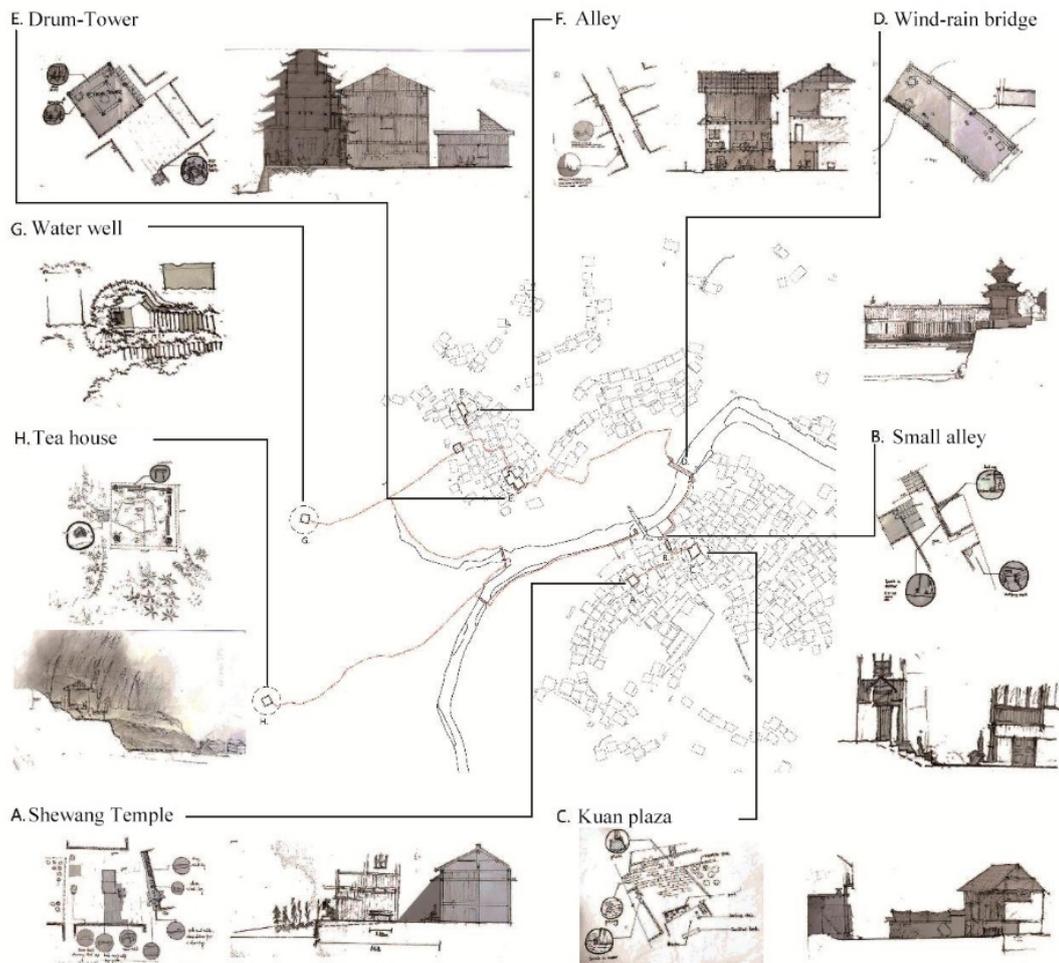


Figure 4. Social space in Gaobu village (Drawn by Certina Chan, re-edited by Shiruo Wang)

3.2. Practice process

Based on the knowledge of Architectural prototype, a united workshop was held in Gaobu village, consisted by 56 master students, PhD students and Professors from Guangzhou University, Chinese University of Hong Kong, Hunan University, South China University of Technology and Polytechnic University of Milan. The working procedure is structured into three independent but related phases:

First Step: Observation and recording

Gaobu Village, as well as the Dong traditional settlements represented by it, are characterized by settlement traditions and diversified social spaces. They form a system that runs through life of all the villagers. Research and recording of social space have been the starting point since the very beginning, and each group has carefully observed and recorded the social space and daily life that are mostly related with the villagers' daily activities (Figure 5). which could help groups to conduct in-depth studies on topics that are most closely related to the daily activities of villagers.

Second Step: Analysis and positioning

On the basis of observation records, this paper systematically analyses the meanings of the social and cultural life of the Dong settlements included in each topic; at the same time, the operational mechanism of the topic in villagers' everyday life and the problems currently faced with were determined through discussion with the villagers. After full consultation with the villagers, each group separately identified and located the sites that play a role in the current or future operation of villagers' daily life. In the choices of these 9 sites, the daily life and real needs of Gaobu village have been fully considered and respected, especially the important position of public communication in the Dong culture (Figure 6). Besides, it was also used as the basis for preserving or stimulating the social activities of villagers. Nine topics were identified by groups, each of who combined its own concerns with the selected site and the design direction.

