

VERNACULAR ARCHITECTURE

Architecture Vernaculaire

Arquitectura Vernácula



MONUMENTS AND SITES
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V

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Front Cover and p. 4: Views of Taos Pueblo, New Mexico

(photo: Christoph Machat)

Back Cover: Indian house in Acoma, New Mexico

(photo: Christoph Machat)

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Preface

Volume V of the series of "Monuments and Sites" combines a number of contributions which members of the International Scientific Committee on Vernacular Architecture (CIAV) prepared for the conference in Morelia on the occasion of the 12th General Assembly of ICOMOS. At the same time this publication complies with a resolution made at the annual CIAV meeting in August 1998 in Santo Domingo: When the Charter on the Built Vernacular Heritage was completed after years of preparation, it was decided that this Charter, finally adopted in 1999 during the General Assembly in Guadalajara/Mexico, should be illustrated by a collection of examples from all over the world. In this present volume mostly examples of rural houses and farm buildings are introduced. Thus with the topic of the „traditional house“ a section of the vernacular has been chosen which was also the focus of the International Day for Monuments and Sites in 2001, namely the architecture of the villages in danger of disappearing worldwide.

It is to be hoped that this publication will be able to help save the endangered values of vernacular architecture, which according to the latest *Heritage at Risk Report 2001/2002* is under particular pressure. As part of our cultural heritage vernacular architecture plays a role which should not be underestimated, and particularly in conjunction with efforts to protect entire cultural

landscapes this is becoming increasingly important. At the same time we need to be aware that the wide range of vernacular architecture has only been documented in a few countries, thus remaining without any protection against decay and a devastating urge for renewal in most regions of the world. Nearly everywhere regional building materials and traditional skills are being lost. Besides, the topic of vernacular architecture, comprising not only traditional settlements such as the various "house landscapes", has not yet been exhaustively researched. It can even include present-day makeshift houses in the gigantic outskirts of some big cities. Vernacular architecture could also play a significant role in the future for sustainable development due to the reuse of materials and the ever-repetitive processes of repair.

We would like to thank all authors, and especially Kirsti Kovanen for collecting the contributions as well as John Ziesemer for revising the texts.

We hope this publication will help point out that vernacular architecture, often underestimated, is in fact a major part of the cultural heritage of mankind.

Christoph Machat
(President of CIAV)

Michael Petzet
(President of ICOMOS)

Préface

Le volume V de la série *Monuments et Sites* rassemble des contributions préparées par des membres du Comité Scientifique International Architecture Vernaculaire (CIAV) lors de la conférence de Morelia à l'occasion de la 12^{ème} assemblée générale de l'ICOMOS. Au même moment, cette publication se conforme à la résolution prise par le CIAV au cours de sa réunion annuelle d'août 1998 à Santo Domingo. En effet, lorsque la Charte du patrimoine bâti vernaculaire fut achevée après des années d'élaboration, il fut décidé que celle-ci, finalement adoptée en 1999 durant l'assemblée générale à Guadalajara/Mexico, devait être illustrée par une série de cas du monde entier. De nombreux exemples de maisons rurales et de bâtiments de ferme sont introduits dans le présent volume. Ainsi, il illustre, avec le thème de la «maison traditionnelle», un certain type d'architecture vernaculaire. La journée internationale des Monuments et Sites de 2001 avait également choisi ce thème en se concentrant sur l'architecture en danger des villages du monde entier.

Cette publication a pour objectif d'aider à la sauvegarde des valeurs mises en péril de l'architecture vernaculaire, laquelle, selon le dernier rapport *Heritage at Risk 2001/2002*, est particulièrement menacée. Partie intégrante de notre patrimoine culturel, l'architecture vernaculaire joue un rôle qui ne doit pas être sous-estimé. Celui-ci prend toute son importance lorsqu'on l'associe aux efforts mis en œuvre pour protéger des paysages culturels dans leur ensemble. Dans le même temps, nous devons

garder à l'esprit que l'ensemble des catégories de l'architecture vernaculaire n'ont été inventoriées que dans peu de pays, laissant sans protection contre la détérioration et l'élan dévastateur des constructions nouvelles le bâti vernaculaire de la plupart des régions du monde. Les matériaux de construction régionaux et les savoirs faire traditionnels disparaissent presque partout. De plus, le thème de l'architecture vernaculaire, ne comprenant pas seulement les établissements traditionnels tels que les différents «paysages bâtis», n'a pas fait l'objet de recherches exhaustives. Il peut même inclure les maisons de fortune construites de nos jours dans les périphéries de certaines grandes villes. L'architecture vernaculaire peut également jouer un rôle important dans le futur pour le développement durable de par la réutilisation des matériaux et les processus toujours répétés de réparation.

Nous remercions tous les auteurs et plus particulièrement Kirsti Kovanen qui a rassemblé les contributions et John Ziesemer qui a révisé les textes.

Nous espérons que cette publication aidera à la reconnaissance de l'architecture vernaculaire, dont l'importance est souvent sous-estimée, comme catégorie majeure du patrimoine culturel de l'humanité.

Christoph Machat
(Président du CIAV)

Michael Petzet
(Président de l'ICOMOS)

Prefacio

El Volumen V de la Serie “Monumentos y Sitios” recoge contribuciones de los miembros del Comité Científico Internacional sobre Arquitectura Vernácula (CIAV) preparadas para la conferencia de Morelia, México, durante la 12ª Asamblea General del ICOMOS. Al mismo tiempo esta publicación cumple la resolución tomada en la reunión anual del CIAV, en agosto de 1998 en Santo Domingo: cuando se terminó la “Carta del Patrimonio Vernáculo Construido” después de varios años de preparación, se decidió que esta Carta, adoptada finalmente en 1999 durante la Asamblea General en Guadalajara, México, debería ilustrarse con ejemplos de todo el mundo. En este volumen se presentan ejemplos de casas rurales y de edificios agrícolas. De este modo se ilustra, con el tema de la “casa tradicional”, un tipo de arquitectura vernácula; este tema fue el elegido también para el Día Internacional de los Monumentos y Sitios en el año 2001, concretamente la arquitectura en peligro de desaparición de los pueblos de todo el mundo.

Esperamos que esta publicación ayude a salvaguardar los valores en peligro de la arquitectura vernácula, la cual según el último Informe *Heritage at Risk 2001/2002* se encuentra particularmente amenazada. Como parte de nuestro patrimonio cultural, la arquitectura vernácula juega un papel que no debería ser subestimado; particularmente, resulta cada vez más importante al asociarlo con los esfuerzos para proteger los paisajes cultura-

les en su conjunto. Al mismo tiempo hay que ser consciente de que la gran variedad del patrimonio vernáculo ha sido documentado solamente en muy pocos países, permaneciendo de este modo sin ninguna protección contra el deterioro y contra el impulso devastador de las nuevas construcciones en la mayoría de las regiones del mundo. Prácticamente en todos los sitios se están perdiendo los materiales de construcción locales y los oficios tradicionales. Además, el tema de arquitectura vernácula, comprendiendo no solo los asentamientos tradicionales, como los diferentes “paisajes edificados”, no ha sido investigado exhaustivamente. Se pueden incluir incluso las chabolas de las afueras de algunas grandes ciudades. La arquitectura vernácula puede jugar también un importante papel en el futuro para el desarrollo sostenible debido a la reutilización de materiales y al siempre continuo proceso de reparación.

Queremos agradecer a todos los autores, y especialmente a Kirsti Kovanen por la recopilación de todas las contribuciones así como a John Ziesemer por la revisión de los textos.

Esperamos que esta publicación ayude al reconocimiento de la arquitectura vernácula, a menudo subestimada, como una parte muy importante del patrimonio cultural de la humanidad.

Christoph Machat
(Presidente de CIAV)

Michael Petzet
(Presidente de ICOMOS)

The History of CIAV

The foundation and the first two decades of activity

The International Committee on Vernacular Architecture (Comité International d'Architecture Vernaculaire – CIAV) was founded in 1976, the Executive Committee of ICOMOS thus accepting the requirement for the creation of an international specialised committee expressed by the resolution of the 1975 International Conference for the Conservation of Vernacular Architecture, held in Plovdiv, Bulgaria. The CIAV started working in 1977, the permanent seat being installed in Plovdiv. As the founding President Rachelle Anguelova, Bulgaria, made a significant contribution to the successful work of the committee, assisted by George Deltchev as Administrative Secretary. In November 1977 the Executive Committee confirmed the 12 permanent members, completed by 10 associate members following the recommendations of the national committees. The permanent (and founding) members came from Bulgaria, USSR, Switzerland, Finland, CSSR, Belgium, UK, Greece, Yugoslavia, Romania, Hungary, Turkey and Spain, the associate members from Austria, Denmark, France, the Federal and the Democratic Republic of Germany, Italy, Luxembourg, Poland, Sweden, Canada and Australia.

The regular annual sessions of the committee have been held in different places and countries: 1977, 1978, 1979, 1985, 1989 in Plovdiv, 1980 in Smoljan, 1981 in Lovetch, 1984 in Sandanski and Melnik – all in Bulgaria, 1982 in Istanbul and Izmir, 1986 in Istanbul and Ankara – Turkey, 1983 in Helsinki and Seinäjoki, Finland, 1987 in Belgrade, Yugoslavia, 1988 in Petrosavodsk, Karelia, Soviet Union, 1990 in Austria and Switzerland, 1992 in Brauweiler, Germany and 1994 in Sardegna, Italy. There is no doubt that the activities of CIAV would not have been as successful without the very important financial support given by the Bulgarian National Committee of ICOMOS and the Bulgarian Government until 1992 – for the permanent seat in Plovdiv with administration, secretary and library (founded by the contributions of all the committee members), for the travel expenses of the President and the organisation of seven regular sessions in Bulgaria (including the subsistence expenses for the permanent members). At the same time the regular budget of the Executive Committee of ICOMOS was essentially eased by this indirect contribution made by Bulgaria. It should be mentioned that all the other sessions have been organised and financed by the ICOMOS national committees of the hosting countries.

Besides these sessions, usually combined with scientific colloquiums or conferences, the committee members attended several national or international conferences on topics not necessarily related to vernacular problems (e.g. 1979 in Plovdiv on preservation methods for historic cities, in 1981 in Sofia on the preservation of the cultural heritage of Bulgaria) or made an active contribution to international events, like the symposium on "Vernacular Architecture on the Islands of the Aegean Sea" in 1981 on the island of Santorini, organised by the Technical University of Saloniki and the IBI under the auspices of the Greek Minister of Culture. (Almost 20 years later the restructured CIAV returned to Santorini for the annual meeting 2000.) From

the very beginning among the CIAV activities special attention has been given to an active cooperation with other international scientific organisations inside and also outside ICOMOS: The first joint annual conference of CIAV with the Wood Committee of ICOMOS took place in 1980 in Switzerland, followed in 1983 after the annual session in Finland by a visit of CIAV members to the colleagues of the Wood committee in Norway. In this way active contacts have been established between the two specialised committees, a very remarkable fact considering that wood is the most important building material for both committees. As a consequence the international conference on "Conservation of Wooden Vernacular Architecture", organised by the USSR ICOMOS National Committee in 1988 in Petrozavodsk, Karelia, was at the same time the joint annual session for both committees. One of the main subjects was the preservation philosophy for the "Kishi Pogost", an ensemble of two wooden churches, bell tower and surrounding fence (18th century) in bad condition due to wood alteration and structural problems and on the World Heritage List of UNESCO since 1990.

Contacts to other scientific organisations followed, some of the CIAV delegates working as link members to ICOMOS ISCs, such as Cultural Tourism or Historic Towns and Villages, but also to ICOM, the European Association of Open-Air Museums, ICCROM and the Council of Europe, Cultural Heritage Division. Together with the Committee on Historic Towns the CIAV organised a joint session in Plovdiv, Bulgaria in 1989 under the main topic "Historic Towns and Rural Vernacular Sites and the Process of Urbanisation". Focussing on the rapid ongoing changes within contemporary life and society and within the architectural heritage, the final resolution of the session pointed out on the one hand the necessity to sensitise and involve the communities in the recognition, maintenance and continuance of their cultural values. On the other hand it includes a clearly formulated demand to reorganise, restructure and improve the work of the two committees, studying new methods of assessment, conservation strategies and policies, to establish an international multidisciplinary network including specialists in sociology, ecology, economy, ethnography, town and landscape planning, to coordinate regional and local initiatives, to participate in development projects and to organise educational and training programmes.

In connection with these ideas and tasks the international project "Regional Architecture and Cultural Development in Europe" was drafted by M. Laenen, at that time Secretary General of the CIAV and O. Sevan from the Research Institute for Culture in Moscow. It considered the regional character of vernacular architecture, the preservation and development problems of the historical milieu of cities and villages in contemporary society and the formation of contemporary regional architecture in the context of regional culture in Europe. Presented at the international conference on "Historic Towns and Villages and the Process of Urbanisation", organised by the Union of Architects of the USSR and the Research Institute for Culture in Moscow during a cruise on the Volga river in June 1990, the project was discussed and recommended towards implementation to the

CIAV, which adopted it during the annual meeting in autumn 1990 in Austria and Switzerland. For the implementation of the project an organisation committee was formed, which met in Belgium in March 1991 and adopted an agenda for the future work – international colloquiums on three main topics: conservation *in situ* – open-air museums – new vernacular architecture. The active contribution of the CIAV to the Skansen Centenary organised by the European Association of Open-Air Museums and the Skansen Museum in September 1991 was part of the project implementation.

The conservation *in situ* as part of the project was the main topic of the international conference on “Preservation of the Rural Heritage. Cultural Landscape and Sites in Europe”, organised by the CIAV (annual session) and hosted by the German National Committee of ICOMOS in May 1992 at Brauweiler Abbey, Germany in cooperation with the Council of Europe. Part of the Brauweiler conference was a joint session of the CIAV and the group of specialists on “Heritage Landscape and Sites”, created in 1991 by the Cultural Heritage Department of the Council of Europe. As a result of the Brauweiler conference the Council of Europe in cooperation with ICCROM, CIAV and different European Universities succeeded in organising a pilot training course on multidisciplinary conservation management for cultural landscape areas, held in November 1993 at the University of Applied Sciences in Cologne, Germany. (Unfortunately an international colloquium on the third main topic – new vernacular architecture – is still missing).

All these ideas, discussions, meetings and projects are in fact the result of the continuous scientific work of the committee members with an agenda including primarily the definition of “vernacular architecture”, a dictionary on special vernacular terminology in architecture, a “State of the Art” of vernacular architecture, later the “Charter on Vernacular Architecture” as well as scientific publications or public relations activities. In 1980 a questionnaire on the preservation and evaluation of vernacular architecture was sent to all European National Committees of ICOMOS, and the results were reported at the 7th General Assembly of ICOMOS in Rostock and Dresden in 1984. (Most of the ideas and recommendations included in that report anticipate those of the final resolution of the Plovdiv conference of 1989.) A more recent “State of the Art” worked out by M. Laenen was adopted by the CIAV at the annual session in 1990 in Switzerland. For the long way from the first draft for a “Charter of Vernacular Architecture” prepared by R. Anguelova and presented at the annual meeting in Bulgaria in 1984 up to the final version and the adoption of the “Charter on the Built Vernacular Heritage” by the General Assembly of ICOMOS in Mexico in 1999 see the short contribution in this book by Kirsti Kovanen (see page 10).

Since the very beginning the CIAV has given special attention to the educational aspect of its activities – exhibitions, public relations, publications etc – to inform a larger public, especially the communities living in places of vernacular heritage, about the different aspects of preservation work. Most of the papers presented at the first colloquium on “Vernacular Architecture” in Plovdiv in 1976 were published in *Monumentum*, vols. XV–XVI, 1977. A special issue of the Romanian *Revista muzeelor si monumentelor* (Museum and monuments revue, No. 1, Bucharest 1979) was dedicated to the CIAV activities, with most of the committee members contributing with papers.

A first exhibition prepared by the CIAV (M. Gschwend, with H. Hiltbrand) on “Rural Architecture in Switzerland”, sponsored

by the foundation Pro Helvetia, was shown in Romania in 1980 (Bucharest, Village Museum and Sibiu), in the same year in the open-air museum of Ballenberg, Switzerland and in 1981 in Sofia, Bulgaria. In exchange, in 1982 the exhibition “Romanian Rural Architecture”, organised by G. Stoica, was presented in Zurich (Museum of Ethnology) and Ballenberg and in the year after it was included in the programme of the “Romanian-Romanche Weeks” of the Romanche League in Laax-Flims. Other smaller exhibitions accompanying different sessions or colloquiums followed.

Even if the efforts to publish the most important papers and results of all the CIAV sessions or meetings failed, at least the papers of the Brauweiler conference (1992) were published in 1993: *Historische Kulturlandschaften* (Historic Landscapes, = ICOMOS Journals of the German National Committee XI) and those presented during the international river cruise on the Volga in June 1990 were printed under the title *Historic Towns and Villages in the Process of Urbanisation*, Moscow 1994. Among the books prepared by different national and international scientific committees of ICOMOS, especially for presentation at the 10th General Assembly of ICOMOS in Colombo, Sri Lanka, the CIAV was also represented: *Vernacular Architecture*, Colombo 1993.

Thanks to the efforts made by N. Moutsopoulos (CIAV President between 1989 and 1995) and other committee members from the Balkan countries, UNESCO published the volume *L'architecture vernaculaire dans les Balkans* (Vernacular Architecture in the Balkans, No. 10 in the series *Etudes et documents sur le patrimoine culturel*, CLT-85/WS/48), including contributions on the Greek Popular House and on Vernacular Architecture in Yugoslavia, Bulgaria and Romania. In Winter 1992 the volume *Traditional Architecture of the Balkans* was edited by the Melissa Publishing House in Athens, Greece. (In the late 1990s the Melissa Publishing House continued to edit books on the vernacular architecture of the different Balkan countries.)

The work of the committee after 1995

Since its start the CIAV has achieved important results in the field of study and conservation of vernacular architecture, in collaboration with other ISCs of ICOMOS or other scientific organisations, trying at the same time to improve cooperation with national committees and to coopt specialists from outside CIAV or ICOMOS to the scientific work or to support the creation of national sub-committees on vernacular architecture (e.g. in Turkey).

Considering the results of all the scientific achievements, all the aims and tasks included in the resolution of Plovdiv 1989, the “State of the Art” of Vernacular Architecture adopted in 1990, the “Recommendations for the Conservation and Renovation of Vernacular Architecture” presented at the Brauweiler conference in 1992 or the different versions towards a final and generally accepted text for the “Charter on the Built Vernacular Heritage”, some committee and Bureau members of the CIAV became conscious of the main tasks for the future work and started to rewrite its content, the working methods, its international coordinating or cooperative task and to think about restructuring its composition in order to become a real worldwide operating committee.

As a consequence after the adoption of the Eger Principles for International Scientific Committees of ICOMOS by the Gener-

al Assembly in Colombo 1993 new statutes were worked out for CIAV in conformity with these principles. Adopted at the annual meeting of the committee in Sardegna, Italy in 1994 and confirmed by the Executive Committee in the same year, the statutes served as a model for a future restructuring of other ISCs. In recognition of the above mentioned contributions by the Bulgarian National Committee of ICOMOS and the Bulgarian Government to the activities of CIAV until 1992, Plovdiv has been confirmed as official seat of the committee in the new statutes, even if the effective administration work has been linked with the seat of the Secretary General (at the moment Kirsti Kovanen in Mikkeli, Finland) since 1992.

Based on the new CIAV statutes up to the end of 1994 36 national committees had already nominated voting members for the restructured committee and the constitutive meeting could take place in May 1995 thanks to the support given by the ICOMOS National Committee of Guatemala. A detailed plan for future activities of the committee worked out in close cooperation between the new members and the new Bureau of CIAV (elected by postal vote before the meeting) should be mentioned as one of the most important results of this meeting: The committee decided to start operating worldwide by moving from continent to continent with the annual meetings and scientific conferences, enlarging the cooperation with national and international conservation bodies, especially the ISCs, but also with specialists outside ICOMOS, trying to establish an international multidisciplinary network, at the same time continuously trying to increase the number of committee members (at the moment more than 70), to finalise the "Charter on the Built Vernacular Heritage", producing a document accepted generally and worldwide, to pay even more attention to educational and public relations work, such as publications, exhibitions, training programmes, to prepare a "Vernacular Newsletter" and a homepage of the committee for internet etc.

Implementing the Guatemala decisions the following annual meetings took place in Jerusalem, Israel in 1996, in Bangkok, Thailand in 1997, in Santo Domingo, Dominican Republic in 1998, in Morelia, Mexico in 1999 as part of the scientific conference during the 12th General Assembly of ICOMOS, and on the island of Santorini, Greece in 2000. The meeting 2001 was hosted by the Canadian National Committee of ICOMOS as part of the international scientific conference on conservation problems of 20th century vernacular architecture. Among these very well organised and successful meetings two are of special interest: At the Jerusalem meeting the committee members succeeded in finalising the doctrinal text for the Charter, prepared by a working group of CIAV members (from all continents) and Spanish specialists during a working session hosted by the Spanish Ministry of Culture in January 1996. For the first time the Bangkok meeting in May 1997 hosted by the Department of Fine Arts of the Thai Minister of Culture offered specialists from the Asian countries (even without ICOMOS committees) the possibility to discuss the topics related to the preservation of vernacular heritage. More than 120 participants from 24 countries contributed to the success of the meeting with very interesting papers, active discussions or poster presentations. The papers printed in the volume *Proceedings of the International Conference on Conservation and Revitalization of Vernacular Architecture and ICOMOS-CIAV Annual Meeting 1997* (Bangkok 1998) include a large number of contributions from CIAV members and also the final "Recommendations for the Preservation of the Vernacular Heritage" worked out by the Bureau of

the CIAV. Other scientific contributions and papers written by members of the committee can be found in the proceedings of the 11th General Assembly in Sofia as well as in those of the 12th General Assembly as part of the papers held at the scientific colloquium in Morelia. The contribution of some CIAV members to the *Encyclopaedia of Vernacular Architecture of the World*, edited by Paul Oliver in 1998 (Cambridge University Press) should also be mentioned. Last but not least the present publication is the result of the committee's decision in Santo Domingo in 1998 to publish a book on traditional houses and housing worldwide.

One of the most important results of the committee's work is without any doubt the final version of the "Charter on the Built Vernacular Heritage" in English, French and Spanish, adopted by the General Assembly of ICOMOS in Mexico 1999 and published (in English and French) in the first issue of *ICOMOS News* 2000. Besides the long history of preparation the text is a real document of the conservation philosophy of CIAV. Addressed directly to owners, communities but also to specialists, it deliberately avoids any definition of vernacular heritage – which may vary according to the specific cultural traditions in the different regions of the world. For this reason the elaboration of regional guidelines will be a very important task for the future work of the committee. The first step was made as a result of the Santorini meeting in 2000: "Guidelines for Tourism in Vernacular Settlements".

Nevertheless all the important achievements in the field of study and conservation of vernacular architecture or the development of preservation strategies are the result of the ongoing scientific work of the committee since its foundation. Starting from the traditional preservation strategies of conservation *in situ* or in open-air museums (in the first years quite a large number of committee members came from open-air museums) and faced with the rapid changes of contemporary life and society, the committee learned to enlarge its understanding of what vernacular is – from the single farmsteads and traditional village units to urban vernacular areas and settlements, to cultural landscape areas and the links between vernacular heritage and the geomorphological conditions of the landscape. Conscious of the fact that the vernacular is one of the most endangered parts of our heritage, new methods and conservation strategies and policies have been studied and worked out, trying to establish an international multidisciplinary network, to sensitise and involve the communities in the recognition, maintenance and continuance of their cultural values, to coordinate regional and local initiatives, to participate in development projects, such as new vernacular architecture and to organise educational and training programmes. Since 1993 committee members have been involved in international training programmes addressed both to specialists (Cologne, Germany 1993, Tbilissi, Georgia 1998) and administrative bodies (Guatemala 1996) and in teaching activities (architectural conservation courses at universities, ICCROM, post-graduate studies etc.). For a couple of years the CIAV has been much more involved in the evaluation process for nomination of the vernacular heritage to the World Heritage List of UNESCO.

At the moment the CIAV has more than 70 members, 60 of them being voting members, the others associate or coopted members. The committee is headed by Christoph Machat (Germany) as President, Blanca Nino (Guatemala) and Miles Lewis (Australia) as Vice Presidents and Kirsti Kovanen (Finland) as Secretary General.

About the Charter on the Built Vernacular Heritage

The Charter on the Built Vernacular Heritage has its early roots in the conservation thinking of the 1980s. The first draft was already prepared by Rachele Anguelova in 1984. This draft was reworked during the following years by the vernacular committee's chairman, Nicolas Moutsopoulos, and by members of the committee. All the work of that period resulted in a joint paper that was presented to the committee in 1992. In the 1990s ICOSMOS President Roland Silva prepared a paper focused on the conservation of vernacular villages. These ideas were included when the joint paper was once more redrafted by the vernacular committee in 1996. During these basic working phases the charter adopted ideas from classical conservation *in situ*, from the conservation work that was done in open-air museums and from the wide experience in research and conservation design of inhabited houses, villages and towns as well as from their immaterial traditions. The early drafts carefully covered the general and detailed features of vernacular buildings, the final draft tied together the issues concerning the conservation of any single building, any group of buildings alone or as part of a cultural landscape. It was finalised and distributed to be commented in 1996.

The comments that the committee received in 1997-98 showed that the general and global viewpoint which the charter had introduced covered many parts of the world's vernacular heritage. However, some of the main definitions were difficult to translate into all languages and cultures. The draft was presented to the colleagues in three languages, in English, French and in Spanish. The most controversial issue was the question of definitions, mainly the differences between traditional, popular and vernacular. The second most argued issue was whether the charter could be applied to the conservation of modern vernacular heritage. There were also demands for a much more practical paper that would give a conservationist the tools for common field work. The final round of discussions was also held in the three languages and resulted in clarifying the definitions and the general guidelines. Additions concerning educational work were made. The final charter text was adopted in the three working languages in 1999 by the general assembly in Guadalajara, Mexico.

Since the adoption of the charter the committee has tried to continue the discussion by enhancing the work on regional guidelines which at their best will concentrate on the issues vital to the region and result in finding and documenting the common and the particular when conserving the region's own vernacular heritage.

CHARTER ON THE BUILT VERNACULAR HERITAGE

INTRODUCTION

The built vernacular heritage occupies a central place in the affection and pride of all peoples. It has been accepted as a characteristic and attractive product of society. It appears informal, but nevertheless orderly. It is utilitarian and at the same time possesses interest and beauty. It is a focus of contemporary life and at the same time a record of the history of society. Although it is the work of man it is also the creation of time. It would be unworthy of the heritage of man if care were not taken to conserve these traditional harmonies which constitute the core of man's own existence.

The built vernacular heritage is important; it is the fundamental expression of the culture of a community, of its relationship with its territory and, at the same time, the expression of the world's cultural diversity.

Vernacular building is the traditional and natural way by which communities house themselves. It is a continuing process including necessary changes and continuous adaptation as a response to social and environmental constraints. The survival of this tradition is threatened worldwide by the forces of economic, cultural and architectural homogenisation. How these forces can be met is a fundamental problem that must be addressed by communities and also by governments, planners, architects, conservationists and by a multidisciplinary group of specialists.

Due to the homogenisation of culture and of global socio-economic transformation, vernacular structures all around the world are extremely vulnerable, facing serious problems of obsolescence, internal equilibrium and integration.

It is necessary, therefore, in addition to the Venice charter, to establish principles for the care and protection of our built vernacular heritage.

GENERAL ISSUES

1. Examples of the vernacular may be recognised by:
 - a manner of building shared by the community;
 - a recognisable local or regional character responsive to the environment;
 - coherence of style, form and appearance, or the use of traditionally established building types;
 - traditional expertise in design and construction which is transmitted informally;
 - an effective response to functional, social and environmental constraints;
 - the effective application of traditional construction systems and crafts.
2. The appreciation and successful protection of the vernacular heritage depend on the involvement and support of the community, continuing use and maintenance.
3. Governments and responsible authorities must recognise the right of all communities to maintain their living traditions, to

protect these through all available legislative, administrative and financial means and to hand them down to future generations.

PRINCIPLES OF CONSERVATION

1. The conservation of the built vernacular heritage must be carried out by multidisciplinary expertise while recognising the inevitability of change and development, and the need to respect the community's established cultural identity.
2. Contemporary work on vernacular buildings, groups and settlements should respect their cultural values and their traditional character.
3. The vernacular is only seldom represented by single structures, and it is best conserved by maintaining and preserving groups and settlements of a representative character, region by region.
4. The built vernacular heritage is an integral part of the cultural landscape and this relationship must be taken into consideration in the development of conservation approaches.
5. The vernacular embraces not only the physical form and fabric of buildings, structures and spaces, but the ways in which they are used and understood, and the traditions and the intangible associations which attach to them.

GUIDELINES IN PRACTICE

1. Research and documentation

Any physical work on a vernacular structure should be cautious and should be preceded by a full analysis of its form and structure. This document should be lodged in a publicly accessible archive.

2. Siting, landscape and groups of buildings

Interventions to vernacular structures should be carried out in a manner which will respect and maintain the integrity of the siting, the relationship to the physical and cultural landscape, and of one structure to another.

3. Traditional building systems

The continuity of traditional building systems and craft skills associated with the vernacular is fundamental for vernacular expression, and essential for the repair and restoration of these structures. Such skills should be retained, recorded and passed on to new generations of craftsmen and builders in education and training.

4. Replacement of materials and parts

Alterations which legitimately respond to the demands of contemporary use should be effected by the introduction of materials which maintain a consistency of expression, appearance, texture and form throughout the structure and a consistency of building materials.

5. Adaptation

Adaptation and reuse of vernacular structures should be carried out in a manner which will respect the integrity of the structure, its character and form while being compatible with acceptable standards of living.

Where there is no break in the continuous utilization of vernacular forms, a code of ethics within the community can serve as a tool of intervention.

6. Changes and period restoration

Changes over time should be appreciated and understood as important aspects of vernacular architecture. Conformity of all parts of a building to a single period will not normally be the goal of work on vernacular structures.

7. Training

In order to conserve the cultural values of vernacular expression, governments, responsible authorities, groups and organisations must place emphasis on the following:

- a) education programmes for conservators in the principles of the vernacular;
- b) training programmes to assist communities in maintaining traditional building systems, materials and craft skills;
- c) information programmes which improve public awareness of the vernacular especially amongst the younger generation.
- d) regional networks on vernacular architecture to exchange expertise and experiences.

CIAY:

Madrid, January 30, 1996

Jerusalem, March 28, 1996

Mikkeli, February 26, 1998

Santo Domingo, August 26, 1998

ICOMOS:

Stockholm, September 10, 1998

Guadalajara, October 22, 1999

CHARTRE DU PATRIMOINE BÂTI VERNACULAIRE

INTRODUCTION

Le patrimoine bâti vernaculaire suscite à juste titre la fierté de tous les peuples. Reconnu comme une création caractéristique et pittoresque de la société, il se manifeste de façon informelle, et pourtant organisée; utilitaire, il possède néanmoins un intérêt et une beauté. C'est à la fois un reflet de la vie contemporaine et un témoin de l'histoire de la société. Bien qu'il soit oeuvre humaine, il est aussi le produit du temps. Il serait indigne de l'héritage de l'humanité de ne pas chercher à conserver et à promouvoir ces harmonies traditionnelles qui sont au coeur même de son existence et de son avenir.

Le patrimoine bâti vernaculaire est important car il est l'expression fondamentale de la culture d'une collectivité, de ses relations avec son territoire et, en même temps, l'expression de la diversité culturelle du monde.

La construction vernaculaire est le moyen traditionnel et naturel par lequel les communautés créent leur habitat. C'est un processus en évolution nécessitant des changements et une adaptation constante en réponse aux contraintes sociales et environnementales. Partout dans le monde, l'uniformisation économique, culturelle et architecturale menace la survie de cette tradition. La question de savoir comment résister à ces forces est fondamentale et doit être résolue non seulement par les populations, mais aussi par les gouvernements, les urbanistes, les architectes, les conservateurs, ainsi que par un groupe pluridisciplinaire d'experts.

En raison de l'uniformisation de la culture et des phénomènes de mondialisation socio-économiques, les structures vernaculaires dans le monde sont extrêmement vulnérables parce qu'elles sont confrontées de graves problèmes d'obsolescence, d'équilibre interne et d'intégration.

Il est par conséquent nécessaire, en complément de la Charte de Venise, d'établir des principes pour l'entretien et la protection de notre patrimoine bâti vernaculaire.

PRINCIPES GÉNÉRAUX

1. Les bâtiments vernaculaires présentent les caractéristiques suivantes:
 - un mode de construction partagé par la communauté;
 - un caractère local ou régional en réponse à son environnement;
 - une cohérence de style, de forme et d'aspect, ou un recours à des types de construction traditionnels;
 - une expertise traditionnelle en composition et en construction transmise de façon informelle;
 - une réponse efficace aux contraintes fonctionnelles, sociales et environnementales;
 - une application efficace de systèmes et du savoir-faire propres à la construction traditionnelle.
2. L'appréciation et l'efficacité de la protection du patrimoine vernaculaire dépendent de l'engagement et du soutien de la collectivité, de son utilisation et de son entretien continus.

3. Les gouvernements et les autorités compétentes doivent reconnaître à toutes les collectivités le droit de préserver leurs modes de vie traditionnels et de les protéger par tous les moyens législatifs, administratifs et financiers à leur disposition et de les transmettre aux générations futures.

PRINCIPES DE CONSERVATION

1. La conservation du patrimoine bâti vernaculaire doit être menée par des spécialistes de diverses disciplines, qui reconnaissent le caractère inéluctable du changement et du développement et le besoin de respecter l'identité culturelle de la collectivité.
2. Les interventions contemporaines sur les constructions, les ensembles et les établissements vernaculaires doivent respecter leurs valeurs culturelles et leur caractère traditionnel.
3. Le patrimoine vernaculaire s'exprime rarement par des constructions isolées et il est mieux conservé par le maintien et la préservation d'ensembles et d'établissements représentatifs, région par région.
4. Le patrimoine bâti vernaculaire fait partie intégrante du paysage culturel et cette relation doit donc être prise en compte dans la préparation des projets de conservation.
5. Le patrimoine vernaculaire ne comprend pas seulement les formes et les matériaux des bâtiments, structures et des lieux, mais également la manière dont ces éléments sont utilisés et perçus ainsi que les traditions et les liens intangibles qui leur sont reliés.

ORIENTATIONS PRATIQUES

1. Recherche et documentation

Toute intervention physique sur une structure vernaculaire devrait être menée avec prudence et précédée d'une analyse complète de sa forme et de sa structure. Ce document devrait être conservé dans des archives accessibles au public.

2. Emplacement, paysage et groupes de bâtiments

Les interventions sur les structures vernaculaires devraient être menées dans le respect et le maintien de l'intégrité de l'emplacement, de la relation avec les paysages physiques et culturels et de l'agencement d'une structure par rapport aux autres.

3. Systèmes de construction traditionnels

Le maintien des systèmes de construction traditionnels et du savoir-faire lié au patrimoine vernaculaire est capital pour l'archi-

ecture vernaculaire et essentiel pour la réfection et la restauration de ces structures. C'est par l'éducation et la formation que ce savoir-faire devrait être conservé, enregistré et transmis aux nouvelles générations d'artisans et de bâtisseurs.

4. Remplacement des matériaux et des éléments architecturaux

Les transformations qui satisfont légitimement aux exigences modernes devraient être réalisées avec des matériaux qui assurent la cohérence de l'expression, de l'aspect, de la texture et de la forme de l'ensemble de la construction et la cohésion des différents matériaux entre eux.

5. Adaptation

L'adaptation et la réutilisation des constructions vernaculaires devraient être effectuées dans le respect de l'intégrité de la structure, de son caractère et de sa forme tout en étant compatibles avec des standards de vie acceptables. La pérennité des modes de construction vernaculaire peut être assurée par l'élaboration par la collectivité d'un code d'éthique qui peut servir aux interventions.

6. Changements et restauration d'époque

Les modifications apportées dans le temps aux bâtiments doivent être appréciées et comprises comme des éléments importants de l'architecture vernaculaire. La conformité de tous les éléments d'un bâtiment à une même période ne sera pas, en général, l'objectif des interventions sur les structures vernaculaires.

7. Formation

Afin de conserver les valeurs culturelles de l'architecture vernaculaire, les gouvernements, les autorités compétentes, les groupes et les organismes devraient mettre l'accent sur :

- a) des programmes éducatifs susceptibles de transmettre les principes du patrimoine vernaculaire aux conservateurs;
- b) des programmes de formation pour aider les collectivités à préserver les systèmes de construction, les matériaux et le savoir-faire traditionnels;
- c) des programmes d'information qui accroissent la sensibilisation du public et des jeunes en particulier dans le domaine de l'architecture vernaculaire;
- d) des réseaux inter-régionaux d'architecture vernaculaire pour échanger des expertises et des expériences.

CIAV:

Madrid, 30 janvier 1996

Jérusalem, 28 mars 1996

Mikkeli, 26 février 1998

Saint-Domingue, 26 août 1998

ICOMOS:

Stockholm, 13 septembre 1998

Guadalajara, 22 octobre 1999

CARTA DEL PATRIMONIO VERNÁCULO CONSTRUIDO

IN DIFFERENT COUNTRIES

INTRODUCCIÓN

El Patrimonio Tradicional ocupa un privilegiado lugar en el afecto y cariño de todos los pueblos. Aparece como un carácterístico y atractivo resultado de la sociedad. Se muestra aparentemente irregular y sin embargo ordenado. Es utilitario y al mismo tiempo posee interés y belleza. Es un lugar de vida contemporánea y a su vez, una remembranza de la historia de la sociedad. Es tanto el trabajo del hombre como creación del tiempo. Sería muy digno para la memoria de la humanidad si se tuviera cuidado en conservar esa tradicional armonía que constituye la referencia de su propia existencia.

El Patrimonio Tradicional o Vernáculo construido es la expresión fundamental de la identidad de una comunidad, de sus relaciones con el territorio y al mismo tiempo, la expresión de la diversidad cultural del mundo.

El Patrimonio Vernáculo construido constituye el modo natural y tradicional en que las comunidades han producido su propio hábitat. Forma parte de un proceso continuo, que incluye cambios necesarios y una continua adaptación como respuesta a los requerimientos sociales y ambientales. La continuidad de esa tradición se ve amenazada en todo el mundo por las fuerzas de la homogeneización cultural y arquitectónica. Cómo esas fuerzas pueden ser controladas es el problema fundamental que debe ser resuelto por las distintas comunidades, así como por los gobiernos, planificadores y por grupos multidisciplinarios de especialistas.

Debido a esa homogeneización de la cultura y a la globalización socio-económica, las estructuras vernáculas son, en todo el mundo, extremadamente vulnerables y se enfrentan a serios problemas de obsolescencia, equilibrio interno e integración.

Es necesario, por tanto, como ampliación a la Carta de Venecia, establecer principios para el cuidado y protección de nuestro Patrimonio Vernáculo.

CONSIDERACIONES GENERALES

1. Los ejemplos de lo vernáculo pueden ser reconocidos por:
 - Un modo de construir emanado de la propia comunidad.
 - Un reconocible carácter local o regional ligado al territorio.
 - Coherencia de estilo, forma y apariencia, así como el uso de tipos arquitectónicos tradicionalmente establecidos.
 - Sabiduría tradicional en el diseño y en la construcción, que es transmitida de manera informal.
 - Una respuesta directa a los requerimientos funcionales, sociales y ambientales.
 - La aplicación de sistemas, oficios y técnicas tradicionales de construcción.
2. El éxito en la apreciación y protección del patrimonio vernáculo depende del soporte de la comunidad, de la continuidad de uso y su mantenimiento.
3. Gobiernos y autoridades deben reconocer el derecho de todas

las comunidades a mantener su modo de vida tradicional y a protegerlo a través de todos los medios posibles, tanto legales como administrativos y financieros y legarlo a las generaciones futuras.

PRINCIPIOS DE CONSERVACIÓN

1. La conservación del Patrimonio Vernáculo construido debe ser llevada a cabo por grupos multidisciplinarios de expertos, que reconozcan la inevitabilidad de los cambios, así como la necesidad del respeto a la identidad cultural establecida de una comunidad.
2. Las intervenciones contemporáneas en edificios, conjuntos y asentamientos vernáculos deben respetar sus valores culturales y su carácter tradicional.
3. Lo tradicional se encuentra sólo en ocasiones representado por estructuras singulares. Es mejor apreciado y conservado por el mantenimiento y preservación de los conjuntos y asentamientos de carácter representativo en cada una de las áreas.
4. El Patrimonio Vernáculo construido forma parte integral del paisaje cultural y esta relación ha de ser, como tal, tenida en consideración en el transcurso de los programas de conservación y desarrollo.
5. El Patrimonio Vernáculo no sólo obedece a los elementos materiales, edificios, estructuras y espacios, sino también al modo en que es usado e interpretado por la comunidad, así como a las tradiciones y expresiones intangibles asociadas al mismo.

LÍNEAS DE ACCIÓN

1. Investigación y documentación

Cualquier intervención material en una estructura vernácula debe ser precedida de un completo análisis de su forma y organización, antes de comenzar los trabajos. Esta documentación debe localizarse en un archivo de acceso público.

2. Asentamientos y paisaje

La intervención en las estructuras vernáculas debe ser implementada siempre y cuando respete y mantenga la integridad de los conjuntos de edificios y asentamientos, así como su relación con el paisaje y otras estructuras.

3. Sistemas tradicionales de construcción

La continuidad de los sistemas tradicionales de construcción, así como de los oficios y técnicas asociados con el Patrimonio Ver-

náculo, son fundamentales como expresión del mismo y esenciales para la restauración de dichas estructuras. Tales técnicas deben ser conservadas y legadas a las futuras generaciones, mediante la educación y formación de artesanos y constructores.

4. Sustitución de partes o elementos

Las intervenciones que respondan legítimamente a las demandas del uso contemporáneo deben llevarse a cabo mediante la introducción de técnicas y materiales que mantengan un equilibrio de expresión, apariencia, textura y forma con la estructura original.

5. Adaptación

La adaptación y reutilización de las estructuras vernáculas debe ser llevada a cabo de modo que respete la integridad de su configuración, siempre que sea compatible con los niveles de habitabilidad deseados.

Cuando se ha conservado la continua utilización de las formas vernáculas, un código ético puede servir a la comunidad como pauta de actuación.

6. Cambios y periodo de intervención

Los cambios a lo largo del tiempo deben ser considerados como parte integrante del Patrimonio Vernáculo. Por tanto, la vinculación de todas las partes de un edificio a un solo periodo histórico no será normalmente el objetivo de los trabajos sobre arquitectura vernácula.

7. Educación y difusión

Para conservar los valores del legado tradicional gobiernos, autoridades, grupos y organizaciones deben poner énfasis en lo siguiente:

- a) Programas educativos para conservadores, sobre los principios del patrimonio tradicional.
- b) Programas de especialización para asistir a las comunidades en el mantenimiento de los sistemas tradicionales de construcción, así como de los oficios correspondientes.
- c) Programas de información que promuevan la conciencia colectiva de la cultura autóctona, en especial a las nuevas generaciones.
- d) Promoción de redes regionales de arquitectura vernácula para el intercambio de experiencias y especialistas.

- CIAV
- Madrid, 30 de enero de 1996
- Jerusalem, 28 de marzo de 1996
- Mikkeli, 26 de febrero de 1998
- Santo Domingo, 26 de agosto de 1998
- ICOMOS
- Stockholm, 10 de septiembre de 1998
- Guadalajara, 22 de Octubre 1999

VERNACULAR ARCHITECTURE AND ITS CONSERVATION IN DIFFERENT COUNTRIES

AUSTRALIA

Miles Lewis

An Australian Hybrid: The Gardiner house, French Island

Australia does not have any one distinctive version of the vernacular, for the climate varies from the cool temperate to the tropical, the distances are vast – comparable with the distance from Oslo to Damascus – the population is sparse, the sources include the architecture of the first settlers from British isles, the transitory structures of the Aboriginal inhabitants, and the importations of migrant groups from the Chinese to the Germans.

The Gardiner house exemplifies some of these characteristics. It was built in the mid-19th century at what was then an isolated and inaccessible location, French Island in Westernport Bay, in the south-east of Australia. John and William Gardiner were squatters on the island – that is, settlers with no real legal tenure, but tolerated on public land so long as they paid a licence fee. It can be no earlier than the date of the Gardiners' squatting licence, 1847, but need not be much later, and it most probably pre-dates their application to purchase the site in January 1854.

The first section has a machine sawn frame which may have been imported nearly 3,000 kilometres from Western Australia. The top and bottom plates were neatly drilled to create rounded mortice holes for the uprights, and midway between each was a single drilled hole which allowed a light sapling to be sprung in vertically. Other such saplings were nailed to either side of each upright, and within each panel the horizontal basketwork was woven in and out between and braced by the saplings. This was plastered with a daub consisting essentially of the locally available soil. This construction makes extensive use of nails, which

had only recently become cheap. In more traditional building the sides of the posts would have been grooved to receive the ends of the horizontal wattles.

At an early date the building was extended, in similar wattle and daub construction, but more crudely built out of local split and adzed timber with a split paling roof. An analysis of the daub has revealed seeds of various introduced European plants, which is consistent with our belief that this is the later section. When the building was investigated some years ago, the original structure had collapsed and only the later addition stood. It was difficult to believe that the collapsed portion was the original; that it could be such a sophisticated structure of milled timber; and still less that it had been prefabricated. At that time prefabrication in wattle and daub was unheard of, though other examples have since been found.

This building exemplifies a number of things:

- the use in Australia of wattle and daub, a traditional European technology
- the adaptation of this technology to a sophisticated system of prefabrication
- the transport of building components over considerable distances
- the *ad hoc* adaptation of this system to local materials and more primitive techniques
- the extensive use of industrialised components, that is nails, in vernacular building.

CANADA

Marc de Caraffe

Hawthorne Cottage and Maison Trestler

Hawthorne Cottage

This picturesque cottage *orné* was built in 1830 by John Leamon, a local merchant. According to family tradition, in the winter of 1833-34 the building was moved over eight kilometres to its present location in the fishing port of Brigus, Newfoundland. The structure was later expanded to include a two storey addition at the rear, which was completed ca. 1920. The most famous occupant of the house was Arctic explorer Captain Bob Bartlett (1875-1946), the skipper of Peary's ship on his voyage to the North Pole.¹

Set within an enclosed garden, Hawthorne Cottage is a charming one-and-a-half storey frame structure laid on an elevated stone foundation and crowned by a low hipped roof. Historical records indicate that frames for buildings were shipped to Newfoundland from neighbouring provinces.² The building provides a good example of the modest suburban residences that were erected on the east coast of Canada during the first half of the 19th century. In this case, the balance between simplicity and variety is achieved by the main building and its addition, which together form simple, unadorned masses arranged in an irregular plan, a traditional feature of the cottage *orné*.³

In the interior of Hawthorne Cottage, each floor is divided down the centre by a hall. Rooms where visitors were greeted – the parlour and the dining room – are situated on the ground level. To ensure privacy, the bedrooms are on the first floor. Departing from Newfoundland fashion, the stairs are parallel with the front wall instead of being located on the axis of the hall. The central chimney, located in the hallway, is derived from a tradition two centuries old, of servicing the ground floor rooms by a central hearth.

The veranda, which surrounds the building on three sides, was constructed in 1863. It is distinguished by a handsome bellcast roof and by rough fretwork, which was probably machine cut. An important feature of houses designed according to the Picturesque Movement in Canada, the veranda offered a harmonious transition between the elegance of the garden and the warmth of the domestic interior.

The relocation of the cottage belongs within the building tradition of Newfoundland. Moving buildings was usually done in winter, as icy surfaces eased the hauling. To move a structure required runners made of green cut logs, long ropes and participation of all able bodies in the village for pulling. This tradition has been dramatically represented by modern Canadian artist David Blackwood.

Maison Trestler

This residence was built for a German soldier, Johan Joseph Troestler, who became a prosperous trader in the St. Lawrence valley after his retirement from the British army. According to three dated stones found in different parts of the house, the central section was constructed in 1798, the west wing in 1805 and



Hawthorne Cottage

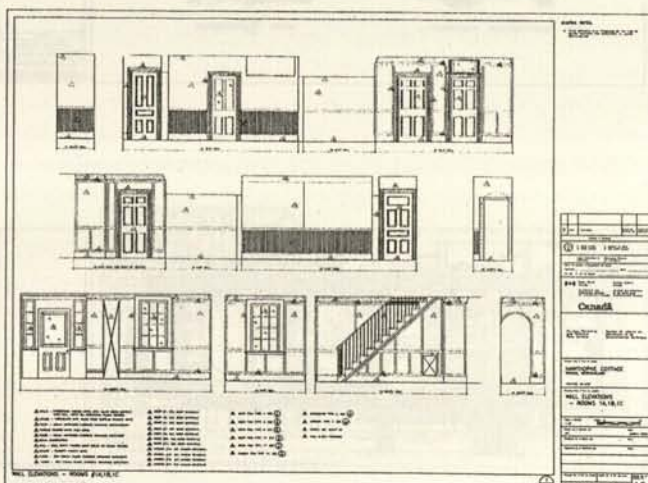
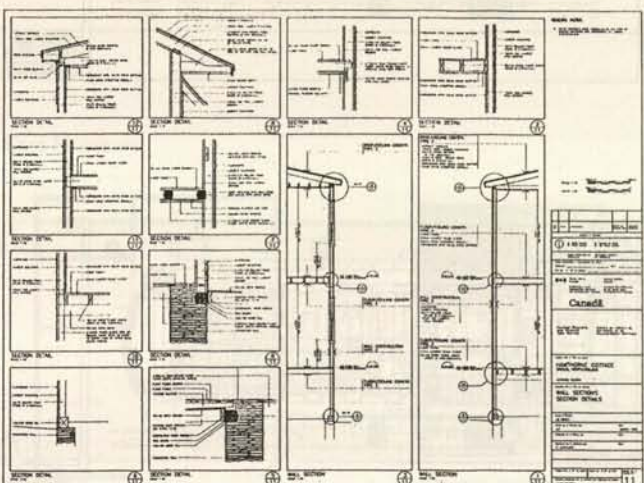
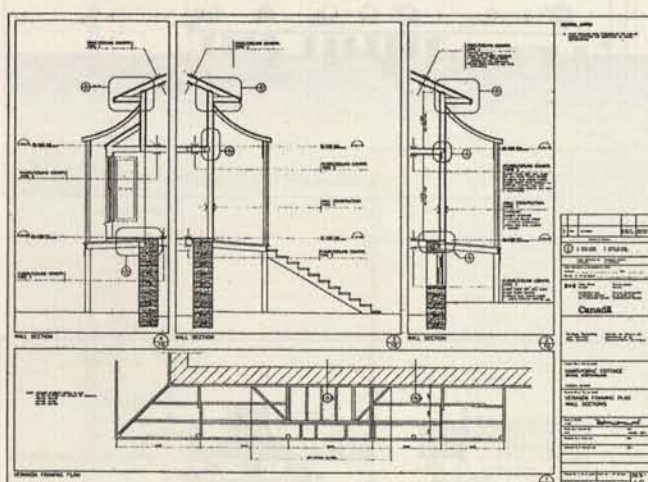
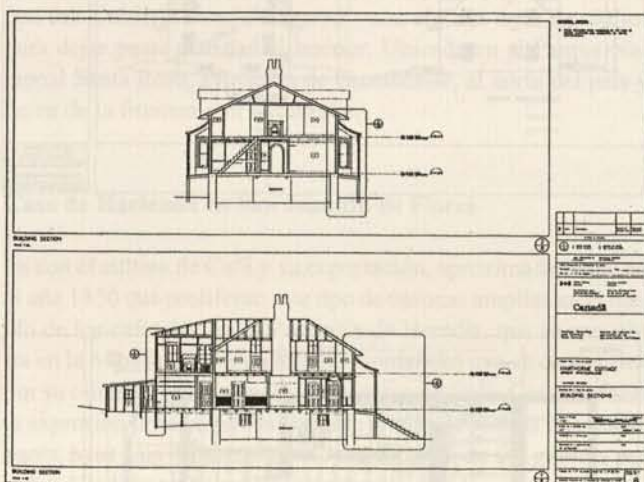
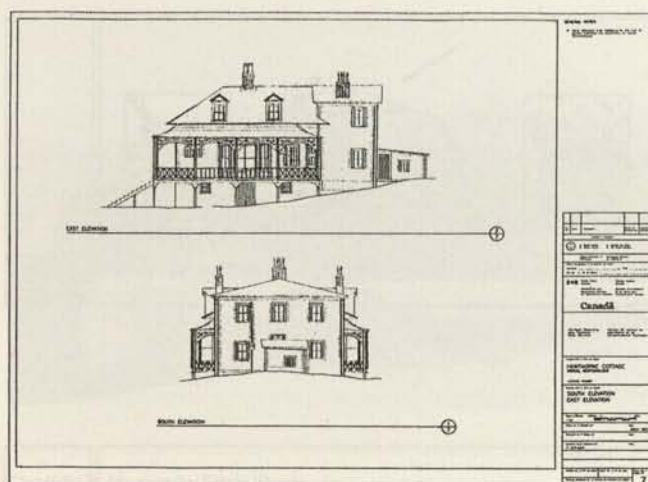
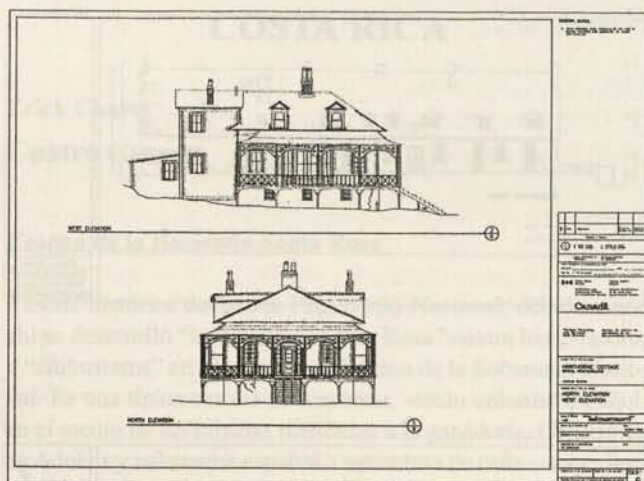
the east wing in 1806. The building and its location provide a good illustration of the construction and settlement patterns of early French Canada.⁴

As the waterways constituted the main access routes of France's colony in North America, the land was subdivided in narrow lots fronting on rivers. Settlers would first construct a temporary shelter and then proceed to clear the surrounding land. The shelter would later be replaced by a house made of square timber. Once a farmer was comfortably settled, he would build a stone addition to the timber house. The addition became the main house; the timber structure a summer kitchen. The timber building would eventually be replaced by a stone structure, resulting in a large rectangular residence made of whitewashed fieldstone.⁵

Troestler bought a square timber house in 1786 in Dorion, near Montréal, and 12 years later, he started to build his stone residence, which also served as a trading post. In its final form, the two-storey house measured 41.2 m by 11.9 m. The walls, made of local Potsdam sandstone, are one metre thick. The gabled roof, covered with cedar shingles, has a sharp 45 degree angle. To build his house, Troestler made use of contemporary French-Canadian construction techniques. With its main floor directly on the ground, its low walls and massive roof, and its central chimneys, the house possesses characteristics common to 18th century buildings of the St. Lawrence valley. Some innovations which first appeared in the 19th century can also be seen: the sharp angle and the overhang of the roof, the numerous openings on the two façades and the symmetrical disposition of the chimneys.