Third Step: Design and construction

This step emphasizes the solutions given to existing problems through the design and construction process (Figure 7). Each design is based on realistic sites, echoing with villagers' daily public behaviours and their respective themes. It also stimulates more participation in activities by giving or adjusting certain elements of these social spaces in various ways, so as to improve and drive some of the dilapidated spaces to regain their vitality until the entire settlement is affected. In the design process, the construction technology and the production process of these designs by making models or constructing structural nodes are necessary considered.

Finally, the construction of "Prototype" was completed by team members, local carpenters and villagers. During the process of implementation, discussions and cooperation with local carpenters and villagers were undertaken to adjust the design until the work was completed (Figure 8).

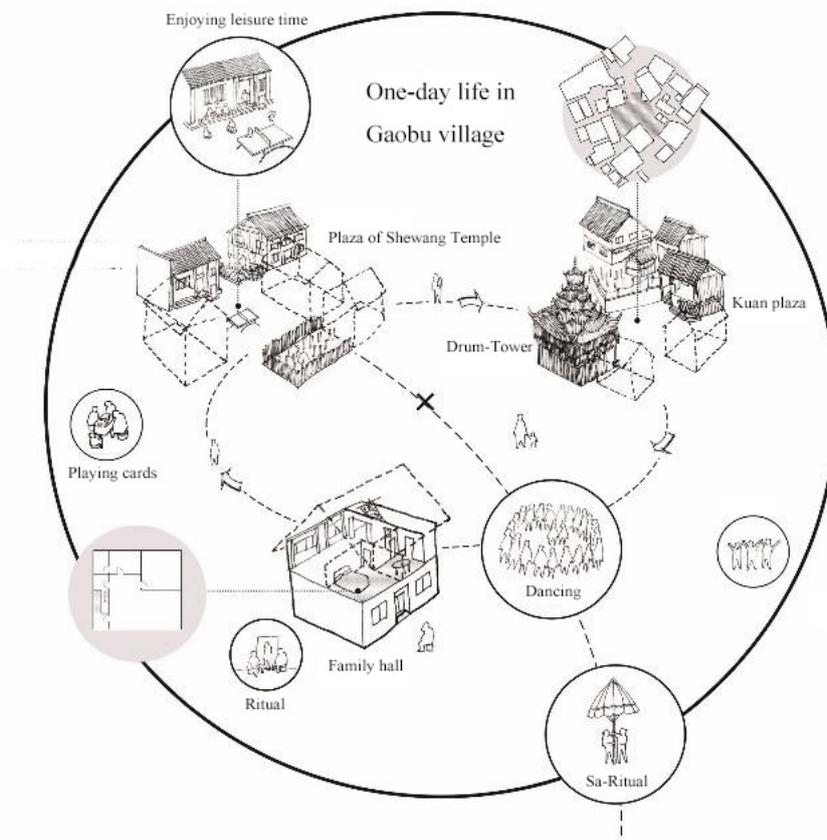


Figure 5. One-day life in Gaobu village(Drawn by Certina Chan, re-edited by Shiruo Wang)