Maison Trestler

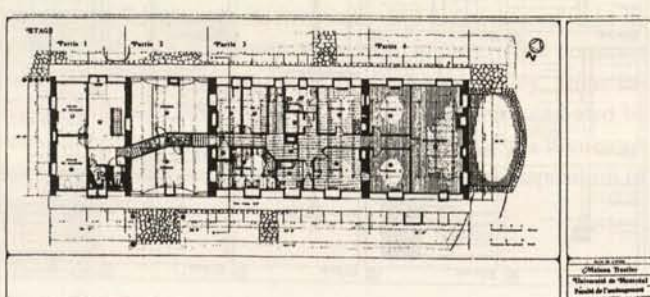
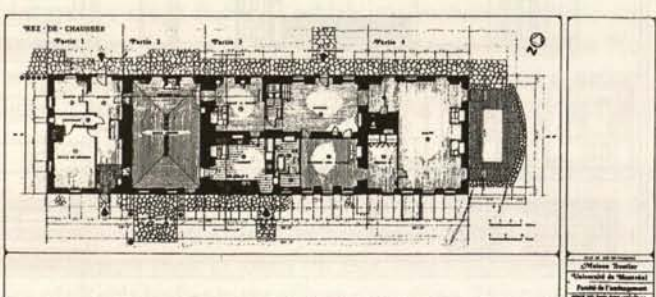
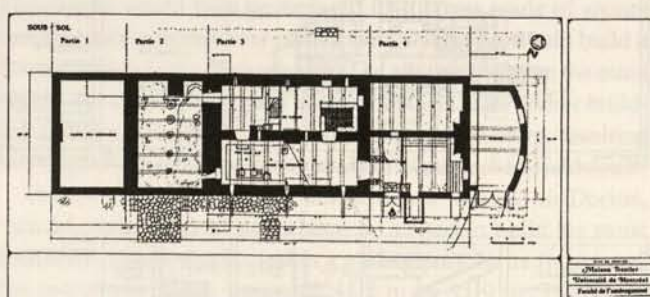
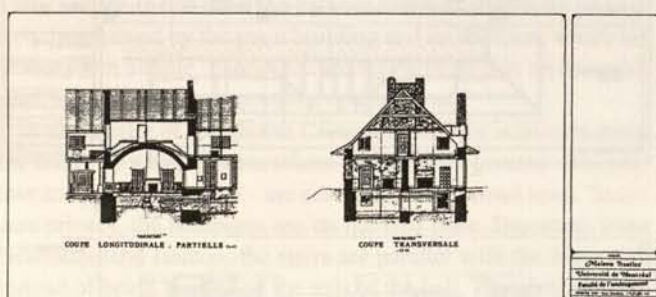
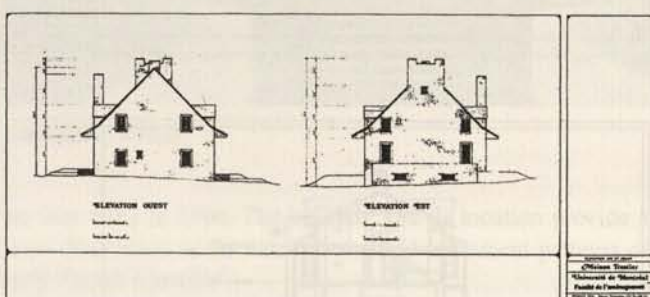
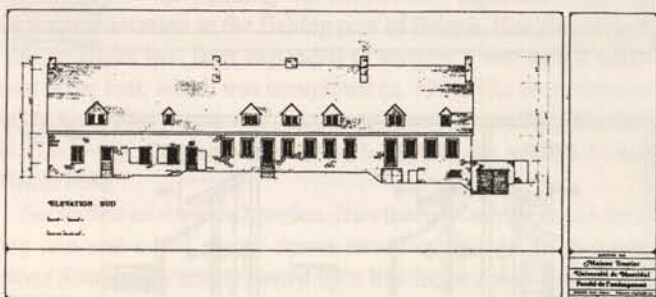
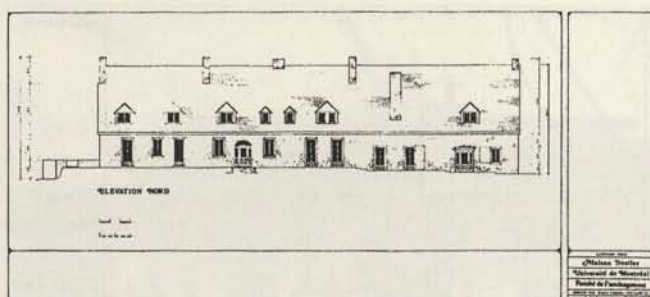
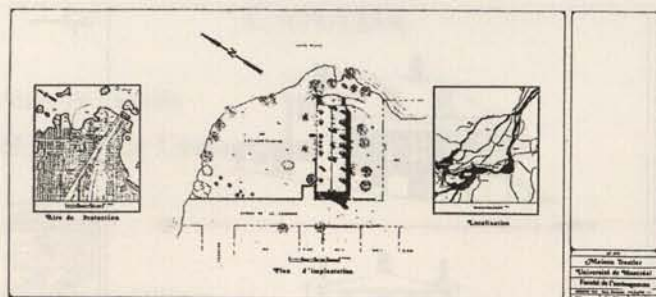




Drawings of Hawthorne Cottage

A distinguishing feature of the interior is found in the large vaulted room, which was used to store trading goods. This room measures 10.97 m by 6.31 m and is 11.88 m high. For security against fire and theft, the doors were made of iron. In urban areas, vaults are usually found in basements of commercial residences. The Trestler house is a rare example of a residence with a vaulted room on the ground floor.

In the first half of the 20th century, the Trestler house was bought by Gustave-Henri Rainville. He remodelled it in the Quebec revival style, then a fashionable interpretation of traditional local architecture, by installing several double dormers on the roof and by opening a central door on the north side. Rainville also did some remodelling in the interior, setting up false beams on ceilings in an attempt to embellish it.



Drawings of Maison Trestler (Université de Montréal)

Notes

- 1 Dana Johnson, "Hawthorne Cottage, Irishtown Road, Brigus, Newfoundland", Federal Heritage Buildings Review Office, Building Report 92-84, Ottawa, Ontario.
- 2 Gerald L. Pocius, "Architecture on Newfoundland's Southern Shore: Diversity and the Emergence of New World Forms", *Bulletin, Society for the Study of Architecture in Canada*, Volume 8, No. 2 (June 1983), p. 14.

- 3 Janet Wright, *Architecture of the Picturesque in Canada*, Studies in Archaeology, Architecture and History, Parks Canada (Ottawa: Minister of Supply and Services Canada, 1984), p. 28.
- 4 Marc de Caraffe et Nathalie Clerk, "La maison Trestler, 85, rue de la Commune, Dorion, Québec", rapport au feuillet, Commission des lieux et monuments historiques du Canada, Ottawa, Ontario, 1981.
- 5 Marc de Caraffe et Nathalie Clerk, "La maison Girardin, 600, avenue Royale, Beauport, Québec", *Ibid.*, 1982.

COSTA RICA

Erick Chaves

Cuatro Casas

Casona de la Hacienda Santa Rosa

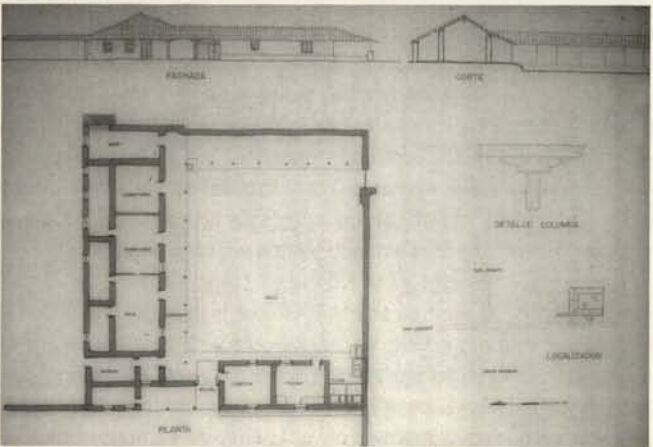
Casona histórica declarada Patrimonio Nacional, debido a que ahí se desarrolló “la Batalla de Santa Rosa” contra los invasores o “filibusteros” en año 1856, en defensa de la Soberanía Nacional. Es una típica casona de hacienda, -estilo colonial español- en el medio de las sabanas dedicadas a la ganadería. Construida en Adobes y bahareque español – estructura de caña – sobre horcones de madera como soporte principal, formando una canasta y rellena con una mezcla de barro con pasto y luego enlucida con cal. Cubierta de teja de barro – con algunas tejas de vidrio- para dejar pasar claridad al interior. Ubicada en el Parque Nacional Santa Rosa, Provincia de Guanacaste, al norte del país y cerca de la frontera con Nicaragua.



Casa de la Hacienda Santa Rosa

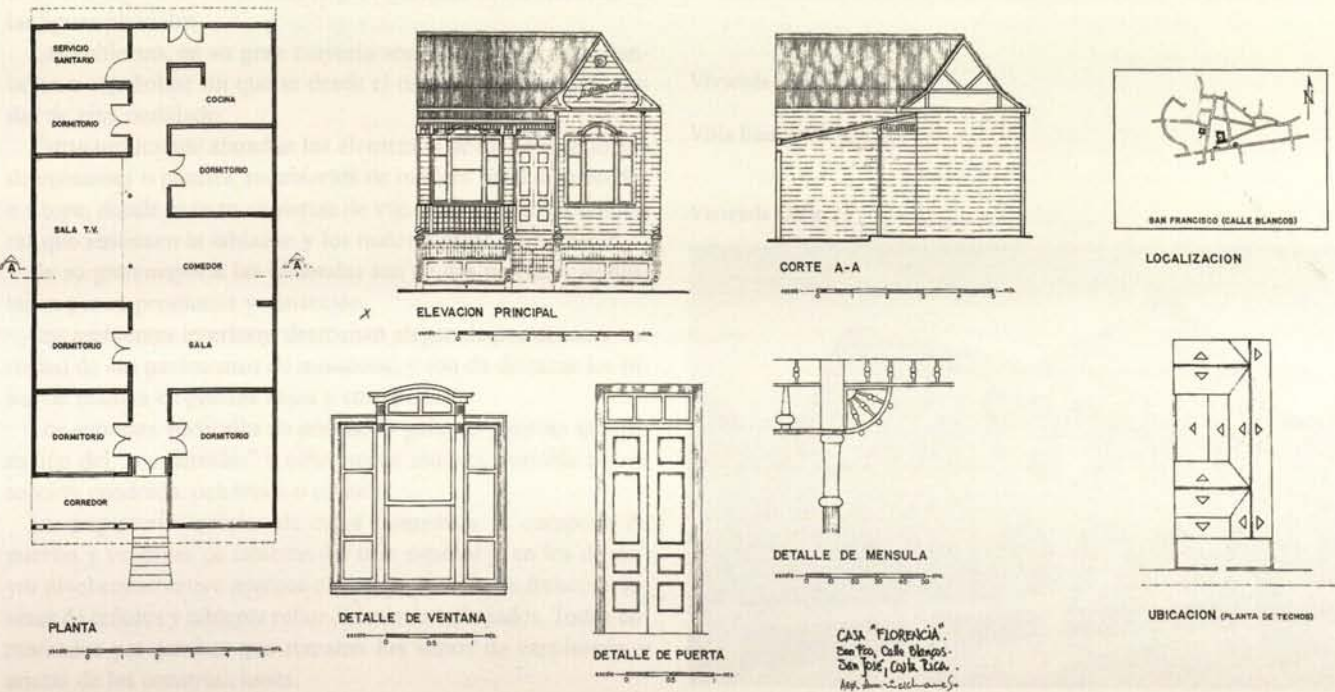
Casa de Hacienda en San Joaquín de Flores

Es con el cultivo de Café y su exportación, aproximadamente en el año 1850 que proliferan este tipo de casonas amplias en el medio de los cafetales, en la Provincia de Heredia, que se encuentra en la Meseta Central, altiplano montañoso que se caracteriza por su clima fresco y el cultivo extensivo de Café. Con una fuerte expresión urbana, por su cubierta texturada por los tejados de barro, hace gala de su estilo colonial español, de sus gruesas paredes de adobes y su gran patio central.



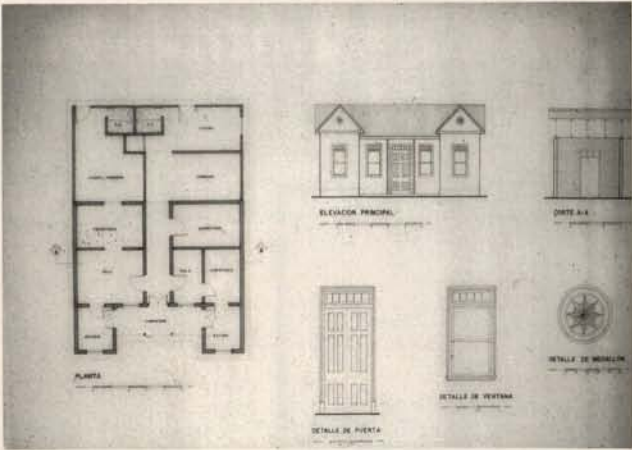
Casa de Hacienda en San Joaquín de Flores

Casa Florencia



Casa Florencia

Ubicada en San Francisco de calle Blancos, Provincia de San José, expresa ya la ajustada forma de vivir urbana, con una delicada influencia del Victoriano en madera, exalta su fina ornamentación a base de elementos torneados e industrializados, que se producen con la introducción de equipo para aserrío de madera, a partir de mediados del siglo pasado y dominan su volumetría la inclinada cubiera metálica con su característico hastial, portando su nombre "Florencia".



Casa en Cartago

Casa en Cartago

Influencia Victorina, en el Centro de Cartago, primera Capital de Costa Rica, construída en bahareque francés-estructura de madera con una malla metálica muy fina – sirviendo de soporte a una mezcla de cal y canto (arena con cal), a doble forro, de tal manera que quedaban las paredes huecas. Este sistema constructivo se hace común a partir del ingresos de metales al país, traídos de Francia, Inglaterra y Bélgica, en el último tercio del Siglo pasado y a principios del presente, muy probablemente posterior al terremoto de Cartago en 1910, que derribó la mayoría de edificios de la ciudad, que estaban construídos en adobes de tierra y que motivó a las autoridades a proscribir la construcción en tierra.



Casa en Cartago

CUBA

Irán Millán Cuetára

Vivienda Calle 35 y Villa Elena, Cienfuegos

Cienfuegos, “La Perla del Sur” fundada por colonos franceses en 1819, posee, entre otras, una zona residencial cuyos parámetros físicos resultan singulares en su trama urbana; tanto por sus características morfológicas, el hecho de poseer un único acceso vial y un diálogo constante con el mar que es quien rige, en última instancia, la configuración de esa península denominada Punta Gorda en el pasado siglo y reconocida en el presente como La Punta.

De carácter reservado para disfrute y esparcimiento en temporada de verano, su privilegiada posición en la porción más sur de la ciudad, se vio cualificada por la construcción en 1917 del simbólico Palacio de Acisclo del Valle, el restaurante Covadonga en 1920 y en 1958, la ejecución del Hotel Jagua.

Predomina en este asentamiento la función doméstica en sus 20 edificaciones, las que se sitúan al centro del lote rodeadas de jardines y patios que miran al oeste y hacia la línea de costa que delimita el contorno de la ciudad.

En las viviendas de madera se aprecia la influencia norteamericana del sistema constructivo conocido como Balloon Frame, que tipificó este tipo de construcción industrial de viviendas de madera, a la manera de muchos de sus homólogos ejecutadas al sur de Estados Unidos; pero en nuestro caso, prevalecen los elementos vernáculos que tanto distinguen nuestra arquitectura cubana.

Predomina también en estos inmuebles la distribución de plantas compactas, con techos que desaguan hacia el exterior y portales que bordean el frente y laterales; aunque también encontramos la tradicional planta en L, con patio lateral cuyas cubiertas declinan hacia el mismo para permitir la recolección de las aguas pluviales.

Las cubiertas, en su gran mayoría son de tejas; ya sean francesas o españolas; sin que se desde el uso de planchas acanaladas de zinc ondulado.

Estructuralmente abundan los elementos de madera en forma de columnas o parales, recubiertos de madera machihembradas o a tope, donde se usan cubiertas de viguetas, soleras o cumbreas que sostienen la tabla y los materiales de terminación.

En su gran mayoría las viviendas son de dos niveles y se destacan por su prestancia y distinción.

Los ambientes interiores derrochan elegancia por el uso y variedad de sus pavimentos de mosaicos; y son de destacar los pisos de madera en plantas bajas y entrepisos.

Los soportes verticales de portales y galerías generan la utilización del “pie derecho” o columna de madera, variable por su sección cuadrada, ochavada o circular.

La carpintería exterior de estos inmuebles se compone de puertas y ventanas de tableros del tipo español y, en los de mayor nivel constructivo aparece el uso de persianería francesa, lucetas de colores y tableros rehundidos más trabajados. Todos enmarcados por jambas que rematan los vanos de carpintería y aristas de las construcciones.



Vista General de Punta Gorda, Cienfuegos

La tradición popular de la herrería cienfueguera se proyecta en las ventanas a través de sencillos y funcionales barrotes metálicos, con escasa; pero elegante decoración en remates y centros.

Los elementos decorativos de estas edificaciones se ubican generalmente en sus fachadas y laterales. Sobresalen las barandas de celosías de madera que forman verdaderos cierres calados que brindan una elegancia transparencia y las clásicas barandas de hierro con pasamanos de madera, que nos llevan a patrones constructivos del siglo XIX cubano.

También llama la atención el uso de cartelas de diferentes motivos en forma de arcos ojivales, de medio punto, rebajados, o secciones de éstos, cual encajes entretejidos de madera que suavizan el meridiano caribeño hacia el portal, galerías y fachadas.

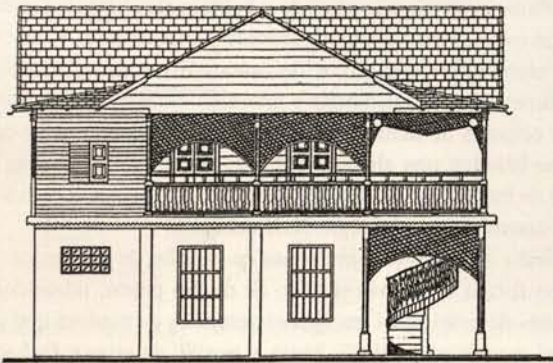
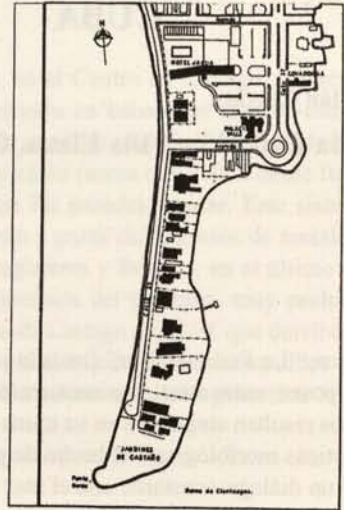
Lambrequeños metálicos o de madera y cubiertas a varias aguas que se rematan por pináculos centrales, a modo de pararrayos, completan el repertorio formal de este valioso conjunto que armoniza agradablemente patrones decorativos de aquí y allá, en un ambiente urbano culturalmente caracterizado, devenido hoy en un interesante y “sui géneris” conjunto, símbolo de esta hermosa ciudad marinera.

Vivienda Calle 35

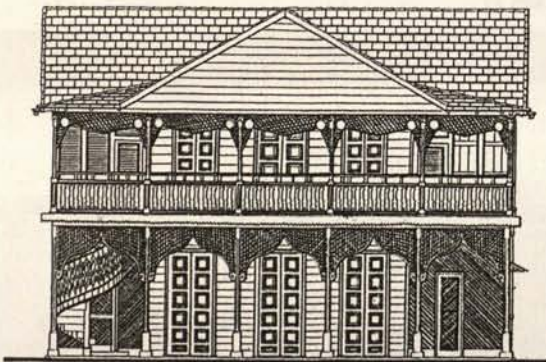
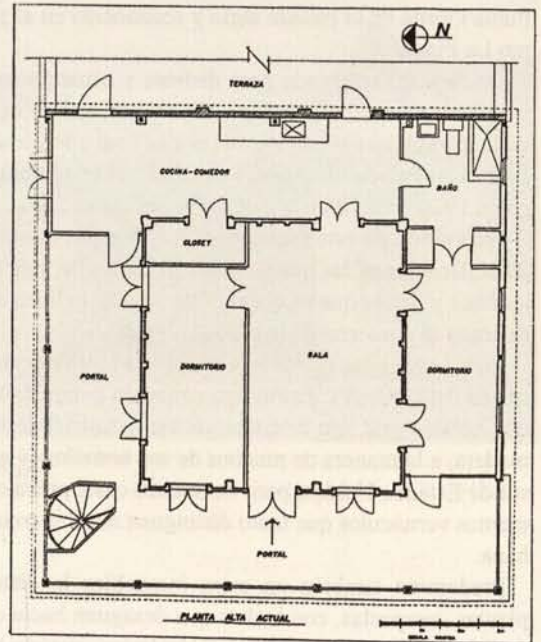
Villa Elena, Cienfuegos

Vivienda Calle 35

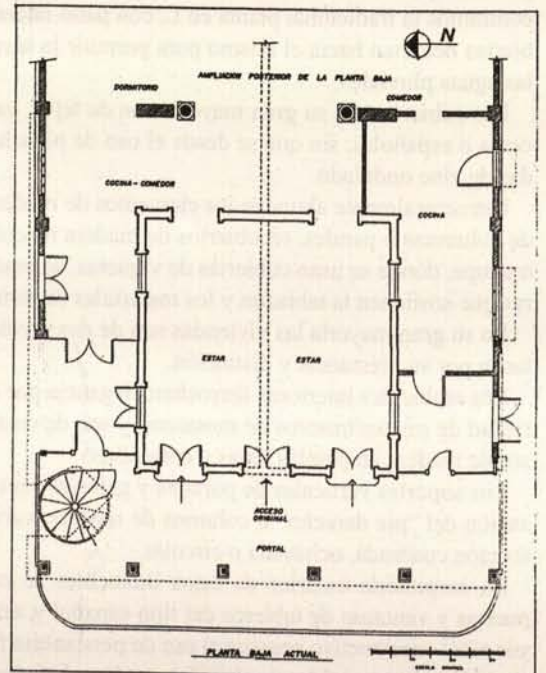


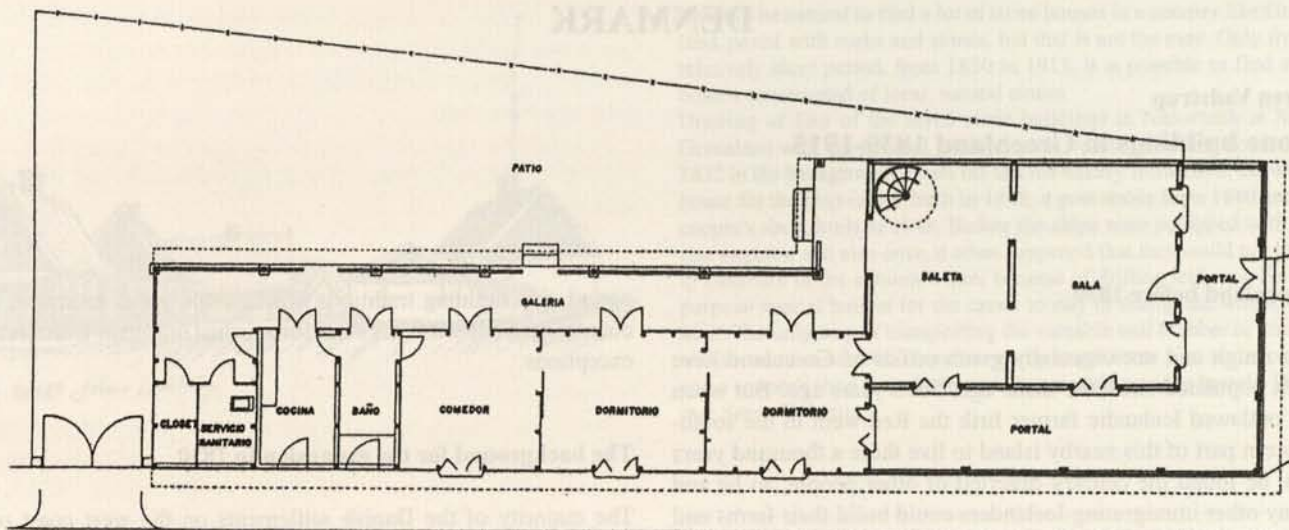


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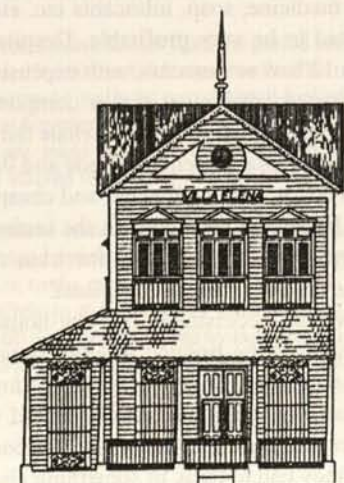
ELEVACION OESTE



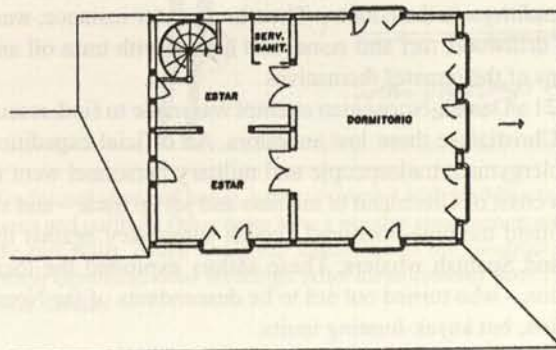


PLANTA BAJA

VILLA ELENA
 Calle 35 esquina Ave O
 Camaguey

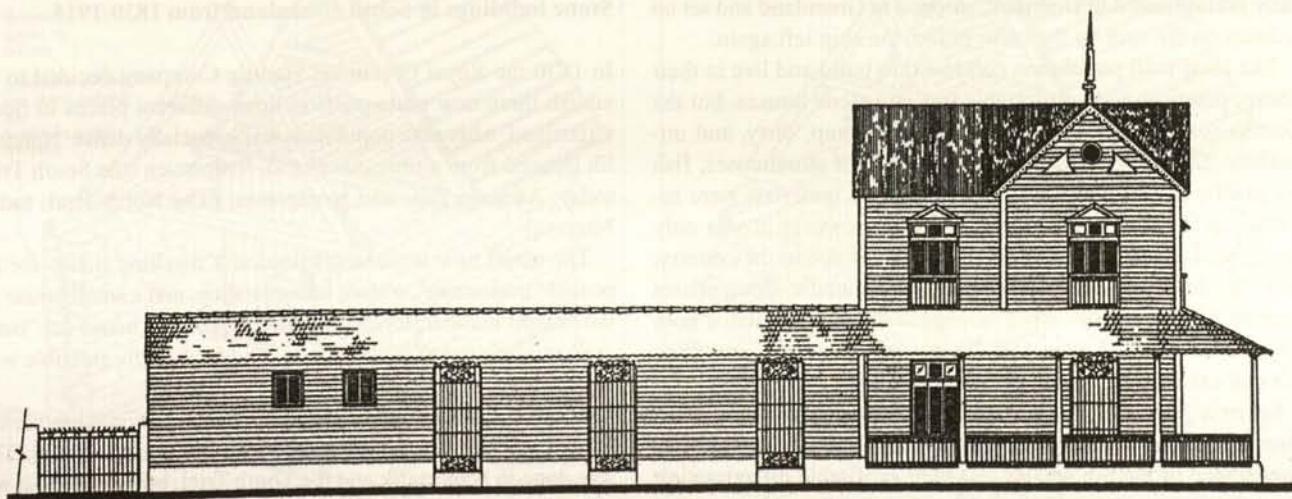


ELEVACION OESTE



ALTA

PLANTA ALTA
 VILLA ELENA



ELEVACION NORTE

DENMARK

Søren Vadstrup

Stone buildings in Greenland 1830-1915

Greenland before 1830

The rough and not especially green coasts of Greenland have been populated since the stone age, 5000 years ago. But when the outlawed Icelandic farmer Erik the Red went to the south-western part of this nearby island to live there a thousand years ago, he found the country deserted of other people, so he and many other immigrating Icelanders could build their farms and villages where they liked. It was Erik the Red who named the country "Greenland", because, as he said, a pretty name is necessary to tempt other people to go there. Branded marketing is definitely not a new phenomenon.

This happened around 1000 AD, but by about 1450 this so-called Norse population of farmers and fishermen, living in quite big turf and stone-houses, seems to have left the country again, due to an extreme worsening of the climate and perhaps also to a struggle with a new inuit immigration. This partly nomadic hunters' culture was totally adapted to the climate and the other conditions in the country. Their houses, for instance, were built of driftwood, turf and stone, and heated with train oil and by means of the inmates themselves.

In 1721 a Danish-Norwegian attempt was made to find, rescue and re-Christianise these lost ancestors. An official expedition with a clergyman, tradespeople and military personnel went to the west coast of Greenland to mission and set up trade – and also to defend the time-honoured Danish supremacy against the Dutch and Spanish whalers. These sailors exploited the local population – who turned out not to be descendants of the Norse population, but kayak-hunting inuits.

The Danish remedy against the foreign intruders in Greenland was to establish small trade-posts and bases along the west coast. With this end in view, they introduced a Norwegian building technique of loghouses, boarded half timber houses and turf and stone houses. For practical reasons, loghouses and boarded half timber houses were primarily used, because they could be fully prefabricated in Denmark, shipped to Greenland and set up quickly on the spot by the crew, before the ship left again.

The local inuit population continued to build and live in their cheap, practical and comfortable turf and stone houses, but the Danish settlers regarded these houses as damp, dirty, and unhealthy. They refused to live in them. But for storehouses, fish oil plants, staples and workshops, the stone materials were regarded as a cheap and suitable material. However, it was only relatively late, after a hundred years of presence in the country, that the Danish settlers and their Greenlandic descendants learned to build "real" stone houses. And they learned it both from the Norsemen, who had disappeared long ago, and from the still existing local inuit building tradition.

So in a period of 85 years between 1830 and 1915, when Greenland was suffering an economic crisis because of the disappearance of the big whales and their profitable oil extraction from the coasts, about 130 stone houses, small and large, were erected in various locations along the coasts. But after this short

period, this building tradition, which would seem natural in a country "paved" with rocks and stones, died out again with a few exceptions.

The background for the expansion in 1830

The majority of the Danish settlements on the west coast of Greenland, still existing as the main towns in the country, were established during the years 1728-1775. The purpose was partly to Christianise the population, partly to sell and buy products. From 1775 to 1800 the Danish State concentrated a lot of efforts and economy on whaling, particularly in the North Greenland Inspectorate. Train oil was a major economic factor at that time, as it was used for house heating, street lights in the big European towns, for medicine, soap, lubricants etc. etc., so this business was expected to be very profitable. Despite enormous investments with 12 new settlements, with expensive log-houses, vessels, and posted whalers, it was a complete fiasco. In some places they only caught one single whale during these 25 years.

But what the Royal Greenland Trade and Whale Company did realize was that it was much easier and cheaper to *buy* the highly coveted blubber of seals, which the inuits were hunting and landing anyway, and utilise this for train oil by heating and pressing the blubber in local "oil-plants".

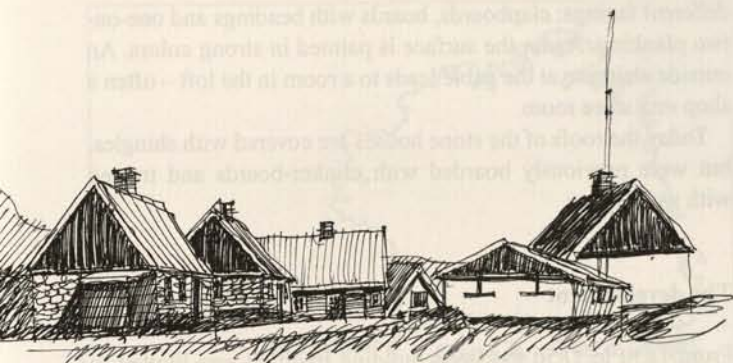
This, however, necessitated that the houses and settlements were moved from the isolated whaling stations to new trading stations, placed where most of the population lived. This could be done relatively easily in North Greenland, where the whalers' houses were loghouses, constructed of wood, but in Southern Greenland they had to think of something else, as there were no unused wooden houses, and no money. After the whaling failure, the coffers were empty.

Stone buildings in South Greenland from 1830-1915

In 1830 the Royal Greenland Trading Company decided to establish three new trade-posts in three different places in South Greenland, where the population was especially dense: Nanortalik (moved from a previous place), Sydprøven (the South Trial; today: Alluisup Paa) and Nordprøven (The North Trial; today: Narssaq).

The small new settlements needed a dwelling house for the posted "tradesman", a store house, a shop, and a small house for the bought blubber, sometimes also a bakery, a house for "burning" and "pressing" blubber to oil and a house for possible wintering crews.

At the beginning it was regarded as necessary to ship prefabricated wooden dwelling houses from Denmark as usual. This was done to Nanortalik and the South Trial, but presently it was clear that it was possible to build suitable houses, entirely made of local stone. A contributory factor to this was also that the



Nanortalik, 20.8.80 Søren Vadstrup

Because of its enormous size compared with Denmark, Greenland was from the beginning divided into two parts, with two separate administrations: The Northern Inspectorate and the Southern Inspectorate. It is interesting that the construction techniques of the locally built stone houses, erected from 1830 to 1915 in the northern and the southern parts of the country, are entirely different, with hardly any parallels.

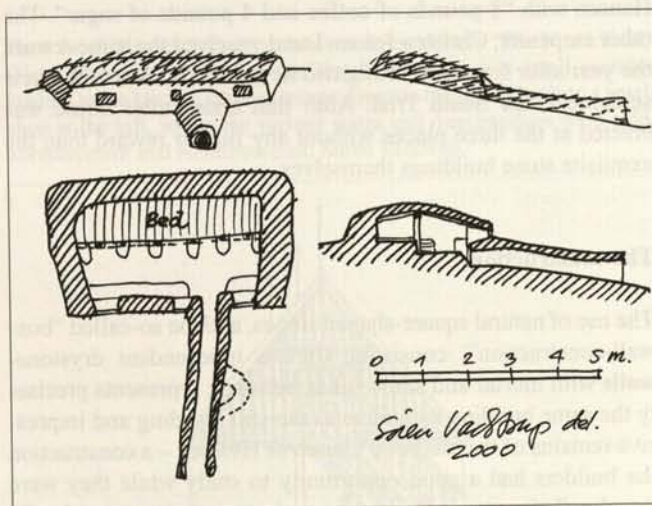
a. In the South Greenland stone houses from the period between 1830 to 1925 the roof is carried by 60 cm-thick stone walls. The roof construction is secured to the stone walls by two dovetail-locked wooden anchors, fastened to the lengthwise head beam, under the rafters. In this construction, there are many parallels to the medieval Norse stone house, which can be studied from many ruins in South Greenland.

b. In the North Greenland stone houses from the period between 1830 to 1915 the roof is carried entirely by an interior wood construction with hardly any connection to the massive stone walls. In this construction, there are many parallels to the traditional inuit turf and stone house, which in 1830 was still used and inhabited by the local inuit population. Like in these, there is no carrying capacity on the outer walls. Drawings: Søren Vadstrup.

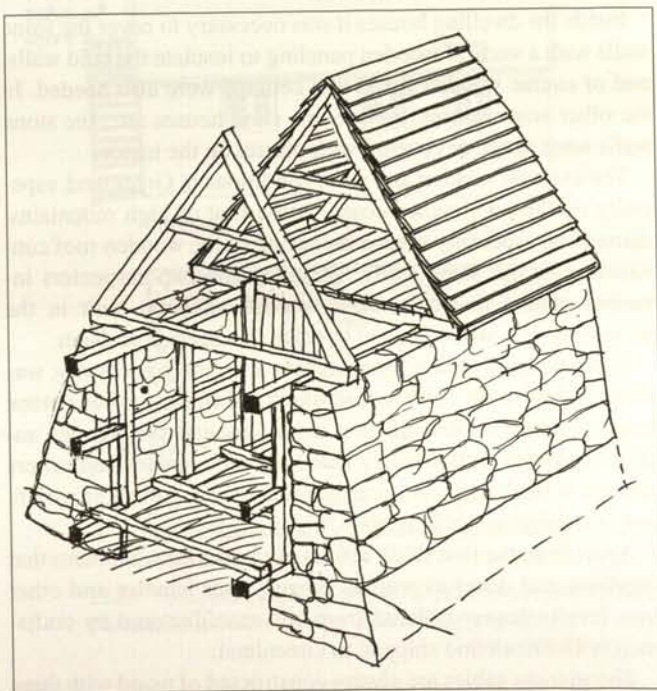
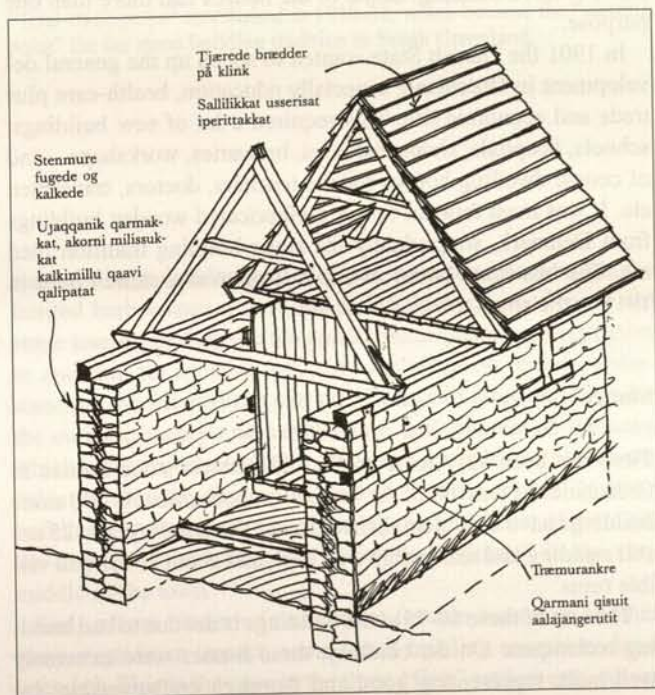


◁ It would be natural to find a lot of stone houses in a country like Greenland, paved with rocks and stones, but that is not the case. Only from a relatively short period, from 1830 to 1915, it is possible to find stone houses constructed of local, natural stones.

Drawing of four of the seven stone buildings in Nanortalik in South Greenland with the delayed, prefabricated wooden dwelling house from 1832 in the background. From the left the bakery from 1840, the winter house for the ship crews, built in 1848, a goat stable from 1840 and the cooper's shop, built in 1848. Before the ships were equipped with marine engines, and also later, it often happened that they could not return to Denmark in the autumn/winter because of drifting icebergs. For this purpose special houses for the crews to stay in during the winter were built. The only way of transporting the valuable seal blubber or train oil was in wooden barrels. Therefore every larger trade post had a cooper and a cooper's shop to make these indispensable wooden barrels. Drawing: Søren Vadstrup.



Traditional inuit turf house, here constructed with load-bearing ceiling-posts and purlines. Other types have a wooden construction inside along the turf walls, which has given inspiration to the construction of the North Greenland stone buildings. After measurements from 1828/29 by W.A. Graah.



Company chose to use native-born Greenlanders as local "tradesmen".

We know in detail how the decision to build the first stone houses was reached. On the one hand the fact that the wooden houses for the three new settlements were delayed for two years, and on the other hand that the big grass plain at the North Trial (Narssaq) had been used as settlements for the Norse farmers in the Middle Ages and was therefore full of ruins from their big stone houses, "with lots of good building stones" as the carpenters Hans Jacob Hansen and Christen Jensen Lund afterwards recounted, was decisive for the construction of the first stone house. Work was much easier than expected, so the house could therefore be finished and inhabited in the same year.

The Chief Inspector for the South-Greenland Inspectorate, who visited the house in 1831, was so pleased with the result that without hesitation he rewarded the master carpenter Hans Jacob Hansen with "8 pounds of coffee and 4 pounds of sugar". The other carpenter, Christen Jensen Lund, received the same reward the year after for constructing two new stone houses at the new settlement, the South Trial. After that house after house was erected at the three places without any further reward than the exquisite stone buildings themselves.

The construction

The use of natural square-shaped stones, and the so-called "box-wall-construction", consisting of two independent drystone-walls with mortar and stone fill-in between, represents precisely the same building technique as the still standing and impressive remains of the medieval church of Hvalsey – a construction the builders had a good opportunity to study while they were "stealing" the stones from the nearby ruins. So not only the Norse settlers' building technique, but also many of their stones were reused.

Probably as a "new" thing in 1830, they chose to cover the stonewalls with lime plaster and afterwards lime-wash the surface in white, yellow or red colors. No attempt was made to smooth down the surface; it was left to expose the uneven and rustic character of the stonewalls.

Inside the dwelling houses it was necessary to cover the stone walls with a vertical wooden paneling to insulate the cold walls, and of course wooden floors and ceilings were also needed. In the other stone houses, workshops, store houses etc., the stone walls were rough or covered with plaster on the inside.

The extreme weather and wind conditions in Greenland, especially on the unprotected coasts at the foot of high mountains, demand an especially secure anchoring of the wooden roof construction to the stone walls. Therefore the two carpenters invented special dovetail-locked wooden anchors, built in the stone masonry, which proved to solve this special problem.

That this constructive precaution is absolutely necessary, was shown as late as in 1978 in Nanortalik, when the roof of a stone house from 1839 blew off in a storm, because the wooden anchors had been unthinkingly attached to the gables and rafters and not to the lengthwise head beam under the rafters, therefore only securing the gable itself.

Apart from the first stone houses, we know from accounts that windows and doors as well as hinges, door handles and other iron furniture were ordered from and manufactured by craftsmen in Denmark and shipped to Greenland.

The triangle gables are always constructed of wood with three

different facings: clapboards, boards with beadings and one-on-two planking. Again the surface is painted in strong colors. An outside staircase at the gable leads to a room in the loft – often a shop or a store room.

Today the roofs of the stone houses are covered with shingles, but were previously boarded with clinker-boards and treated with wooden tar.

The development

From 1830 to 1850 the stone building tradition was limited to the southern part of South Greenland, more precisely to the Julianes-Haab District, where no fewer than nine new trade posts were established, all supplied with two or more new stone houses. At the same time in the main town of the District, Julianehaab, three new stone houses and in the three first Trial settlements from 1830 about nine new stone houses were built, thus altogether 30 stone houses during these first 20 years.

After 1850 the stone building traditions spread north to the rest of the South-Greenland Inspectorate, especially to the main towns of Frederikshaab (Pamiut), Godthaab (Nuuk – now the capital of Greenland), Sukkertoppen (Maniitsoq) and Holsteinsborg (Sisimiut).

The most productive period was between 1850 and 1870 when 37 stone buildings were erected in South Greenland. Among these are 9 store houses, 6 dwelling houses, 6 shops, 5 train oil plants, 2 workshops, 4 schools, 4 small chapels, 1 church and 1 hospital.

Especially in the Sukkertoppen District the stone houses became a characteristic feature, with their bright, luminous white, yellow or red lime colors – both the publicly built houses, of which there were 20 in all, as well as a lot of the privately built stone houses.

Among the total amount of about 100 stone houses in South Greenland there were 23 store houses, mostly for seal train, 12 workshops, 12 dwelling houses, 4 houses for ship crews in the winter, 13 shops, 5 train oil plants, 4 houses for storing gunpowder, 5 schools, 15 small chapels, 1 larger church, 5 hospitals and 1 archive building. Some of the houses had more than one purpose.

In 1901 the Danish State wanted to speed up the general development in Greenland, especially education, health-care plus trade and economic life. This required a lot of new buildings: schools, hospitals, shops, bakeries, breweries, workshops – and of course dwelling houses for the teachers, doctors, tradesmen etc. It was most rational to use prefabricated wooden buildings from Denmark, so gradually the stone building tradition died out. The last stone house in this manner was a church built in 1915 in the small town of Atammik.

Status

Time has been very hard on the old historic stone houses in Greenland. At least 60 of the originally approximately 100 stone buildings have been demolished during the last 50 years. 25 are still standing and reasonably well kept, and about 15 are still visible ruins.

The loss of these 60-75 stone buildings is not due to bad building techniques. On the contrary, these houses were extremely well built, representing good and thorough craftsmanship. In-



Map of Greenland, showing the Julianehaab District with the three new "Trial-trade-posts" established in 1830-32, which became the "starting point" for the stone building tradition in South Greenland.

stead the huge development pressure in the town centers and the limited harbor spaces have led to the destruction of many old stone houses, as they are too small, inconvenient and expensive to maintain for modern use. Very few decision-makers understand the special qualities and significance of these buildings for the cultural history and architectural environment of the town which has been entrusted to their care. Especially the main town Julianehaab, today Qaqortoq, has lost 17 of the original 24 stone buildings, among them one of the biggest and finest of them all, the impressive and forceful "White Store House" in the very middle of the town.