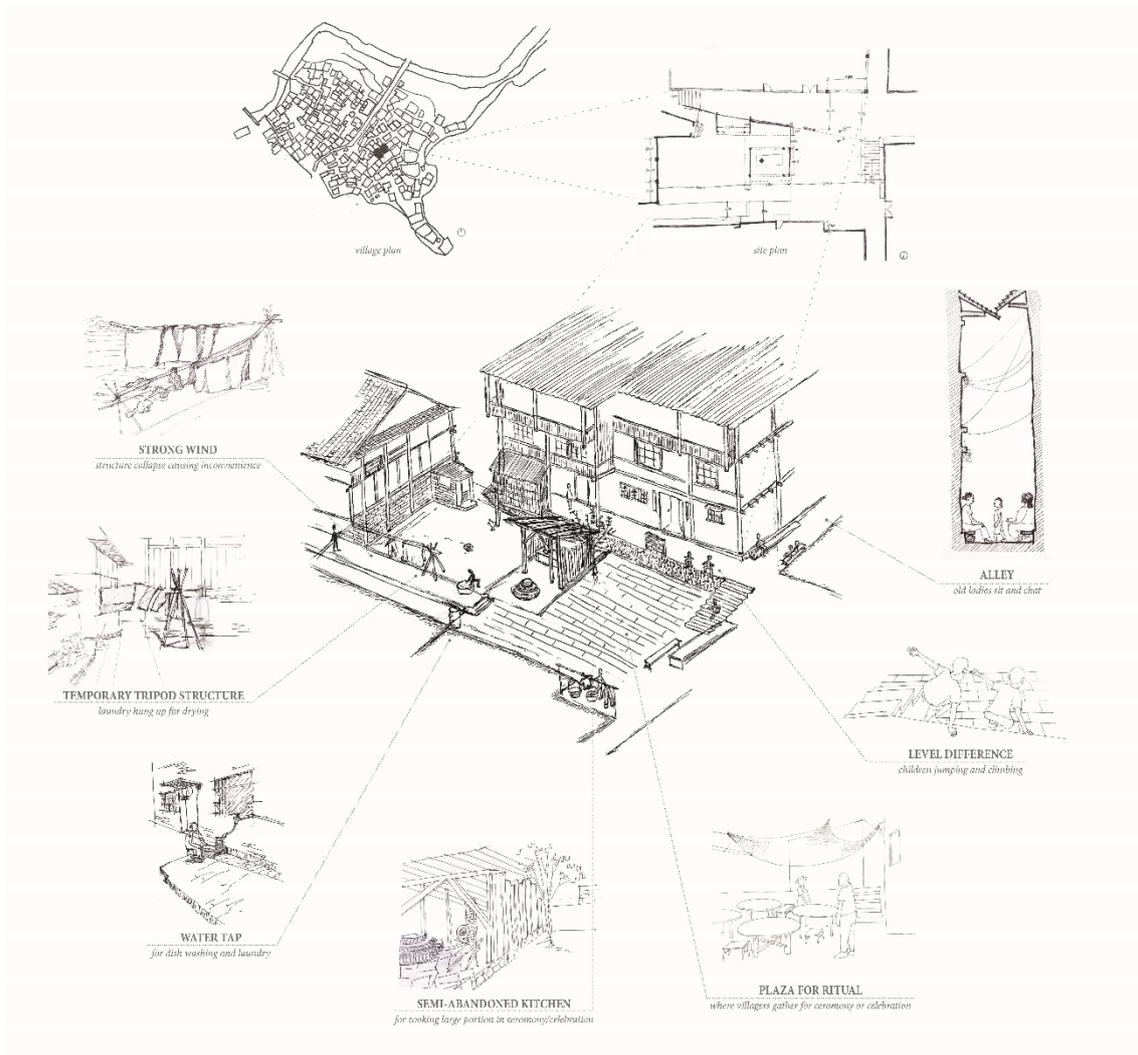


Figure 6. Graphical site analysis (Drawn by Certina Chan, re-edited by Shiruo Wang)



Figure 7. "Prototype" is under construction by the members of workshop (Shot by Binxin Chen)