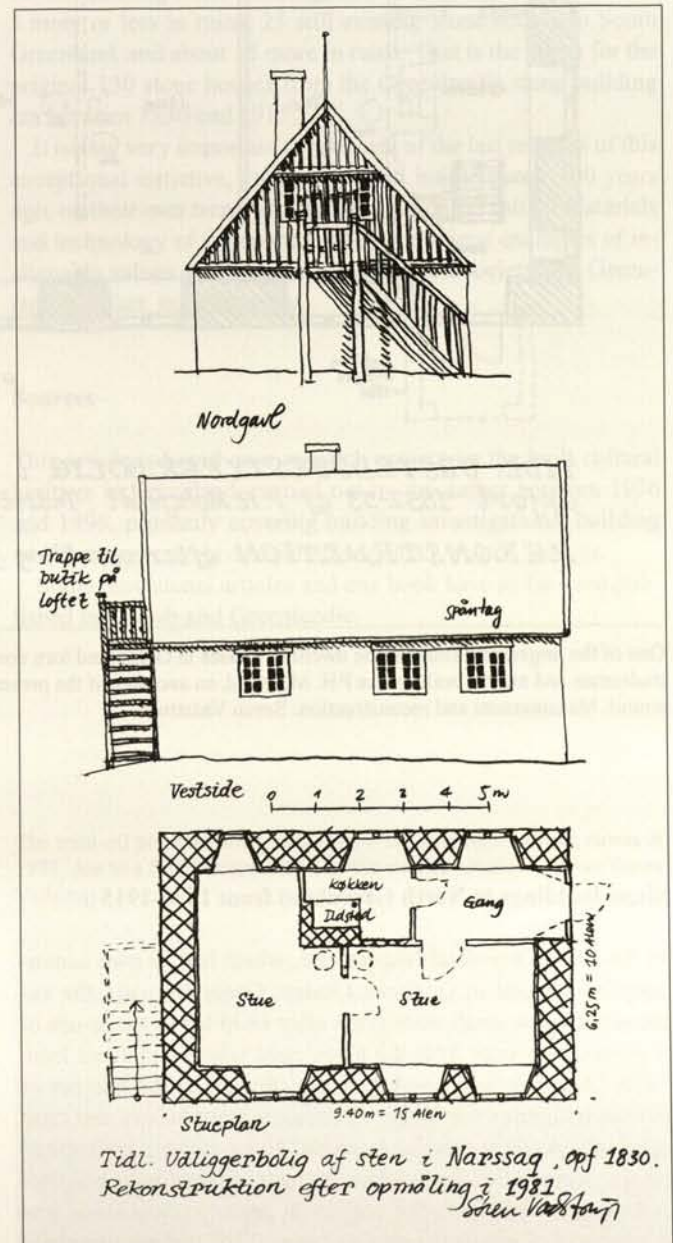
Only where modern development for one reason or another has not made an impact, some intact building ensembles have been left. This is the case in the three "first" settlements, where

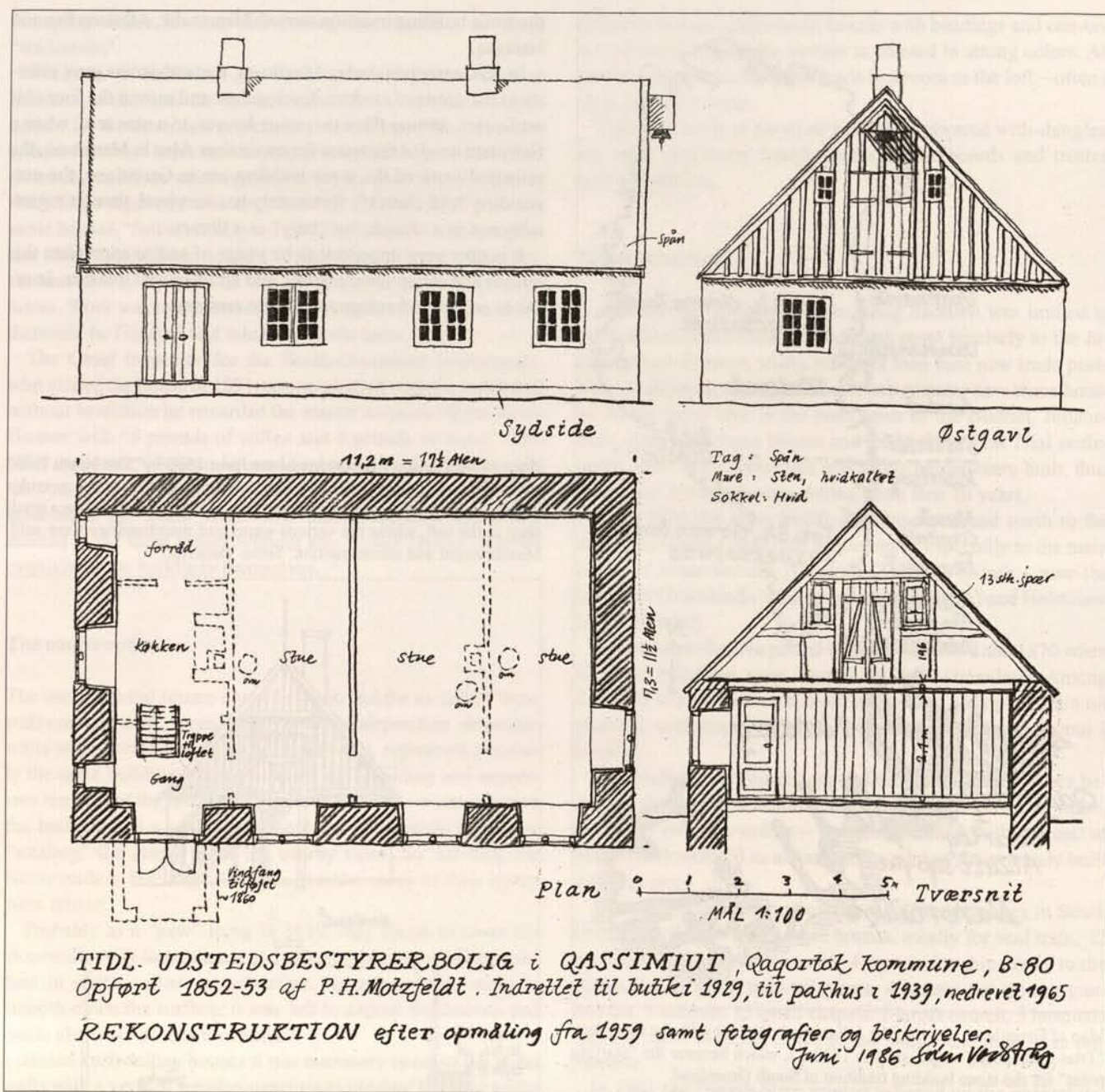
the stone building tradition started: Nanortalik, Alluisup Paa and Narssaq.

In Sukkertoppen, today Maniitsoq, the authorities gave priority to the needs of modern development and moved the four oldest houses, among them two stone houses, to a new area, when a fish plant needed the space for expansion. Also in Maniitsoq, the principal work of the stone building era in Greenland, the outstanding "old church", fortunately has survived, though regrettably not as a church, but "only" as a library.

It is now very important to be aware of and to appreciate this unique and exceptional historic and architectural treasure, in order to secure and safeguard the last remains.

Hans Jacob Hansen's first stone house from 1830 in "The North Trial" (Now: Narssaq). Inside the dwelling house there is a small corridor leading to the kitchen and two rooms. Outside the ladder leads to a small shop at the loft, where the various wares and merchandises were sold. Measurement and reconstruction: Søren Vadstrup.





One of the largest and finest stone dwelling houses in Greenland torn down in 1974 was the tradesman's house in Qassimiut, built in 1852-53. The tradesman and master builder was P.H. Motzfeldt, an ancestor of the present prime minister of Greenland, Jonathan Motzfeldt, who was born in Qassimiut. Measurement and reconstruction: Søren Vadstrup.

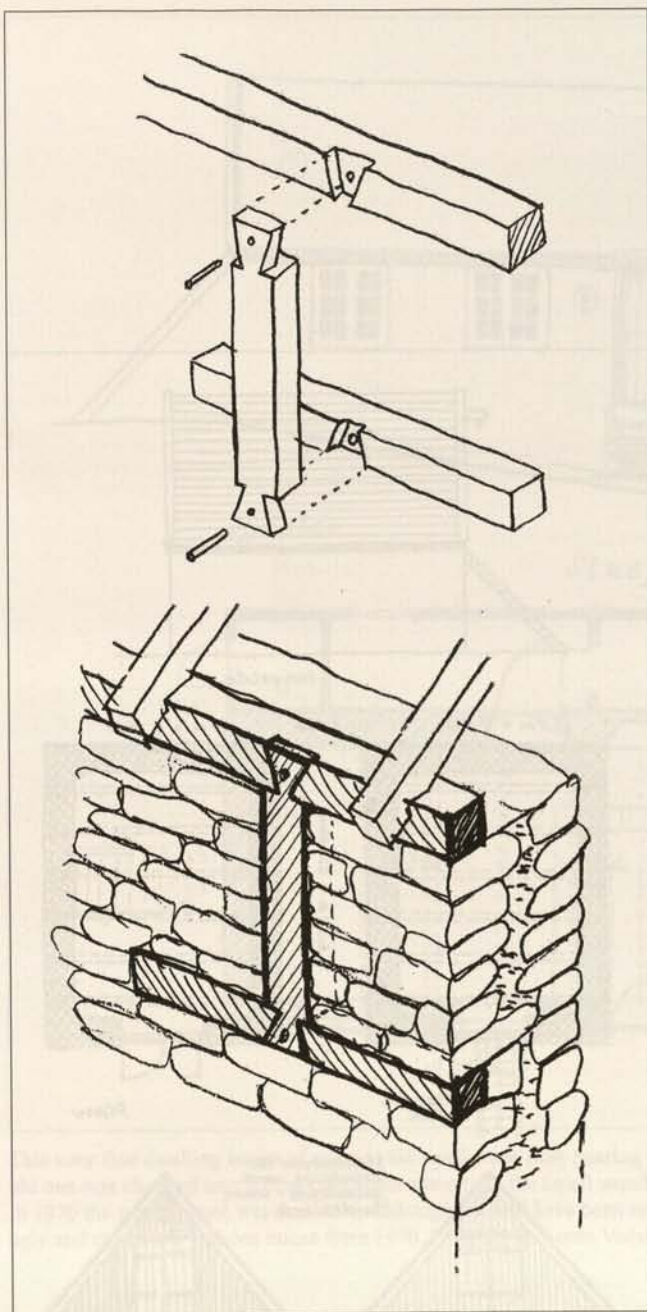
Stone buildings in North Greenland from 1830-1915

In the North Greenland Inspectorate, which had its own administration situated in Godhavn (Today: Qeqertarsuaq), the expansion of new small trade posts after 1830 led to the re-use of the wooden houses from the abandoned whaling stations from 1775-1800. But here also creative craftsmen built a number of new stone houses for shops, workshops, store houses and train oil plants. As there were no medieval Norse ruins to be inspired by, they copied the construction of the traditional inuit houses.

As mentioned above, the traditional inuit dwelling house was constructed of driftwood, turf and stone. The turf material can-

not be load-bearing, as it will constantly shrink and sink, so the nearly flat roof of laths, covered with turf and made weather-proof with seal-skins, is carried by a rather flimsy interior construction of driftwood. Here there were various types, either with the carrying capacity in the middle with ceiling posts and purlines as a wood-construction inside along the turf walls.

A special detail is the low entrance without a door, but with a kind of open "cold-lock". The roof also had a ventilation hole which could be opened when draught air was needed. Turf houses were quite dark. Apart from small holes, closed with a thin membrane of intestine which could give some light, no glass-windows were used before about 1890.



Special dovetail-locked wooden anchors, securing the lengthwise head beam under the rafters to the stone walls, and thus preventing the wooden roof construction from blowing off in the very windy climate. Drawing: Søren Vadstrup.

Because of the slight dimensions and the humid conditions, and probably also due to a lack of interest, none of these traditional turf houses have survived in Greenland until today. Some of the local museums have made new copies, but with modern materials, just to show what they looked like.

The construction of the North Greenlandic stone house

Only about 10 still existing stone houses, out of the originally 15 erected in North Greenland from 1830-1915, show authentic evidence of this old construction, made by local builders. But in-

stead of turf and stone, the walls here are constructed entirely of solid stone, and even with the same slanting walls as if they were made of turf. Despite the fact that the stone walls can easily carry any roof-weight without sinking one inch, the roof is still carried by an interior construction of wood, just like some of the traditional Greenlandic turf-houses.

The roofs of the stone houses are of course not flat but 40-45 degrees, in many cases covered with gray slate, which, in connection with the often "uncovered" rustic stone walls, creates a very solid and impressive "all stone look". The few windows are placed very deeply in the walls and are therefore dark looking, which also gives these houses a specially rough and unapproachable architectural expression.

In North Greenland the stone houses are mostly used as store houses for train, or train oil plants, workshops or shops.

The sizes can be quite big. The largest stone house in Greenland, a train-oil plant situated in Umanaq, is 14 x 30,5 metres.

General status

10 still existing stone buildings in North Greenland, plus about 5 more or less in ruins, 25 still existing stone houses in South Greenland, and about 15 more in ruins: That is the status for the original 130 stone houses from the Greenlandic stone building era between 1830 and 1915.

It is now very important to take care of the last remains of this exceptional initiative, created by local builders over 100 years ago, on their own terms and with the use of the natural materials and technology of the country. They are unique examples of inalienable values and bearers of identity in a society like Greenland – in fact, in any society.

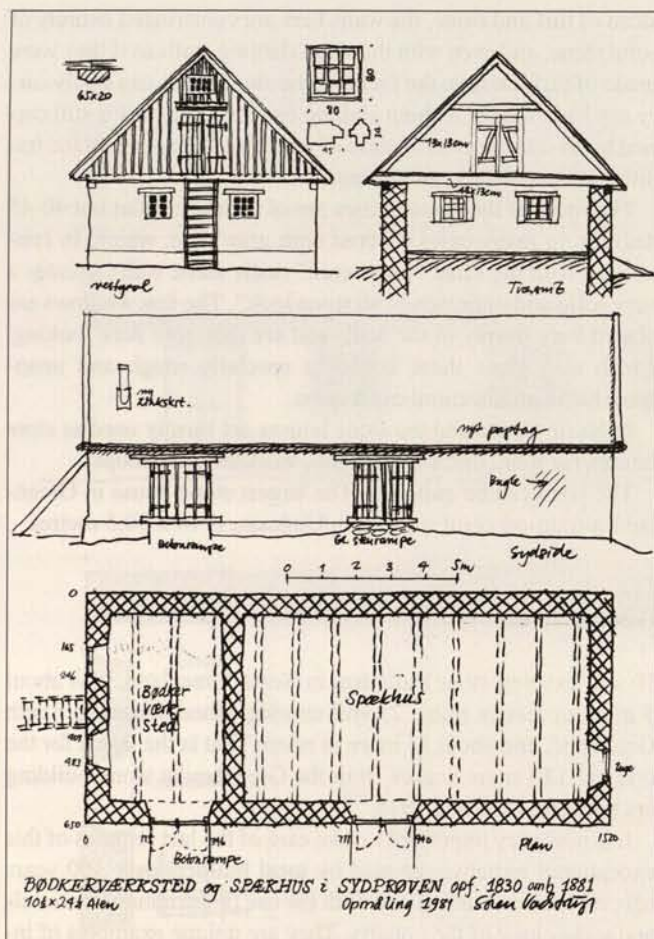
Sources

This article is based on a research project on the built cultural heritage in Greenland, carried out by the author between 1976 and 1996, primarily covering building investigations, building measurements, archive material and other written sources.

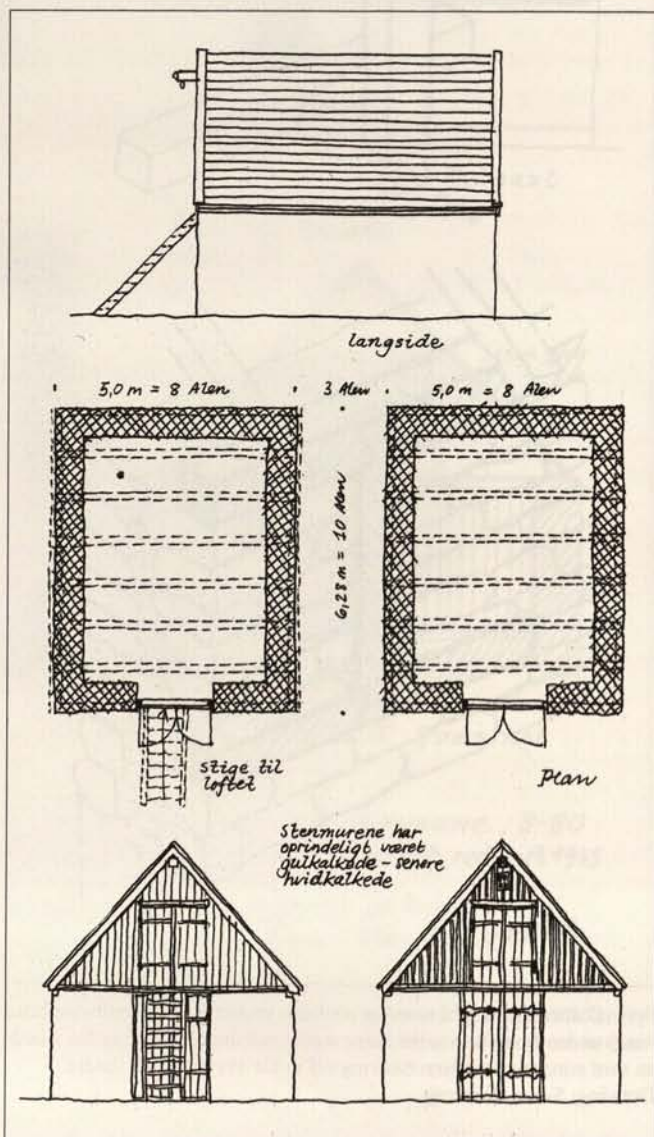
Some provisional articles and one book have so far been published in Danish and Greenlandic.

The train-oil plant in Nanortalik, where the roof blew off in a storm in 1978, due to a faulty construction of the wooden anchors. Photo: Søren Vadstrup.





The first stone house in Alluitsup Paa ("The South Trial") was this train house from 1830, enlarged in 1881 with a small coopers' shop. The house still exists, but the coopers' shop was closed down long ago. Measurement: Søren Vadstrup.



The old smithy in Qaqortoq (Julianehaab), built in 1871, enlarged in 1940 and used today as the local museum. Photo: Søren Vadstrup.



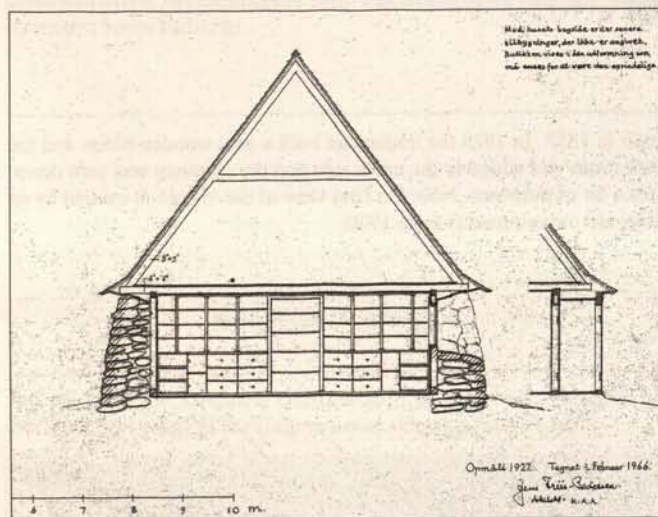
Reconstruction of the original appearance of the two twin stone houses in Atammik, built within seven years and app. 2 meters distance in 1890 and 1897.

The oldest, to the left, was originally the train house with a small shop in the loft.

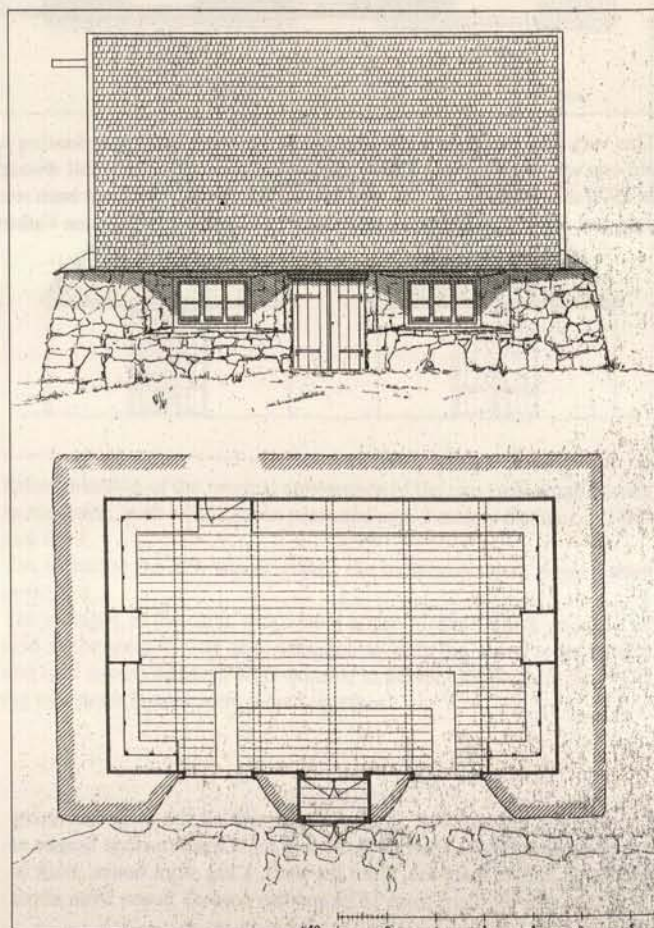
The younger, to the right, was a store house for the Danish goods to be sold in the shop. It was quite common to keep the wares to be bought and sold in two different store houses, to prevent mixing. In the 1920s the two stone houses were joined together.



The principal work of the stone building area in Greenland is undoubtedly the big church in Maniitsoq (formerly Sukkertoppen). The church has been converted into a library.



The old shop in Upernavik, erected in 1864. An example of the North Greenlandic stone building tradition, where the bearing construction, despite the extremely solid outer walls of stone, consists of an interior wood construction. The loft is used as a store room, although due to the rather large span of the beams there were limits as to the weight they could carry. Inside the shop the few windows create quite a dark atmosphere, so kerosene lamps are necessary all day. The typical shelves and drawer furniture are fortunately still kept in the house, although they are out of use at the moment. Measurement: Architect Jens Friis-Pedersen, 1928.





Cross-section showing the interior of a traditional inuit turf house, drawn by the Greenlandic painter Jakob Danielsen (1888-1938) in 1900. This house, he writes, was old-fashioned without any wood inside, but large, good skins hung on the walls as hangings and there were thick reindeer skins on the settle so that the house was comfortable. The blubber lamp could easily and quickly warm it up.



This old stone train house in Uummannaq in North Greenland – now a store house – is an important part of the unique built environment in the city center as it forms one of the “walls” in a little central square.



The former train oil plant and train house in Uummannaq is, with its 14 x 30,5 metres, the largest stone house in North Greenland.

Some of the old Greenlandic stone houses are situated in abandoned settlements, where they suffer from oblivion and neglect. Big holes in the roof and stone walls portend an approaching death. Here two stone houses in the abandoned settlement of Narssalik, in the foreground the store house and shop from 1895, and behind the train house, erected in 1871.



FINLAND

Kirsti Kovanen

Conservation of the built vernacular heritage in rural and urban areas

The Finns are said to originally have been settlers and they love to foster this myth even nowadays. The idea derives from the time when vast areas of the country were inhabited by families that practised swidden culture. The uninhabited forest was slowly conquered from the 14th to the 18th centuries. Later, in the 19th century, the slash and burn cultivation was practiced even on a larger scale by the descendants of the first settlers. During this period many traditional farming methods and building types were developed. A typical view of the rural landscape is still one farm yard in the middle of its fields, surrounded by forest. The farm yard is the basic unit of a rural settlement. The patterns of the settlements owe much to several land divisions that have been implemented during the past three centuries.

The earliest land division was an open field system of the southern and southwestern parts of the country, elsewhere the land was divided in larger units. The "big deal" – a general parcelling – was executed throughout the land, starting in the southern parts in the 18th century and continuing until the 20th century. From 1848 on a new general division system, the "new deal", was introduced (*uusjako*). This parcelling is still being executed in the northern parts of the country. After these operations the early settlements also lost their first dense pattern. In some places the earlier pattern can be traced using the old division maps and modern maps, and sometimes seen in the landscape as ditches or fencing.

The rural village is traditionally roughly divided into categories characterised by the location or pattern of the settlement. A row village (*rivikylä*) is typical of the western and other flat parts of the country. A hill village (*mäkikylä*) built on the slopes of a ridge or hill is typical of the eastern and central parts of the country. In a road village (*raittikylä*) the houses are built close to each other and to line the roads. This type can be found throughout the country. In a group village (*ryhmäkylä*) even 20 houses could form a dense and irregular pattern.

The basic unit is a house that consists of several separate buildings. The buildings have developed in the traditions connected with the soft wood techniques – horizontal log and light timber frame techniques. The traditional building materials are still available within a short distance. The buildings are covered with pitched roofs. The basic building techniques and yard forms which were originally created and developed in the rural buildings, were later adopted by all buildings, public and private, rural and urban. The influences from outside spread in rings, from the towns and municipal centres to the rural places.

Fishing villages on the shoreline of the gulfs of Finland and Ostrobothnia are characterised by the barren and stony shoreline, piers and log buildings built of wood, the lay-out of the fields and yards that are common also in the inland country, and the land division in a comb pattern to form long and narrow lots to allow every house the immediate approach to the shoreline. The biggest of these villages built their own gathering halls and churches. The fishing village is the best preserved of all types, with only some of the social features lost in recent decades.

The most "urban" village type is the municipal centre that was actually born in the 1860s when the land trade was freed and the local administration established. The new village centre was built around the church by the new settlers, house by house to line the roads leading to the church. The buildings were executed in the same pattern as the rural types, the techniques being the common carving and sawing techniques, but the houses received the most modern wallpapers and weatherboarding and were equipped with modern technical installations.

Since the 17th century those towns we now call wooden towns were built on a gridiron plan. Many of them grew slowly and remained small for centuries. The common sign of a town, a town hall, was built much later and the surrounding wall is still missing. Only the regular plan and the right to trade distinguished the early towns from the villages of the countryside.

A picturesque and popular type of vernacular settlements in the late 20th century is a workers' housing area, which grew adjacent to a town around the turn of the 20th century. These areas did not originally have a strict plan, building regulations or building trade like the neighbouring towns. Sometimes the workers literally built whole areas themselves, as is the case in the sawmill workers' areas. The workers were allowed to take as much material free from the sawmill as they could carry. They adopted building types and horizontal log techniques from the small houses of the agricultural countryside, but soon they were taken over by more modern light timber constructions. These communities are still characterised by simple lot division, houses built by the first generation of settlers, open lots and mature vegetation.

All vernacular settlements developed slowly in our terms and reached their peak in the traditional way of building during the 1930s, when the numbers of buildings of a yard and the numbers of yard groups in a village were highest. It was possible to find almost urban villages consisting of hundreds of buildings, inner roads, and a social system. The first signs of modernity might have already come to the village, in the form of an early white functionalistic merchant's house or co-operative's shop.

How the settlements have met the development

Since the 1960s the countryside has been suffering from a severe structural change due to integration and rapid urbanisation and a decline process, the end of which cannot be seen. Especially in the peripheral areas of the country and of the regions, abandoned houses form a prominent part of the building stock and the rural landscape, as the population rate is still falling in these areas. During the after-war period not only many traditional buildings but also building types were lost and the high diversity of the agricultural landscapes was ruined. The traditional settlements have often lost their most vulnerable elements, such as fences and ornamental vegetation. The open fields are neglected or turned into forestation areas. New buildings have been built, but

only seldom has local tradition been given a priority in the selection of materials and techniques. Also the building types have become universal. Problems of redundancy and of impoverishment of nature's diversity have developed because of the rapid diminishing of the fields and of the flora and fauna of the pasture land. In the village areas the direction of the development is the same, though the speed of decline is not as fast as in the real countryside. Remedies have been sought for the illnesses of the rural areas. Housing and tourism seem to be able to offer some solutions. Many villages are also counting on their cultural heritage and on their value as cultural heritage, judged by the many grass-root level projects in the country. At least some villages want to keep their heritage and everyday life.

In an active rural village the main buildings are kept in up-to-date condition, the many store houses are left, the yard is embellished with plants and fences, the landscape has been cleared from bushes and decorated with fencing and spots of meadows. Much of the work has been done in a traditional "talkoo" organisation, with voluntary work among the villagers, which supports the preservation of the social values in the village, or by man power services.

Planning was introduced in the 1950s in the densely populated areas, e.g. municipal centres and some bigger villages. Because of the modern town planning principles of the open town, we only have fragments left today of the municipal centre villages preserved in their pre-war form.

A handful of wooden town areas have been saved as examples of this type of settlement thanks to subsidised loans and grants and town planning regulations. Many of the earlier workers' housing areas have been integrated into the towns as fashionable suburban areas. Now these areas are inhabited by the third generation after the builders. The present inhabitants' ties to the area are loose or do not exist.

Establishing conservation ideas

The long research tradition in ethnology and other related sciences has provided us with the framework of the knowledge on vernacular building. To take up one example: the basic units of the villages, the yards, used to be divided into two categories, the irregular or open yard (prevailing in the eastern and central parts of the country), and the more or less regularised yard (prevailing in the southern and western parts of the country). The recent study of Prof. Niilo Valonen's research documentation and manuscripts has led to a much more developed classification: the two main categories – the closed yard and the open yard – are each divided into several subtypes.

Oral tradition of the vernacular has continuously been collected since the late 19th century. The files have become voluminous and are used in research work. The work for opening the files to a wider public use began in the 1990s. The use of the large files for conservation has started and resulted in a growing number of studies on building traditions.

Since the beginning of the architects' training – during the National Romantic era – one of the teaching methods has been the production of measured drawings of existing buildings. Though the classical vocabulary of architecture was popular at the very beginning, vernacular buildings have eagerly been measured by many generations of architectural students. This heritage has proved to be an immense source for the studies and it has opened many eyes to the beauty of the vernacular. In the 1990s the vil-

lages of the sea coast were documented and drawn by students. Some years ago when the eastern border was reopened the researchers could return to the places that had been documented at the beginning of the 20th century.

Since the 1970s inventories of the built cultural heritage include single buildings, areas and groups of buildings. Urban settlements are well covered in various inventories, but a survey covering vernacular settlements is missing.

Since the 1980s the vernacular has been one part of the research on architecture – the distinction between popular and vernacular is not very clear in Finnish – and many results on the villagescape and landscape have been published. Also the problems of planning and building in a village have been approached in the studies.

In the mid-1990s it was noted in the plant inventories that our plant diversity was severely diminishing due to changes in agriculture. Several projects were established to promote the safeguarding of the traditional endangered biotopes. The projects have resulted in a national inventory, the legislation for their preservation and the authorities' possibility to fund their maintenance. They have not yet proved to be competitive with the modern methods and form one drop in the main stream of integrating agriculture. The loss of the open landscape – due to the integration process – is a bigger worry than the loss of small pieces of traditional pastureland.

The administration supports the conservation of vernacular settlements by providing the general framework for preservation legislation, planning and building laws, nature conservation law and subsidising. The preservation legislation of 1985 gives possibilities to protect single buildings, groups of buildings and areas or landscape areas. The practice of protecting groups of buildings and larger landscape areas has not been implemented due to a lack of arguments for these types of monuments. The planning and building law and the state subsidies to rural areas

Table of Procedure

SHARE THE RESPONSIBILITIES with local actors (people who stay, live or work in the area)
DETECT THE THREATS AND PROBLEMS especially short term judgement and temporary fashion
THE STANDPOINT is that there is only one past and many possible futures
THE AIMS would create and reinforce the historic continuity, local identity and high quality of the landscape
THE TOOLS provide people with knowledge, total conception and wise judgement
THE GOAL all the opportunities for living and people's traditional crafts are secured

The table is based on Johanna Forsius-Nummela, *The rural landscape and its cultural and historical values*.

have again been changed to meet the new situation within the EU. The densely built areas in municipality centres and towns are preserved according to the regulations of the planning and building legislation.

A sad fact is that traditional skills and crafts necessary for constructing vernacular buildings and, especially, for conserving vernacular monuments and buildings, were about to die out in the years of rapid urbanisation and standard housing. In the 1990s we experienced a boom of courses on traditional crafts and building. The demand is huge and the gap of skills will probably be filled. It is only very difficult to find enough skilled people to teach traditional materials and methods. However, establishing an institute for building conservationists will contribute to the number of specialists in the long run.

During the past decade various awareness programmes have been set up to make the heritage visible and to highlight its meaning and expressions in everyday life. European Heritage Days, several national and regional prizes for a preservation activity of the year, annual "village of the region" competitions, countryside programmes, research programmes have brought into daylight the values of the vernacular and listed the most valuable areas. The programmes for the rural landscape deal with common ideas of conservation: planning, responsibilities, standpoints, aims, tools and goals.

Conservation practice

The development of conservation of the vernacular follows the same lines as the conservation of single monuments: The first targets of conservation – in the late 19th century – were single masterpieces, such as wooden churches of the 17th and 18th centuries that were the first vernacular buildings to be regarded as ancient monuments. During the 20th century the scope was widened and also some prominent buildings built by laymen like large farmhouses were the next buildings to belong to the higher category of monuments. In the 1960s areas including several buildings and sites reached the status of a monument. Until the 1980s exemplary specimens of different types of buildings and sites were thought to preserve the tradition if saved from demolition. Today we think that the few examples or reserves, be it single buildings or groups of buildings, do not serve the goal of conserving the vernacular. Also the ideas and various invisible phenomena behind the actual building – for example craft skills – are part of the vernacular heritage that needs to be preserved.

After a long period of "hard" new building and improvements resulting in drastic changes to old buildings, a "softer" approach was introduced for the first time by some conservationists and architects in the late 1970s. The traditional repair ideology has been studied and also gradually explained to the users and designers through handbooks and training courses since the late 1980s. It has been accepted only with difficulties among the builders and owners. Also small subsidies have helped to turn the repair ideology towards the same goal since the 1970s.

Conservationists continuously meet the same problem: the inhabitants of a village or new house owners do not know the history of the place or house and cannot relate to it or recognise its values. Awareness programmes may have brought people to think about the values of heritage in general, but implementing them in the practical repair and conservation work is still rare and requires an educated eye. In order to fill this gap we will

need closer co-operation between professionals in the conservation field and those in education and training.

Practical conservation work was formerly based on every man's skills, on laymen who were trained at the building sites, on a few specialists and some common *talkoo* work. Construction materials used to be mainly local, but the use of imported materials has grown throughout the history. For a long time building work has been regulated by legislation and regulations from the government and the municipalities, though the building allowance was introduced to the countryside only in the early 1960s. The quality of building has also been regulated by public funding.

The models for further discussion have presented the common sound principles of using the biggest possible amount of the existing structure, of an execution in the most effective and practical way possible, an imitation of the existing parts or good practice and a certain willingness to decorate. Written codes of practice were formerly rare and only used by some craftsmen, the recipes of the painters being examples. The influence of written information in various guide books for both, laymen and craftsmen, has grown during the 19th and 20th centuries.

Finding and rewriting the unwritten codes of practice have proved to be important when working on the vernacular and on settlements. When a designer joins a project, he often aims at keeping the frame and the form, at copying the existing forms and at finding uses for the abandoned buildings. How these ideas are translated into the language of a builder is a task to be tackled in the future.

In the post-war period, when many buildings of the countryside were abandoned by the inhabitants who moved into the towns, the likely loss of important examples of traditional buildings was solved by dismantling, storing and re-erecting an example of a building type at a museum site. Hundreds of local open-air museums were created in this way. Soon it was seen that the results were not always good: the technique of moving destroyed parts of the buildings and the "natural" environment of the building was lost. It was followed by a recommendation that the buildings should be re-erected at a site resembling the original site, for example re-erecting a water mill close to a river, a granary close to a farm yard, etc. The new open air museums provided ideas of how to restore vernacular monuments at a time when the number of industrial building materials was growing.

Today we are faced with serious deterioration problems of these buildings and the lack of technical and financial resources to maintain them. Only some of the most important buildings of the local open-air museums have been newly restored, now with the ideas of gradual restoration and traditional and original building techniques. Although the dismantling and moving can be argued, we are lucky to have this collection of traditional buildings around the country. Together they are an important source of information on traditional building techniques, which would have been lost at the site. Moving the buildings from a site to another is a tradition that derives from the early settlers' time. The man – or girl – who left the house received his/her dowry as logs. He/she dismantled his/her log building and re-erected it on the new home site. In our time the habit of moving old buildings to serve a new purpose on a second or third site has increased.

Generally, in politics and discussion, we seem to be ready to accept the conservation of our rural areas and its components. What we now have ahead, is the implementation, the work on the

regional and local levels, in all fields of conservation from principles and awareness to training and wise application of repair and maintenance techniques. Many doubts can be raised, however, because all the resources are decreasing in these fields and in rural areas.

In the denser vernacular settlements, for instance the municipal centres and the suburban areas, the conservation principles and methods can be very close to what is understood of conservation of historic towns and areas. Based on the ideas of the Charter on Historic Towns the conservation process of vernacular settlements would be widened with more specific studies and conclusions on the characteristics or key features of the area and serve the planning phase. On the most practical level the skills of the participants are essential. How the refined organisation and knowledge of building and repair developed by several generations of owners, craftsmen, designers, and administrators will be passed on will unavoidably be seen in the resulting work done on the buildings and in the areas.

In former times we would have demanded answers to conservation problems from the authorities: by increasing public support and funding, by improving and strengthening the legislation, and by making the authorities feel more responsible for the

development. Considering the situation today, we should instead see the problems from the local point of view, that means find more integration and more co-operation with experts and actors, focus on awareness and the values of conservation and in that way find commitment and responsibilities, a better use of the existing funds and adapt relevant models for this work. Furthermore, the work should support the people who live in the conservation targets.

As a model I see the discourse between three classic participants of conservation: the owner/user, the building and the landscape, and the guiding specialist. They develop the conservation process together. For the conservation of vernacular heritage I could imagine this process to be as full of life as the target itself. In practical conservation work the same tools can be used as in the past, together with renewed and new tools: the work will be done by ordinary people, specialists and joint voluntary *talkoo* work. Materials will be local and imported. Regulation will be provided by laws, regulations and subsidies. Think models will present new ideas (for example ecological thinking, recycling) while the old models (for example saving the old, imitation, practicality, willingness to decorate) will survive persistently.

GREAT BRITAIN

Peter Smith

Tŷ-Mawr

Tŷ-Mawr standing in the parish of Castell Caereinion near Welshpool, Montgomeryshire was discovered in the course of my survey of Welsh vernacular architecture. This survey was later published by the Royal Commission on the Ancient Monuments in Wales under the title *Houses of the Welsh Countryside* as a contribution to Architectural Heritage Year 1975. The authorities agreed that the house was of an architectural quality worthy of conservation and restoration, but were long undecided whether to restore *in situ* or to remove and re-erect in a museum.

Tŷ-Mawr has been dated by dendrochronology to 1460. It was built as a half-timbered aisled and base-cruck hall-house. The open hall, originally heated by an open hearth, stood between storeyed inner and outer units, a common enough form of house in late medieval Wales. It has, however, two surprising features. The first was the extensive use of aisled construction. The second surprise was that such ambitious craftsmanship should be incorporated in a "long-house", that is a house so arranged that cattle tethered alongside the passage partition would have been visible to those seated at the "High Table" in the hall.

The house had been "modernised" in the sixteenth century when a framed fireplace backing on the dais partition replaced the open hearth, and not long afterwards a chamber was inserted into the roof space above the hall. Later the original lateral walls were destroyed and replaced on a new alignment.

The restoration posed two groups of questions. The first was whether to remove and re-erect in a museum or restore *in situ*. Re-erection in a museum would have made it accessible to a

large number of visitors. At the same time it would have been possible to restore it exactly to its ancient appearance without any concessions to modernity, and therefore of great educational value. However, it would have meant robbing the landscape of an ancient historic feature and placing the house in an alien environment. It was also doubtful if some of the more fragile parts of the structure would have survived transportation.

Restoring *in situ* would have avoided some of these difficulties, but would have limited access, while occupation by a tenant-custodian would have called for some concessions to modern comforts and usage.

The second question was to what period in its history was the house to be restored – as it stood as completed in 1460, which after all was the main reason for restoring it at all, or should some of the later modifications be retained, and if so which.

The final decision, after many years of deliberation was to restore *in situ* with the necessary concessions to the comforts of a resident family, but conforming as closely as practicable to the house as it would have appeared after the remarkable fireplace had been inserted but before the floor had been built over the hall. The lateral walls were restored on the analogy of the still surviving end walls. While the open hall was restored in all its splendour the ancient byre was made into inhabitable living space.

The Royal Institute of Chartered Surveyors clearly approved the decision taken and the quality of work achieved when it nominated Tŷ-Mawr "Building of the Year" for the year 2000.

Tŷ-Mawr, the exterior





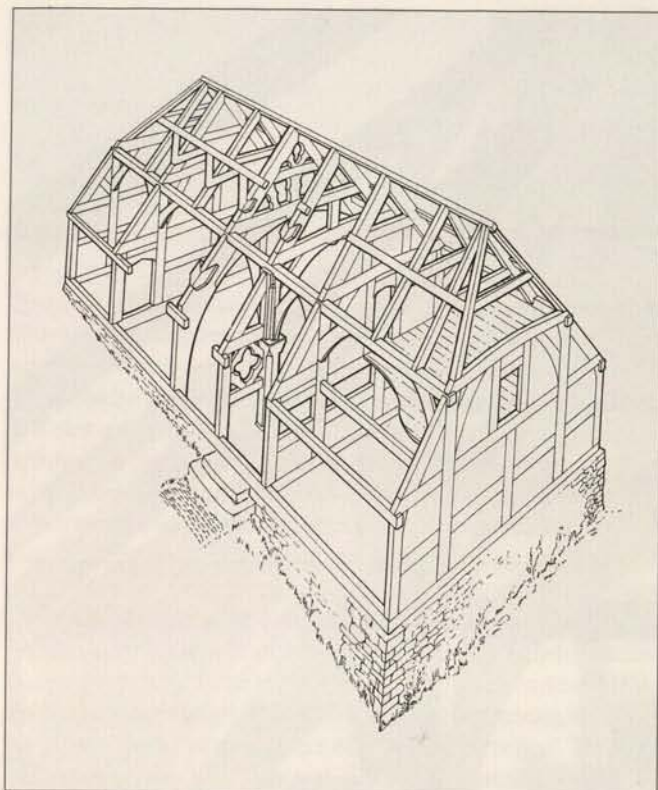
Tŷ-Mawr, the hall

The system of the timber frame, which is the main feature of the hall, is well seen in the photograph. The ceiling is made of the last row of stone of stone. The ceiling is made of the last row of stone of stone. The ceiling is made of the last row of stone of stone.

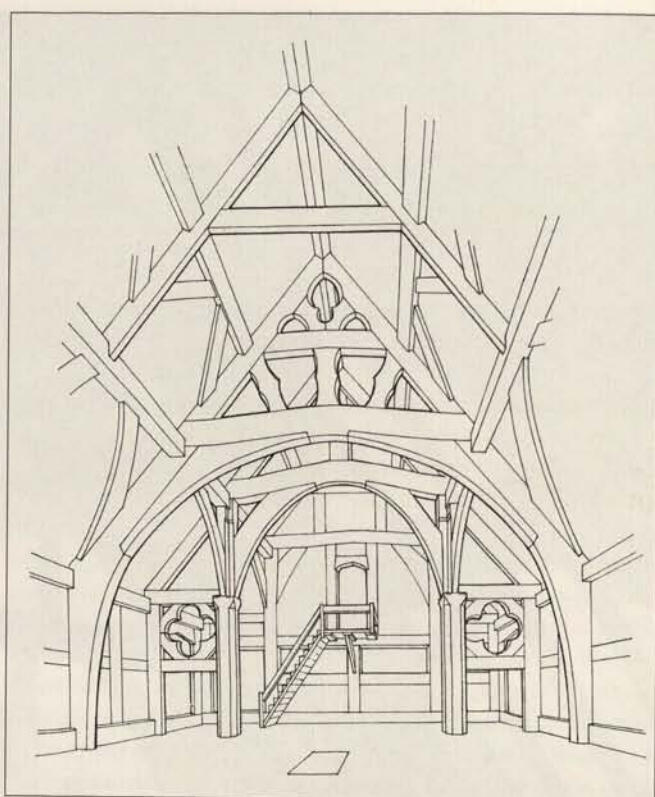
In addition to the other features of the hall, the hall is a very good example of the hall. The hall is a very good example of the hall. The hall is a very good example of the hall.

The photograph

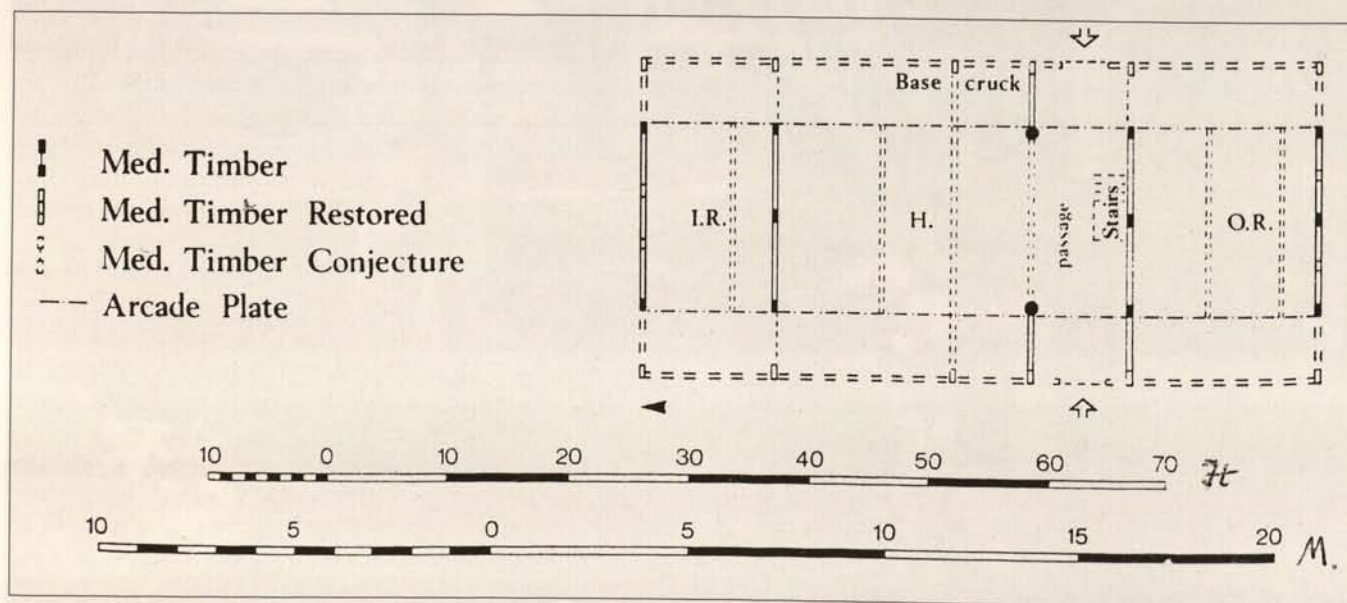
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Cutaway drawing of Tŷ-Mawr, showing the mixed aisled and base-cruck construction



Drawing of the hall



Drawing illustrating the age of the timber

Marikitta Diamantopoulou and Orestis Vavatsioulas

Re-use of a vernacular mansion complex in the medieval castle of Naxos

The objective of this study is to restore and draw attention to two remarkable historical vernacular buildings in the medieval castle of the city of Naxos and particularly to convert them into a Byzantine museum.

Historical and geographical overview

The island of Naxos is the biggest and most fertile of the Cyclad Islands, situated in the centre of the Aegean Sea with a mild climate. Its history goes way back to the pre-historic age. There is a large number and great variety of monuments from all historic periods. Those of particular interest date from ancient Greece and Byzantium, of which we see many buildings, mainly churches and monasteries, but remains of dwellings as well. A large number of Byzantine and post-Byzantine icons (many of which well-preserved but awaiting the completion of the museum) are of particular interest.

One must not forget the profound influence of the Venetian domination (13th century), which introduced a new socio-political status to the area. The whole of the Aegean Sea was under the influence of Venice, which controlled the sea-routes, especially those to Constantinople (Istanbul). The duchy of Naxos as the capital of the Archipelago played a primary role – after the island of Crete – in the exceptional policy that Venice exerted in its relations with the area. Naxos was only loosely attached to the metropolis, so that during the Middle Ages it functioned as a private and largely independent central spot, a safe station in an area suffering from piracy. These are the general conditions under which the castle of the city of Naxos expanded from the 13th century onwards.

It is the largest in the Cyclades and of an exceptional structure. It refers to the city planning, without necessarily indicating that the synthesis of the castle was planned in advance. It was the seat of the duke and as such a political, religious, financial and administrative centre. It was built on a hill, at a short distance from the sea, a position enabling the surveillance of both the sea and part of the interior of the island. Constructed on the model and structure of the medieval cities of Western Europe, its defensive capacity is based on the closely built houses that form the external ring and the defensive wall at the same time. One can also see a second internal ring, which alongside the radial alleys forms the interior network and communication of the castle. Although we find indications in the literature of the existence of three gates, today there are only two while there is a particular structure that allows us to suggest the possible location of the third. The defensive system of the settlement is reinforced by the towers covering the entrances as well as by the central tower (Donjon) as the last resort in case of siege. The dwellings are outstandingly large mansions with interesting ground plans, structure and function. There are also five churches.

In comparison to the other castles in the Cyclad Islands it shows particular regal characteristics, starting with its size, sec-

ondly the size of the mansions and last but not least the number of its churches and monasteries.

Its significance and singularity, again in comparison to other castles in the Hellenic dominion, has to do with the fact that although being small (approximately 150 metres diameter) it is considered the largest medieval fortified city of the Cyclades. Also the 20th century has left it relatively unaffected. This is mainly due to the fact that very few buildings have changed their original use, namely habitable mansions.

The buildings chosen to house the Byzantine Museum of Naxos are a vernacular house complex near -and in a way- above the central gate of the castle.

The noted tower of the castle with a characteristic round tower, nowadays considered as the local symbol, is a remarkable monument, a great mansion in the outer ring. It dominates the castle, while in the past it used to protect one of its gates. The other building of the complex is an old mansion in the interior. These two buildings now belonging to the Greek Ministry of Culture offer a good opportunity for a new use as a museum since they adjoin and are suitable in terms of situation and architecture. The overall plans indicate the relations between the buildings and their sizes. The connection between the buildings, however, is not on the ground, but on a level above it. This peculiar situation, the result of successive constructive stages, creates a very interesting structure. In the site plan the exact location of the complex in the castle as well as the area it covers proportionately are indicated.

After a fire in the interior of the tower had caused extensive damages, fixative and consolidation works were carried out between 1970 and 1975, that is, a partial reconstruction of parts of the tower as well as a completely new construction of floors, using concrete instead of the traditional light construction of wooden beams, boards, earth and slates of marble.

As architects of the Ministry of Culture we undertook the project to conserve the complex as well as to convert it into a museum. The study aimed at integrating two buildings that should function together as a museum, taking into account the interventions that had already been carried out, which were in no way reversible. However, one of the architects did research on the architectural and historical background of the castle and thus provided essential information to help realise the study.

The project is presently in the phase of consolidation and securing the stonework, since serious damage was discovered when plaster was removed.

The premises

Apart from the exhibition rooms the museum will also house the necessary auxiliary space, such as store rooms, rooms for the personnel and the public, a studio for the conservation and maintenance of movable works of art as well as a small guest-house.

The principles of synthesis

The architectural proposal has respected the more general frame and the principles that are internationally valid for the protection of monuments. The choices basically aim at a harmonious coexistence of the remarkable shell and the valuable exhibits to bring out the quality of both.

Setting off the building

The buildings on their own are objects to be exhibited and – after the completion of the works – should give an idea of the era they represent. It has been suggested that each building should be restored appropriately, so as to preserve its specific characteristics and style as much as possible. The proposal is mainly based on the use of the remaining old materials. New materials will be used only where it is necessary, especially for securing and completing.

Setting off the exhibits

Ensuring areas for exhibiting large objects of particular shape and size was considered necessary and as such it formed part of the study. For these exhibits neutral areas were chosen in the building-shell so that on one side the eye of the visitor could focus while on the other the exhibits would not get into conflict with powerful architectural elements. Four exhibits significantly affected the architectural solution. For them permanent locations were chosen. The exhibits are:

- a) The original painted decoration of the dome of the church of Protothroni in Chalki on Naxos, which has been transferred to a frame in the shape of a dome (height 2.10 metres and diameter 3.96 metres).
- b) The three layers of frescoes from the quarterspheric of the apse from the church of Panagia Drossiani near the village of Moni. Each layer has been transferred separately to a frame in the shape of a quarterspheric of an apse with respective dimensions (about 1.50 metres to 3.0 metres).

In the parts of the building that are of architectural interest, it has been suggested that only movable objects of relatively small size should be exhibited (frescoes in frames, Christian sculptures etc).

Joining the buildings

The connection of the two buildings was done in such a way that on the one hand the result would be an integral part of the morphology of the existing character of the settlement while on the other the good functioning of the Museum would be ensured.

Ensuring good function

To ensure the good functioning of the building, it was necessary to make suggestions for secluding the areas of a different operation (e.g. administration, lab for the preservation of works of art, guesthouse, store rooms etc.). Through the suggested solution the museum has the potential to function either united or in wings. The exhibition rooms are in a sequence prompting visi-

tors to stroll around. In this way they get the benefit of understanding the architectural structure of the building as a whole.

Functional analysis

A. Areas for the public

1. Entrance Hall

The existing old main entrance to the tower-building has also been selected as main entrance to the museum. It carries the coat of arms of the Barozzi family, while on the inside of the main entrance and above the door to the great hall one can see the coat of arms of the Crispi family, both prosperous noble Latin families during the Frankish domination and later on of Naxos). The entrance hall which is the junction between the two buildings is designed with interventions as indicated on the plans. In the same part of the building is the area for selling tickets and cards. This area surveys the main entrance as well as the two wings of the museum. On the same level the public restrooms are located (in the same location as the existing sewerage).