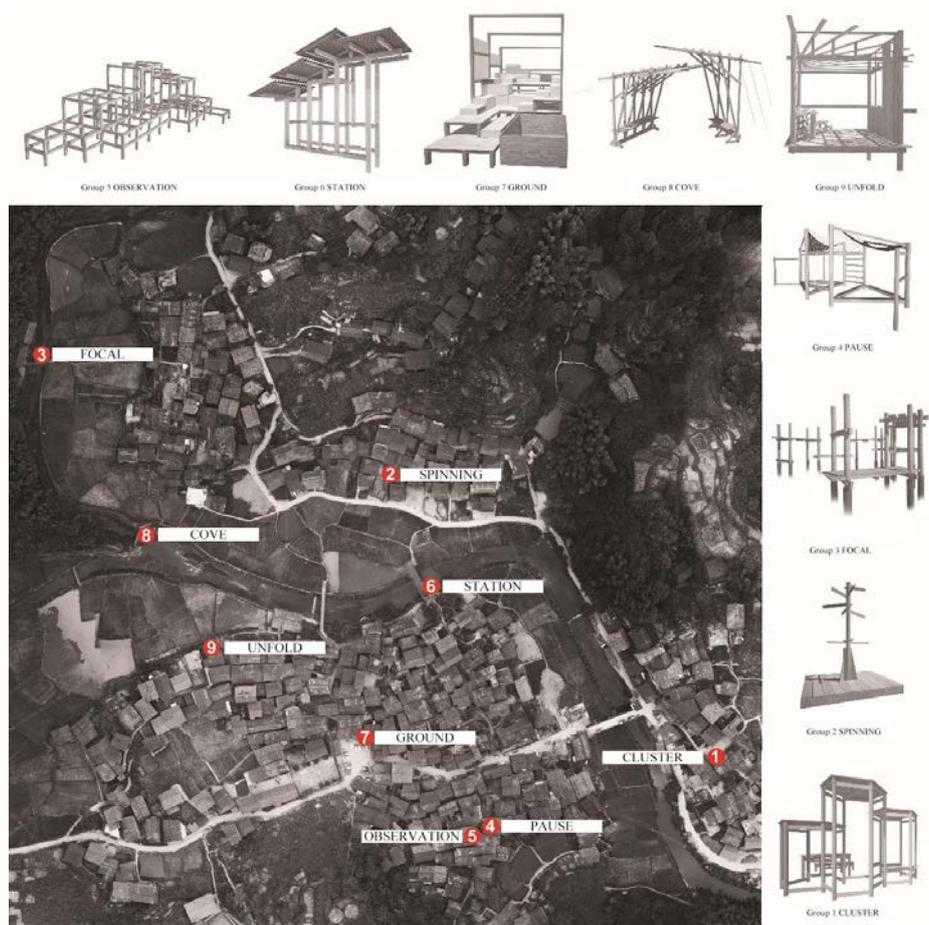


Figure 8. Completed works and location of 9 groups mapped in Gaobu village

4. Adaptive proposal on preservation

The case of Gaobu village reflects the circumstance among most Dong communities: features vanishing, infrastructure deficiency, construction chaos (Figure 9), etc. In addition to the architectural prototype, the preservation proposal is regarded as a profound and adaptive methodology to echo the realistic problems occur in village. Following the “tentative recognition” granted by UNESCO to a number of Dong Minority villages along the Pingtan River basin, lots of local authorities have swiftly embarked on a policy of employing local customs as a symbolic asset in the development of a new tourist economy with potentially catastrophic effects. Entire villages cease to be operational economic and social entities reliant on agriculture and the environment, falling victim to a “theme park” mentality that produces a quasi-state of cultural taxidermy. The physical space change and future development is in an urgent need. The general proposal could be implemented according to master planning:

Table 1. General proposal on architectural space [8]

Architectural space	Preservation and development objective	Possible alterations and suggestions
Settlements	Remain Drum Tower as the centre of village layout	Road or other large-scaled infrastructure may disorder the centripetal layout, making a detour or rebuild a new zone to solve the conflict
	Remain the space scale of traditional buildings	Keep the new constructions no more than 3-storey; the facade should remain the traditional feature.

	Regardless the transformed or new constructions ought to remain the Dong features, the dominating construction materials are fir wood, brick or masonry regard as complementary materials	Brick-timber construction almost as the inevitable future, however the Dong architectural features should be always respected.
Dwellings	Remain “front porch” space	Remain “front porch” space
	Remain “fire place”	With the living condition altered, “fire place” loss the original sacred function and replace by main hall. The “fire place” should be traced at least in old buildings
	Other functional space should remain original spatial order	Modern facilities should also be respect the spatial scale and order
Drum Towers	Remain the original form	Regular monitoring and maintenance
	Remain the vivid social activities	Traditional folk custom activities should be developed for the purpose of enhancing self-identification
Sa-altar	Remain the original form	Regular worship ceremony should be remained and developed
Wind-rain bridge and Village gate	Remain the original form and function	Make it more symbolic and encourage the folk custom activities
Barn and rice frame	Remain the original form	Barn and rice frame is vanishing gradually, the typical examples should be remained
“Kuan” plaza	Remain the space for social activities	Organizing more social activities to promote the utilization of space

The target audience of the proposal is not only local authorities, conservation architects, construction contractors but also the local villagers. The top-down management may improve the living standards of the existing residents, maintenance of buildings as well as the traditional fabric among the villages. What the most vital issue, in any case, is raise the awareness and improve the self-identification of the local villages on traditional buildings.



Figure 9. Construction chaos, Pingtan village (shot by Xiaotie Chen)

5. Conclusion

The practice workshop held in Gaobu village talked about Dong minority settlements and in a similar manner to many other rural Chinese villages today face a challenge that how to survive and how the traditions adapted to the mainstream society; and the problem how rural settlements regenerate and preserve in an appropriate way.

The inherent social and space structure in rural settlements plays a crucial role in propelling social life, it would be rather adapted to the current society than replacing it. Based on the characteristics and current condition of Dong society, a new architectural methodology was come up with, the architectural prototype. It covered up the deficiency of regeneration policy in national and regional level, which the regeneration policy, in most extent, is reliant on promoting the tourism.

With the commercial strike occurs among the Dong communities, in void of failing victim to a lifeless cultural taxidermy, supporting with the preservation proposal which not only adapt the mainstream society but also respect the traditional fabric, is quite necessary. In the following research, the sustainable and adaptive guideline on Dong drum towers and potential other buildings is under commencing. The next collaboration in Gabou village among the universities will be the restoration and reuse project of an abandoned but typical Dong dwelling. Intervention made by the students supported by skilled professors and local carpenters.

Finally, the research will contribute towards the future development of rural Dong minority villages and potentially other minority villages in China, by producing an incremental adaptive and preservation planning strategy, which aims to lead to a long-term integration plan for the whole Dong community.

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