2. Exhibition areas

According to the principles of synthesis and as required by the building programme, it has been suggested that the exhibition rooms should extend and cover all the important areas so that the visitor has the chance to stroll around the buildings on all levels. In the main mansion, the construction of a new staircase will allow vertical communication between the exhibition areas on three levels.

B. Personnel

1. Administration

The administration should be situated centrally but independently of the public. It should include offices and a waiting room and should provide access to the restrooms for personnel.

2. Guesthouse

The guesthouse should be located in the mansion on two levels. It consists of two apartments with kitchen, has an entrance of its own and is secluded.

3. Museum store rooms

The dark areas on level B are to house the necessary museum store rooms which can be isolated from the rest of the building. There is the possibility of provisioning and service through an independent access straight from the road.

4. Areas of mechanical installation

These areas were planned to shelter the necessary electro-mechanical installations because of their location in the building

(immediate access from the street with no communication with the rest of the building, lack of light and air, size, shape).

5. Workshop for preserving works of art

The workshop operates on level A with an outside entrance. It is to be organised with the necessary auxiliary areas.

Technical description

1. Bearing construction

Structural stability is provided by the existing stonework. This should be repaired and reinforced where necessary. The concrete slabs constructed during the previous renovations of the buildings shall be preserved. It has also been considered necessary to construct concrete slabs at the point where the two buildings join, since in order to accomplish the necessary integration some of the existing walls have to be demolished. The old beams and boards will remain and be used as wood-forms. In general all wooden ceilings (beams, boards or canes) will remain and be preserved while worn parts will only be replaced where considered necessary.

2. Openings

Openings that have recently been repaired or replaced shall remain. New openings should be constructed only if the old ones cannot be repaired and of course similar to the old existing ones.

3. Floors

It has been suggested that the existing old marble floors as well as the new ones constructed during recent repairs should be preserved. Some areas that have not been covered and remain with concrete floors, will be paved with slabs of marble (dimensions: 30/30 cm). The remaining areas will be covered with rectangular slabs of slate.

4. Marble door-frames and coats of arms

All marble doorframes as well as both coats of arms (above the main entrance and the door to the great hall) shall be cleaned and preserved.

As far as the security of the museum is concerned, the installation of an electronic security system has been planned because of the numerous existing openings, while the natural lighting of the areas will be supplemented by necessary artificial light.

Epilogue

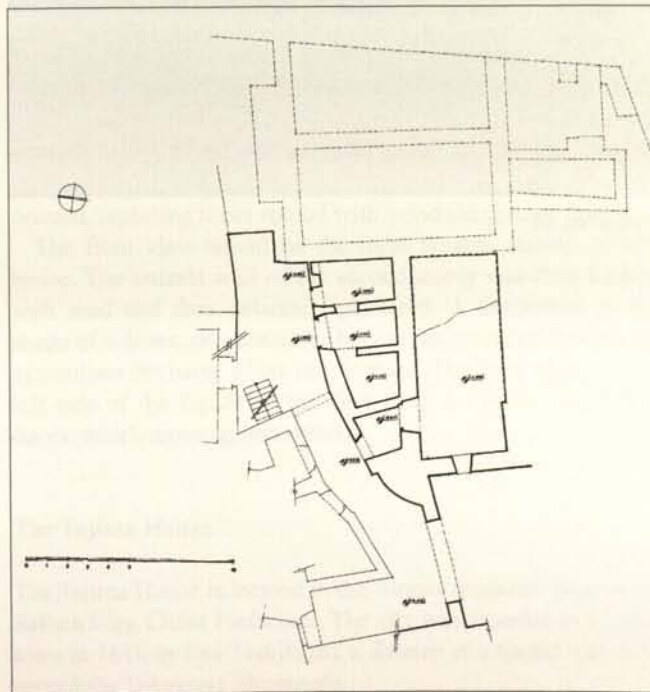
Finally one has to mention that in this particular study the original character of the vernacular building complex is being stressed together with the challenge to preserve as much of its character as possible in the conversion. It was also done to underline the importance of restoring and converting buildings for

new uses, to set off their architecture, to extend their life and to show the possibilities of using historical spaces for public purposes.



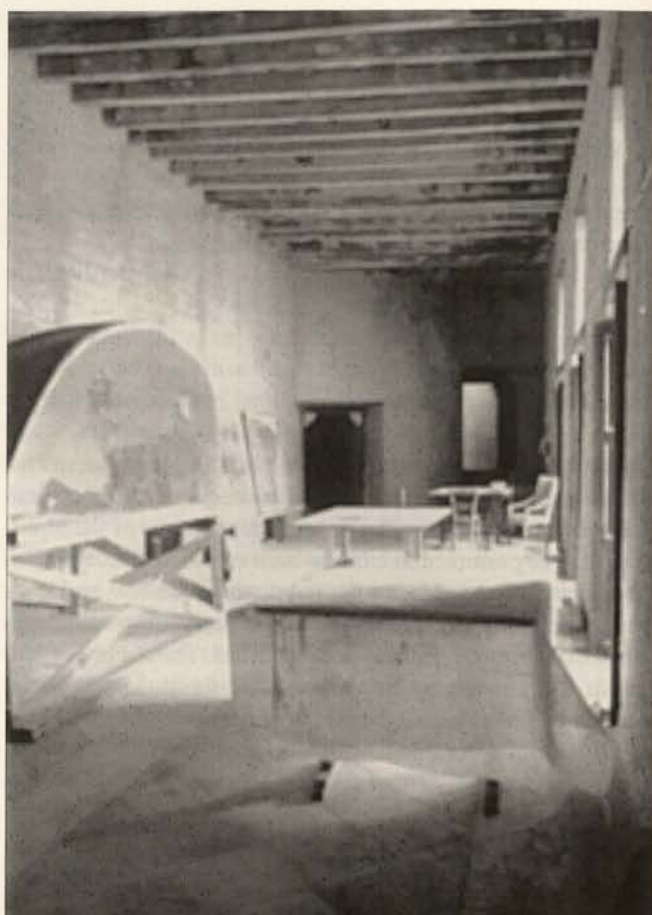
Part of the complex

Floor plan level B (old situation)





Main entrance of the complex



Room No. 5



Room No. 14



Room No. 9

JAPAN

Naomi Okawa

Four Houses

The Nakamura family residence

The Nakamura family residence stands on a narrow flatland in Miasa Village, Nagano prefecture, a mountain village in the central part of Japan. Built in 1698, the main house is the oldest existing folk house in the prefecture with a reliable construction date. The storehouse in front of the residence was built in 1780.

The buildings have been well preserved and are valuable artefacts of the past, from which we can experience traditional residential styles of a farming community in the northern region of Nagano Prefecture. The properties came into the hands of the municipality in 1995 and were restored for use as a historical museum in 1997. They were designated by the national government as important cultural properties in 1997.

The history of the Nakamura family can be found in the records owned by the family. The document ends with the following description:

"In 1614, Nakamura Shikibu came to this village from a region nearby Kyoto, and was renamed Nakamura Hikozaemon. He opened up fields for farming, and lived as a farmer and passed away in 1673."

The second family head, Shouzaemon, became an active member of the village as an assistant to the *shoya*, or the village headman. On 15 March 1698 he started constructing his residence on the site where the house stands now.

The structure of the main house represents a style of farmhouses common not only in the northern region of the prefecture but also in the north-eastern part of Japan. It has a large hipped roof covered with thatch. The roof is supported by *gassho*, or principal rafters, and posts under the ridgepole. In addition to the framework which employs the common wooden post-beam system, there are a few thick lintels, which are more frequently found in the later houses. Both in the interior and the exterior walls are filled with wattle and daub.

Inside the house, there is a large earthen floor, which was used for various farming chores, such as threshing, as well as for housing horses and cows. The spacious room with a wooden floor, beside the earthen floor, was used as a living room. Equipped with a sunken hearth and house shrines of Shinto and Buddhism, this was the centre of the household. The small room to the back of the living room was used for sleeping.

The two rooms floored with tatami mats were guest rooms. The northern room with an alcove for displaying pictures and decorative items was used for receiving important guests such as local governors. The guest rooms face a small Japanese-style garden. A gate building, including bathing facilities for guests, can be found at the entrance of the garden.

The roof of the storehouse is unique in that the thatched roof is supported by eave posts, not by the structure of the roof itself. The exterior walls daubed with thick mud are an effective fire protection.

Tamaya, a post town inn

Tamaya is located in the town of Seki, a former post town along the old Tokaido highway. A system of highways called *kaido* was established by the Tokugawa Shogunate in 1601. Connecting Kyoto and Edo (present Tokyo), the Tokaido was the most important highway. Post towns arranged along these highways provided conveniences such as accommodation for travellers, transportation, and postal service.

Of the 53 post towns on the Tokaido, Seki in Mie Prefecture was one of the largest, located at the foot of the Suzuka Pass, the most perilous pass on the highway. In 1843, the number of residential structures in Seki was 632, and the rows of houses lined on both sides of the highway extended for about 1.8 kilometres.

Tamaya is the name of an old inn in the centre of Seki. Its existence can be traced back to the year 1800. The main house of Tamaya which remains to this day was built in 1739. The introduction of railroads from the late 19th century to the early 20th century brought about the decline of post towns, and the function of Tamaya as an inn ended in the 1920s.

The restoration of historic buildings in Seki was begun after the designation of the old town of Seki by the national government as a preservation district in 1984. Tamaya's buildings came into the hands of the municipality in 1993, and restoration for use as a historical museum was conducted from 1994 to 1996.

The layout of the rooms as found in Tamaya's main house was commonly used for the old merchant houses in Japan. The space facing the street included on one side a room for displaying goods or receiving guests. An earthen floor on the other side served as the entrance and a corridor. The rear space housed other facilities. In the case of an inn, there were guest rooms, bathing facilities, a kitchen, and rooms for other purposes.

The interior of Tamaya's main house is made of high-quality woods and is very refined. This reflects the time of construction of the structure, at the end of the Edo period, when the Tokaido highway flourished most. In post towns of this time, two-storied inns like Tamaya, with large guest rooms on the second floor, began to appear, and the number of tile-roofed houses also increased, replacing those roofed with wood shingles or thatch.

The front view would be the most notable feature of this house. The outside wall of the second storey was first daubed with mud and then delicately plastered. A decoration in the shape of a *Tama*, or a jewellery ball, in the centre of the façade, symbolises the name of the inn, Tamaya. The front doors on the left side of the façade of the first floor are *Ageto*, or sliding doors, which move up and down.

The Tajima House

The Tajima House is located in the former retainers' quarters in Sakura City, Chiba Prefecture. The city was founded as a castle town in 1610 by Doi Toshikatsu, a *daimyo* or a feudal lord, who served the Tokugawa Shogunate.



The Baba Family Residence

The old town of Sakura, built on hills ranging from east to west, still preserves distinctive characteristics of a castle town in Japan, though few old buildings survive. The castle and the residence of the *daimyo* were located at the western end of the hills, overlooking a river. The areas near the castle were occupied by lots for houses of upper or middle class retainers, who were called *samurai*. A street which runs along the hilltops, was lined on both sides with homes of merchants and craftsmen.

A *daimyo* was transferred from one castle town to another under the orders of the shogun. Similarly, a *samurai* also moved from one house to another more suitable one for his new rank or duty. Accordingly, the houses of the *samurai* were not privately owned, but allotted to each *samurai* family by the *daimyo*.

The main building of the Tajima house is believed to have been built between 1821 and 1837, based on a study of historical city maps. After two *samurai* families occupied this house in turn, it was purchased by the Tajima family in 1875.

View of the interior



The lot of the house has a small gate along the street. From the gate, a pass leads through the front garden to the formal entrance called *genkan*. Gates and *genkans* were allowed only to houses of *samurai*, not to those of lower-class retainers. A guest room with alcoves for displaying pictures, armors, and decorative items and a study for the family head are located in the western part of the house, close to the formal entrance. The eastern part houses a living room, a dining room, a kitchen, a storeroom, a side entrance, a bathroom and toilets.

Because *samurai* families were banned by decree from a luxurious life, the appearance of the house is plain. The hipped roof with a T-shaped ridge is covered with thatch. The structure employs the common wooden post-beam system, which is still used in Japan. Both the interior and the exterior walls are filled with wattle and daub. The interiors follow the *shoin-zukuri* style, though they are much simpler than those used for the residence of the *daimyo*. However, the atmosphere of the house is very pleasant. One can enjoy a fine view of the garden from each room. Such attractive features of a *samurai*'s house have survived in modern Japanese houses.

In 1990, the house came into the hands of the municipality and was restored for use as a historical museum and a meeting house for the neighbourhood. The dining room and the rooms to the south of it were reconstructed based on an old floor plan.

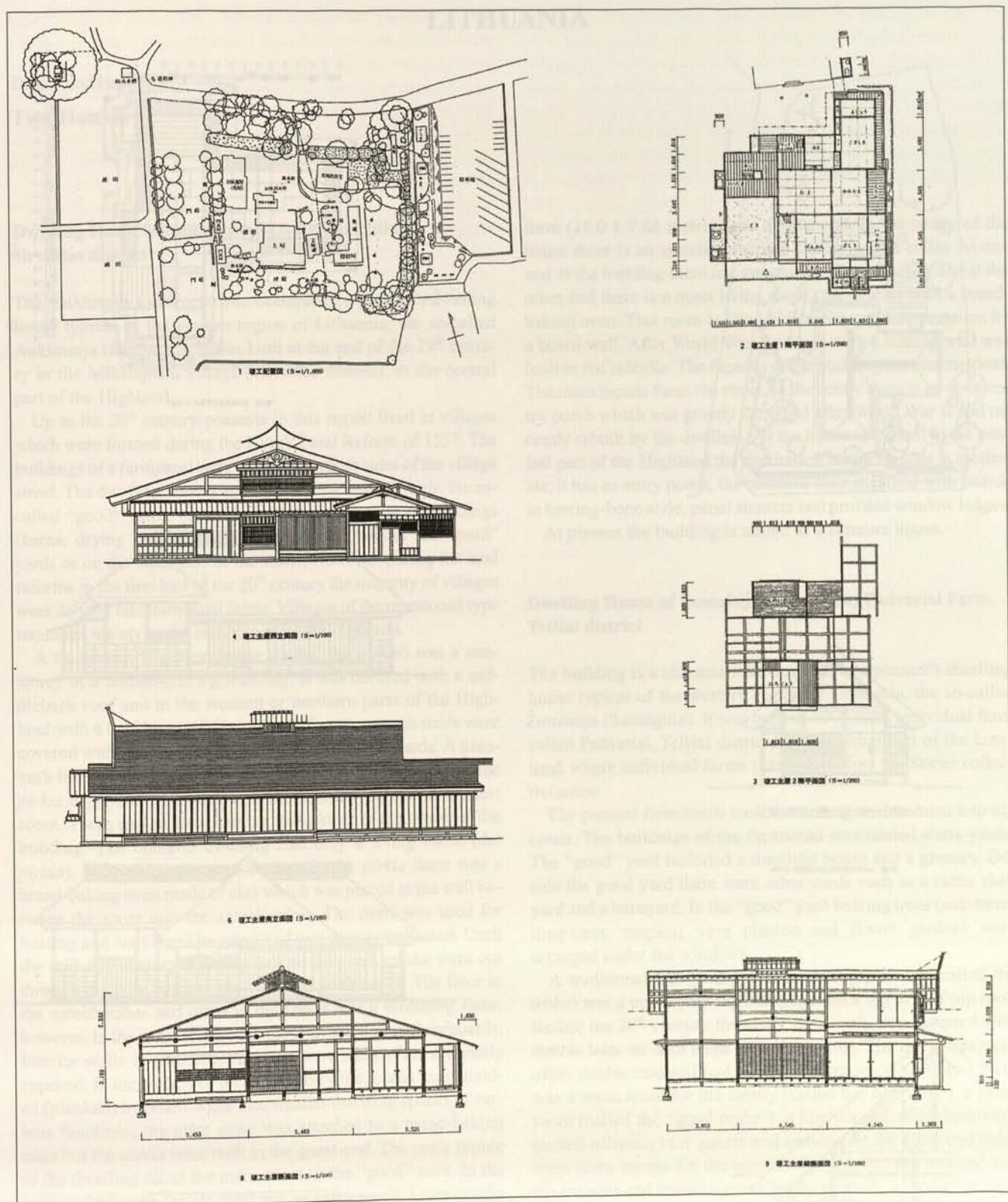
The Baba Family Residence

The grandiose premises of the Baba family residence cover an area of 10.400 square metres, including 10 buildings, a garden, a graveyard, and groves. Long walls and banks surround the entire property. They are located on a terrace in the eastern part of the Matsumoto Basin, in Nagano Prefecture, with the main entrance facing the lower-lying area.

A family tradition says that the family settled down at this site in the late 16th century and opened up fields for farming nearby. Inscriptions on an old gravestone show that the first family head, Baba Sukemasa, died in 1581 and his wife in 1585. Another tradition says they were the relatives of Baba Nobuharu, who commanded warriors in Matsumoto Castle, which was besieged and captured in 1582.

During the Edo period, the family kept a high social status, though they lived as farmers. The family was allowed to construct magnificent gate buildings, because it sometimes received the *daimyo* or the feudal lord, of this region. All the buildings on the premises were built after a fire in the mid-19th century. According to an inscription the main house was built in 1851. Reconstruction work came to an end in around 1890. A detailed plan of the premises dated 25 May 1895 shows the state of the site at that time. Of the 13 buildings seen on the plan, three buildings – a storehouse, a watermill, and a shed – are no longer extant.

A typical characteristic of the farmhouses in this region can be seen in the appearance of the main house. It has a gabled roof covered with wood shingles, with the gable ends facing the front and the back of the house. This style, called *Honmune-zukuri*, is one of the most distinctive styles of traditional farmhouses in Japan. Inside the main house there is a large living room in the centre. The guest rooms are located at the front, equipped with formal entrance, a bathroom, and toilets for the guests. At the rear, there are private rooms for the family head, a storeroom, and a kitchen. A narrow Japanese-style garden is laid out along

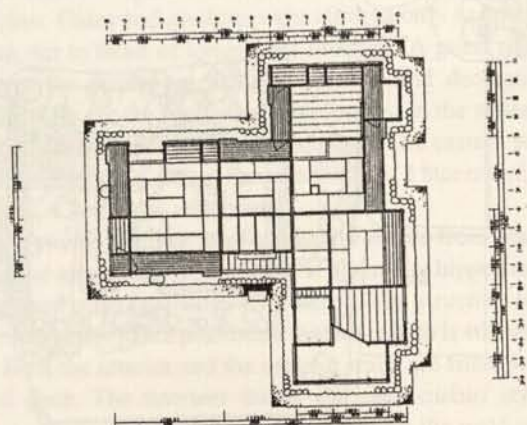
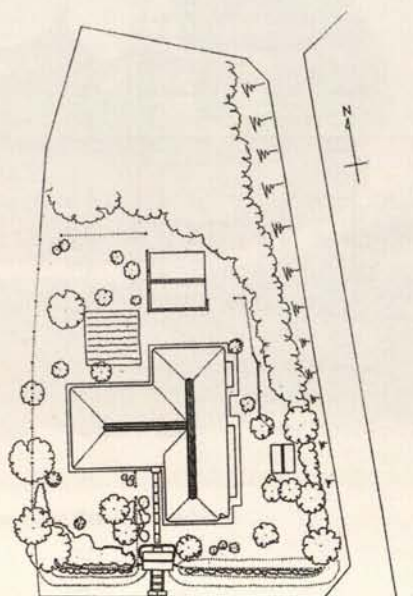


Drawings of the Baba Family Residence

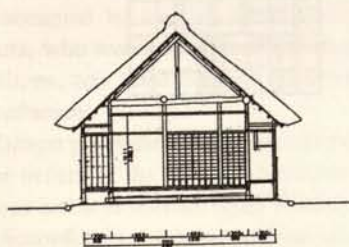
the south side of the main house. A small house for tea-ceremonies stands at the eastern end of the garden.

Taken as a whole, this residence represents the typical lifestyle of upper-class farmers in the Edo period. The main

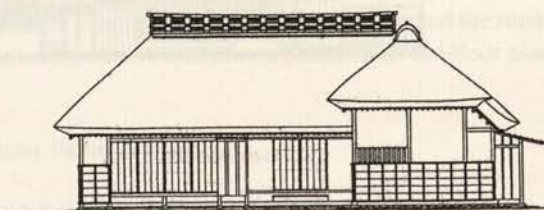
part of the premises was donated to the municipality in 1992 and is now used as a historical museum. It was designated by the national government as an important cultural property in 1997.



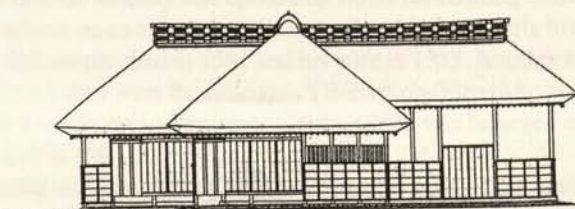
第10图 山内氏家住宅竣工平面图 (1/100)



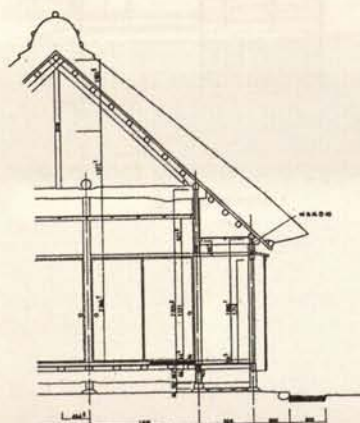
第11图 山内氏家住宅竣工前立面图 (1/100)



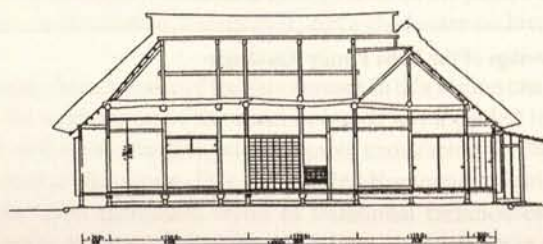
第10图 山内氏家住宅竣工前立面图 (1/100)



第12图 山内氏家住宅竣工前立面图 (1/100)



第13图 竣工剖面图 (1/50)



第14图 山内氏家住宅竣工前立面图 (1/100)

LITHUANIA

Dalė Puodžiukienė

Two Houses

Dwelling House in Aukštaitija Mikalajūnai village, Širvintos district

The building is a characteristic example of a peasant's dwelling house typical of the eastern region of Lithuania, the so-called Aukštaitija (Highland). It was built at the end of the 19th century in the Mikalajūnai village (Širvintos district), in the central part of the Highland.

Up to the 20th century peasants in this region lived in villages which were formed during the King's Land Reform of 1557. The buildings of a farmstead were arranged on both sides of the village street. The dwelling houses and storehouses formed yards, the so-called "good" yards, situated along the street. The outbuildings (barns, drying houses, baths, stables) were behind the "good" yards or on the other side of the street. However, during the land reforms in the first half of the 20th century the majority of villages were divided into individual farms. Villages of the mentioned type remained mainly in the eastern part of the Highland.

A traditional Highland house (called the *pirkia*) was a one-storey or a double-end log building. It was covered with a saddleback roof and in the western or northern parts of the Highland with a half-hip roof. Up to the 20th century such roofs were covered with thatch, later on with chips or small boards. A peasant's family lived at one end of the building which was called the *pirkia* or *gryčia*. The other end, the *seklyčia*, served as a guest room. There was an antechamber and a store in the centre of the building. The one-end dwelling had only a living room (the *pirkia*), an antechamber and a store. In the *pirkia* there was a bread-baking oven made of clay which was placed at the wall between the room and the antechamber. The oven was used for heating and cooking. The guest end was mostly unheated. Until the mid-19th century the oven had no flue and smoke went out through the hole in the ceiling or through the door. The floor in the antechamber and often in the *pirkia* was a threshing floor; however, in the guest room (the *seklyčia*) there were floorboards. Interior walls of dwelling premises were most often originally exposed. In the middle of the 20th century the rooms were divided (planked) by board-walls into smaller dwelling spaces of various functions; the plate stove was attached to a bread-baking oven but the stoves were built in the guest-end. The main façade of the dwelling faced the main street or the "good" yard. In the centre of the main façade there was an entry porch. Entry porches, window ledges and frames, doorways, cornices and gable windows were ornamented. The dwelling houses in the eastern part of the Highland were richly decorated unlike the dwellings in the central part of this region. From the mid-20th century the traditional open entry porches were enclosed with glass. Such a type of dwelling house in the Highland villages prevailed until the fifth decade of the 20th century.

A dwelling house of Mikalajūnai is built of flat hewn logs and is covered with a saddleback roof. At the beginning of the 20th century the roof was covered with thatch, and from the sixth decade with asbocement sheets. The house is rectangular in its

form (15.0 x 7.65 metres) and double-end. In the centre of the house there is an antechamber and a store with a cellar. At one end of the building there is a guest room (the *seklyčia*), and at the other end there is a main living room (the *gryčia*) with a bread-baking oven. This room is divided into two separate premises by a board-wall. After World War II a stove with a heating wall was built in the *seklyčia*. The façades of the building are symmetrical. The main façade faces the street. In the centre there is an open entry porch which was greatly damaged after World War II and recently rebuilt by the dwellers. As the house is located in the central part of the Highland the decoration of the façades is moderate: it has an entry porch, the entrance door sheathed with boards in herring-bone style, panel shutters and profiled window ledges.

At present the building is rented as a summer house.

Dwelling House of Žemaitija (Samogitia) Padvariai Farm, Telšiai district

The building is a characteristic example of a peasant's dwelling house typical of the western region of Lithuania, the so-called Žemaitija (Samogitia). It was built in 1904 in an individual farm called Padvariai, Telšiai district, in the central part of the Lowland, where individual farms prevailed before the Soviet collectivisation.

The peasant farmsteads took the natural environment into account. The buildings of the farmstead surrounded some yards. The "good" yard included a dwelling house and a granary. Beside the good yard there were other yards such as a cattle shed yard and a barnyard. In the "good" yard bearing trees (oak-trees, lime-trees, maples) were planted and flower gardens were arranged under the windows.

A traditional Lowland peasant's dwelling house (called the *troba*) was a one-storey log building with a hip or half-hip roof. Before the 20th century the rafter type roofs were covered with thatch, later on with chips or small boards. The *troba* was most often double-end and had up to 14 premises. At one end there was a main room for the family (called the *šeimyninė*), a guest room (called the "good *troba*"), a kitchen and small bedrooms (called *alkierius*) for guests and owners. At the other end there were some rooms for the aged mother (called the *priešinė* and the *trobikė*) and some stores: a larder for milk, a larder for meat and pantries. In the centre of the dwelling there were two antechambers: the main antechamber (called the *sienius*) facing the "good" yard, and the back antechamber facing the outbuilding yard. Between them there was a chimney-kitchen (called the *virenė*) with an open fireplace and a bread-baking oven. The chimney-kitchen narrowing gradually upwards and ending in a funnel above the summit was made of kiln or unbaked bricks. A family room, a guest room and a kitchen were heated by stoves with heating "walls". The stores and the bedrooms at the ends of the building were not heated. The floor in the rooms and the main antechamber was a board floor, yet the back antechamber,

the chimney-kitchen, the kitchen, the stores, sometimes even the living room had a threshing floor. The walls of the rooms were often plastered, whereas the walls of other premises were often originally exposed. The long façades of the building were asymmetrical, one end of the house being more developed. The log walls often had vertical panelling. The *troba* usually had little decoration. The doors were most often panelled with various ornaments of boards nailed in different directions. Sometimes an open entry porch was attached to the main façade. In the middle of the 20th century the porches were enclosed with glass.

Such a type of peasant houses dominated in the Lowland up to the fifth decade of the 20th century. The *troba* in the Padvariai farm is situated on the rugged terrain on the bank of the river. The initial structure of the farmstead is fragmentary. Only a fragment of an original shed has survived.

The dwelling is rectangular in its form (18.29 x 8.57 metres), a double-end log house with a half-hip roof. At the beginning of

the 20th century the cover was thatch, from 1938 onwards chips were used, in the eighth decade it was newly covered with asbo-cement sheets. In the centre there are antechambers and a chimney-kitchen; at the east-end there is a kitchen, a family room (the *šeimyninė*), a guest room (the "good" *troba*) and a small bedroom (the *alkierius*); at the west-end there are two rooms, a bedroom (the *alkierius*) and three stores. At first a bread-baking oven stood in one of the western rooms with its mouth in a chimney-kitchen. After World War II the oven was built in a chimney-kitchen. The main south façade is asymmetric. The open entry porch of the main façade has not survived. An entry porch in the north façade enclosed with glass was attached to the back antechamber door after World War II. The house is only slightly decorated; it has window ledges and profiled rafter ends. The flat hewn log walls are panelled with boards and battens.

At present a farmer's family resides in the building.

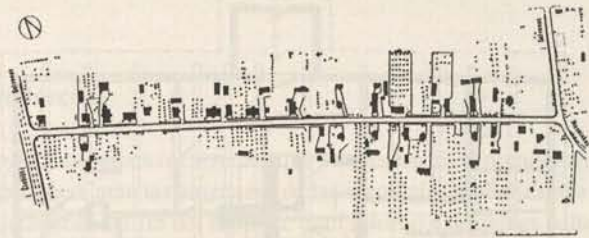


Dwelling House in Aukštaitija Mikalajūnai village

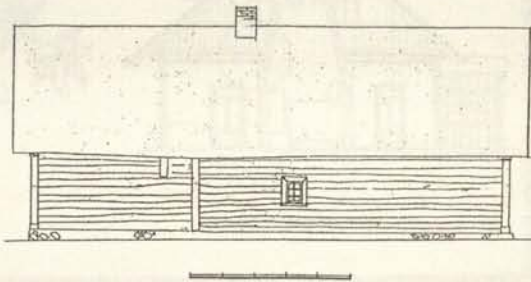
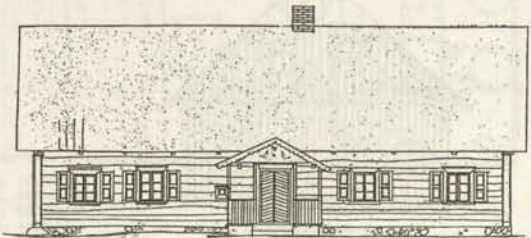
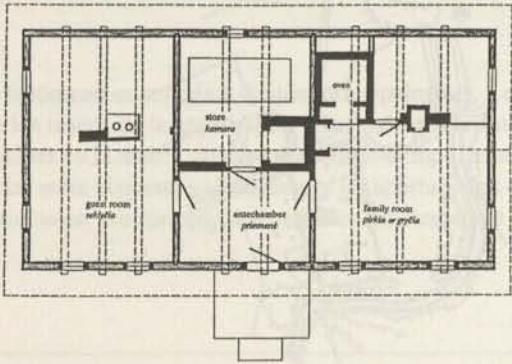
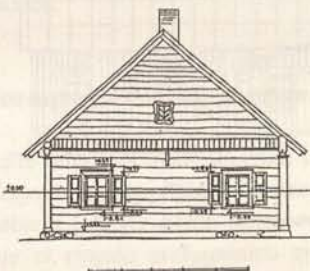
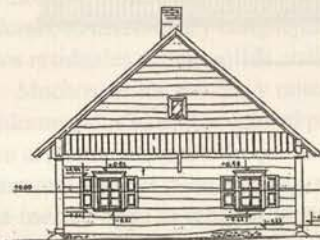
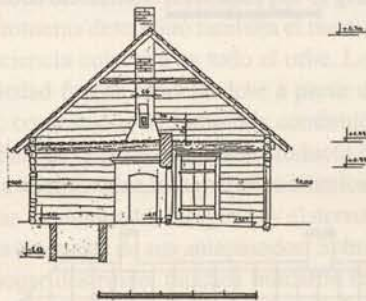


Dwelling House of Žemaitija (Samogitia) Padvariai Farm

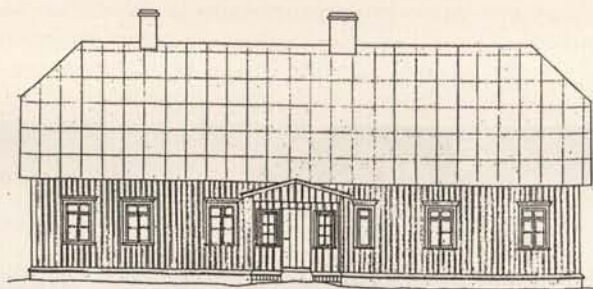
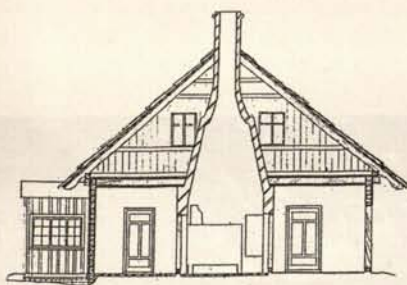
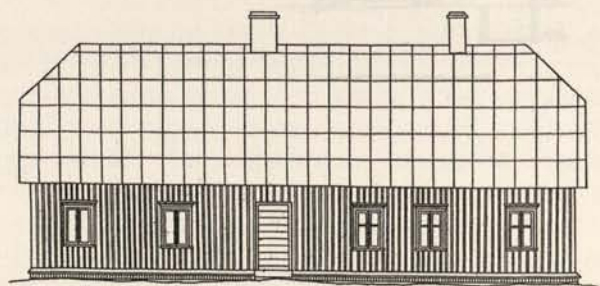
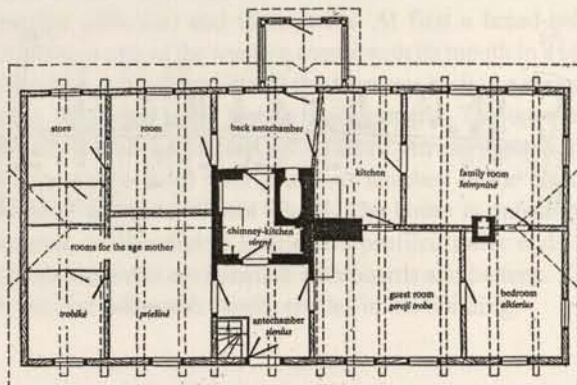
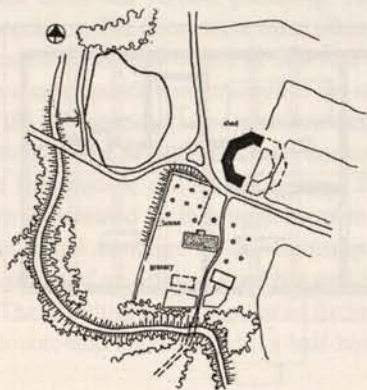
Dwelling house of Aukštaitija (Highland)
Mikalajūnai village
Švenčionys district
Lithuania



Mikalajūnai village



Drawings of the Dwelling House in Aukštaitija Mikalajūnai village



Drawings of the Dwelling House of Zemaitija (Samogitia) Padvariai Farm

Francisco Javier López Morales

Influencias de la arquitectura y el espacio prehispánicos en el hábitat vernáculo actual

Introducción

Uno de los tópicos recurrentes que se debaten en el mundo contemporáneo, ante las amenazas de las ideologías globalizantes y totalizadoras del fin del milenio, es el retorno a las raíces culturales que definen a cada pueblo.

En México, esta preocupación pasa por el rescate de la identidad del abigarrado grupo de comunidades indígenas y mestizas que conforman un invaluable legado cultural.

El viaje de Cristóbal Colón en 1492 marcó el encuentro de dos mundos diferentes, separados por el gran océano. La expansión de fronteras determinó también el mestizaje y la creación de una conciencia colectiva en todo el orbe. Los perfiles de una nueva sociedad fueron modelándose a partir de aquel momento en el que, con estupor, se rompió la continuidad de las culturas americanas, cuya civilización fue producto de largos milenios.

La conquista de los territorios americanos implicó la sumisión de las comunidades indígenas y el derrumbamiento de los mitos y las creencias de sus antepasados. Sobre los escombros del viejo hogar destruido, muchos buscaron reconstruir el antiguo orden cósmico, pero el trauma fue profundo. Los elementos que integraban su identidad habían sido mutilados y transformados: el espacio humanizado cambió; las ciudades antiguas fueron destruidas; las lenguas aborígenes sucumbieron a la castellanización y los indios fueron despojados de sus pertenencias. Sin embargo, se dice que la vitalidad de la cultura del México moderno, su diversidad y complejidad son interpretadas como efectos residuales de una sólida civilización mesoamericana.

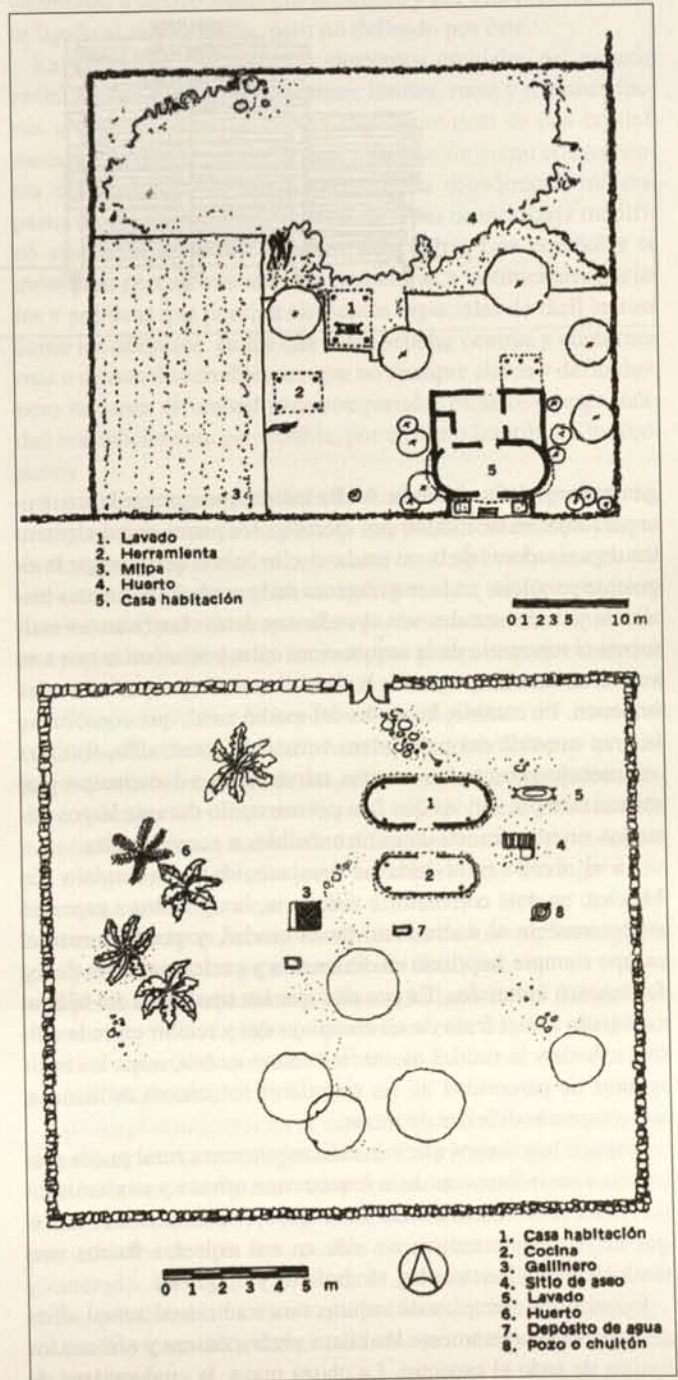
Muchos de los rituales y mitos prehispánicos permanecieron adormecidos y ocultos entre el pueblo. El sincretismo se originó en el mismo momento en que se inició la conquista espiritual; la instauración del culto a la virgen guadalupana es paradigma de la mezcla entre la religión impuesta y las transfiguraciones de raíz prehispánica. El gran dios de las semillas, Huitzilopochtli —adorado por los aztecas— aparece ya en la obra de sor Juana Inés de la Cruz, *El divino Narciso*. Las mezclas no sólo se consuman en lo espiritual y cultural: desde el inicio de la colonización los reyes católicos habían recomendado los matrimonios mixtos.

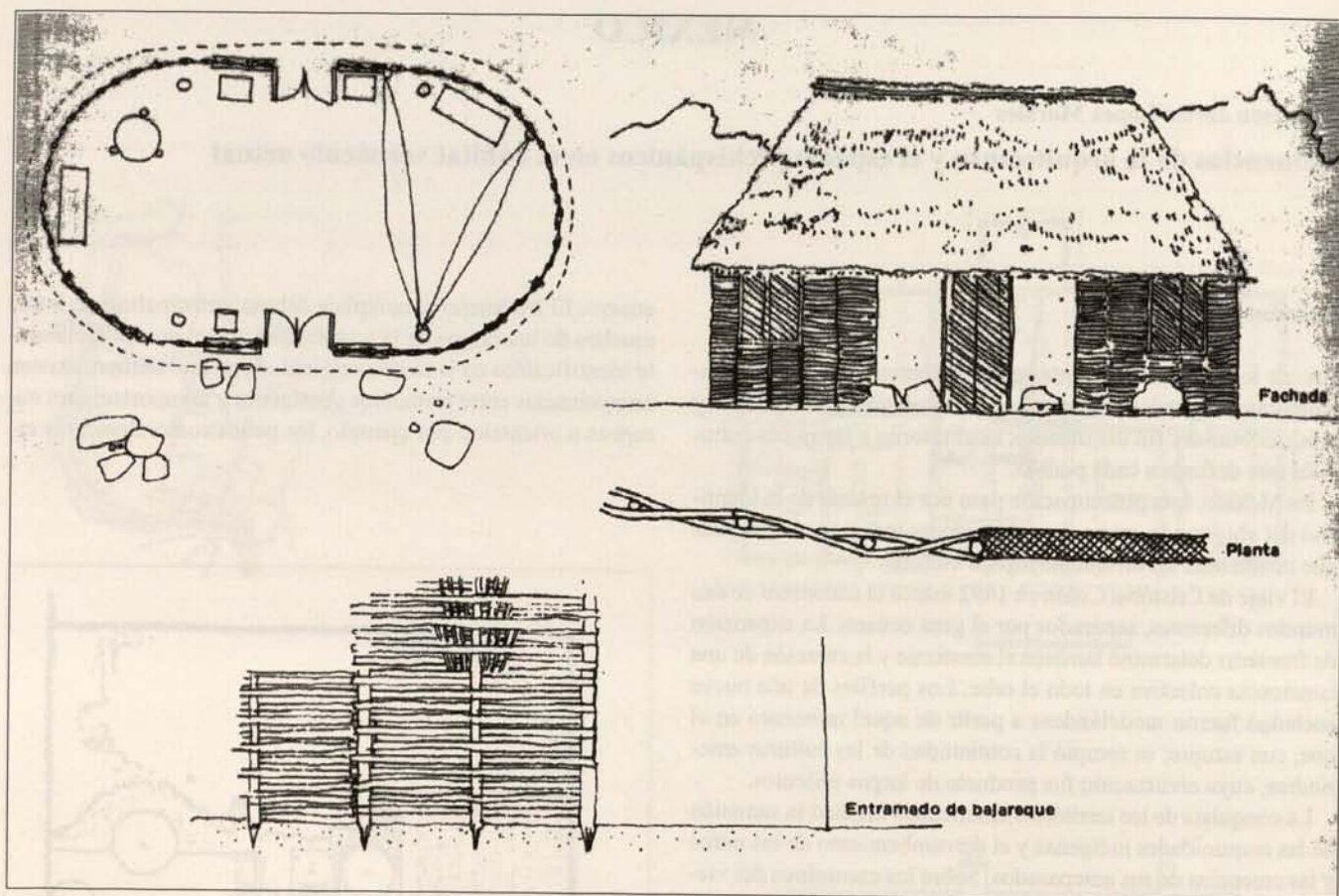
Los espacios y la arquitectura en el mundo prehispánico

En el campo de la arquitectura y el territorio construido el mestizaje se produjo desde el primer contacto. En este artículo nos interesa indagar cómo operó este mestizaje y las influencias que el mundo prehispánico ejerció sobre distintos tipos de arquitectura tradicional que sobreviven hasta nuestros días, teniendo como marco la dimensión espacial en la que toman sentido y escala.

Explicar exhaustivamente las múltiples influencias que la arquitectura prehispánica legó al México colonial y contemporáneo es evidentemente un desafío que rebasa el espacio de este

ensayo. El fenómeno se complica debido, principalmente, a que muchos de los rasgos de la arquitectura actual no son fácilmente identificables en la matriz original. Al mismo tiempo, existen coincidencias entre elementos aborígenes y las aportaciones europeas u orientales: por ejemplo, los patios como elementos or-





ganizadores de la vivienda. A ello habría que agregar la siguiente paradoja: en orientales: por ejemplo, los patios como elementos organizadores de la vivienda. A ello habría que agregar la siguiente paradoja: en la arquitectura de la ciudad, las fuentes históricas y documentales son abundantes; éstas clasifican normalmente el repertorio de la arquitectura culta y académica que a su vez se caracteriza por sufrir las transformaciones que las modas imponen. En cambio, las casas del medio rural, que constituyen la gran mayoría del patrimonio vernáculo construido, son rara vez mencionadas en los escritos, narraciones o documentos y, al mismo tiempo, son las que han permanecido durante largos periodos sin transformaciones reconocibles o considerables.

En el mundo rural nada ha desaparecido por completo. En México, un país con historia milenaria, la agricultura precedió evidentemente al nacimiento de la ciudad, y precisamente el campo siempre imprimió su dimensión y carácter al resto de los fenómenos culturales. Es por ello que las tipologías del hábitat vernáculo son el fruto de un complejo dar y recibir entre la cultura urbana y la rural. Los confines entre ambas, o sea los testimonios de paternidad de las singulares soluciones estilísticas, son a menudo difíciles de trazar.

Aunque hoy menos que nunca la arquitectura rural puede sustraerse a las influencias de la arquitectura urbana y modernizante, conserva de manera clara y sin mayores alteraciones los rasgos de tiempos remotos, no sólo en sus aspectos físicos sino también en los funcionales, simbólicos y religiosos.

Existen dos ejemplos de arquitectura tradicional actual, donde se perciben claramente las raíces prehispánicas y ofrecen los límites de todo el espectro. La choza maya, la cual encarna de

manera ilustrativa la vigencia de la tradición, la continuidad a través de los siglos, la validez de las soluciones eternas, la sencillez y la dignidad. Es una arquitectura donde el ingenio se combina magistralmente con el sentido práctico y donde se descubren las riquezas del saber popular. En cambio, el segundo ejemplo, la casa de maguey, en la zona del Valle del Mezquital, constituye la otra cara de la moneda: es un grito de alerta por su inminente extinción. Padece la misma suerte de muchas otras etnias, cuya cultura sometida y agraviada sucumbe ante la avalancha de los valores "modernos" y por la relación asimétrica que existe entre los grupos hegemónicos urbanos y mestizos y las comunidades indígenas marginadas.

Mutaciones espaciales durante el periodo colonial

España fundamentaba su política de colonización y ocupación del territorio en el papel estratégico de la ciudad; la explotación de recursos agrícolas y mineros se hizo siempre a partir del núcleo urbano. Las ciudades de América constituyeron el foco de expansión y difusión de la cultura impuesta; la conquista se explica en su carácter urbano. El mestizaje fue posible en el tejido urbano por el constante roce de los grupos y castas que lo habitaban. La ciudad fue el asiento de los colonos europeos, pero muchas de las urbes del Nuevo Mundo se erigieron sobre las ruinas de los principales centros indígenas.

En Nueva España se fundaron más de 30 ciudades y pueblos para españoles antes de 1574 y la mayoría logró consolidarse merced a la labor de los trabajadores indígenas. Si bien la ciu-

dad fue el baluarte colonizador europeo, el campo constituyó el refugio y el espacio de continuidad del indio. La desubicación, "nepantlismo" causado al indígena en el nuevo escenario urbano, era contrarrestado en el espacio rural donde quedaban casi intactos los puntos de referencia del mundo mítico anterior.

El territorio y el espacio ocupados en el mundo prehispánico han sido poco estudiados. La permanencia de lo antiguo, sin cambios o alteraciones, es prácticamente inexistente. Las formas de organización del espacio, esenciales en la representación del mundo precolombino, han desaparecido casi por completo. En ciertos lugares prevalecen, sin embargo, algunas comunidades que perpetúan prácticas rituales traducidas en el espacio doméstico ceremonial y que hablan de las transformaciones y mutaciones que sufrieron al contacto con la cultura impuesta.

Estos cambios impuestos por la política colonial fueron invariablemente forzados y ejecutados a contrapelo de las tendencias nativas y de la resistencia al cambio por la mayoría de los grupos que habitaban nuestro territorio. Esta reacción debe ser entendida como el más efectivo medio para la defensa de la cultura autóctona.

La gran mayoría de las comunidades han sido mucho menos permanentes y estables de lo que originalmente se pensó. La sociedad indígena del siglo XVIII era muy diferente a la del siglo anterior y su ámbito de acción rebasaba ampliamente los estrechos límites de una colectividad campesina.

Organización espacial indígena

La denominación colonial de "Pueblo de los Indios" deriva del *altepetl* prehispánico, *altepeme* en plural, que constituía el elemento básico en la organización política de toda Mesoamérica, desde su nacimiento hasta su virtual desintegración a finales del siglo XVIII. En la civilización mesoamericana prevalecía una estructura espacial diferente a la europea que privilegiaba los or-

denamientos concentrados y centralizados sobre los dispersos o difusos, de lo cual derivó un notable afán por congregarse a la población y definir cabeceras.

En la etapa final de la historia de los *altepeme* fue de enorme trascendencia la naturaleza cambiante de los diversos lazos y relaciones que ligaban aquellos componentes de los pueblos que se expresaban espacialmente, en particular los designados como "cabeceras" y "sujetos" en el lenguaje colonial. Estas relaciones se habían tejido en tiempos prehispánicos y fueron reinterpretadas con la Conquista. Por otra parte, debido al importante proceso de las congregaciones, no siempre fue fácil conservarlas; subsistieron mientras fue posible y los integrantes reconocieron la legitimidad y vigencia de un elemento de unidad. Cuando este lazo fue cuestionado, los pueblos entraron en crisis.

El espacio regional estaba articulado sobre la base de un conjunto funcional de relaciones espaciales y percibido como individual por quienes participaban en él. También era un espacio cambiante y determinado por la cultura y por ello históricamente ligado al medio físico, pero no definido por éste.

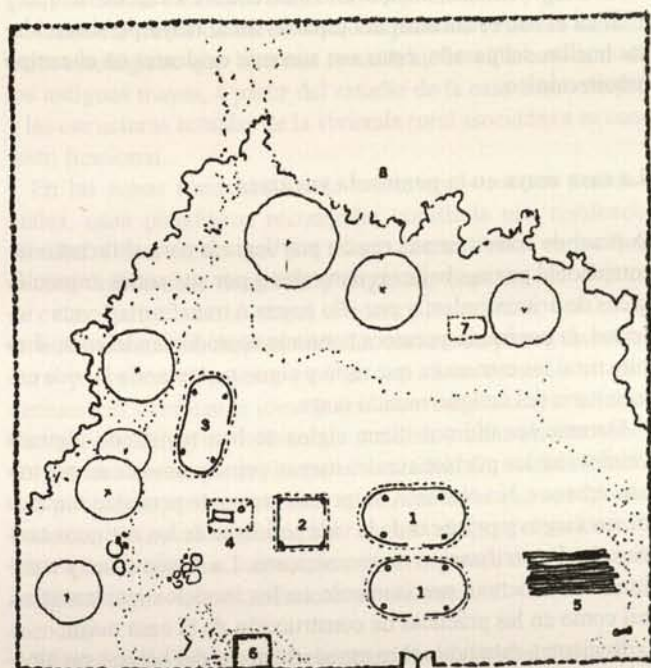
La Conquista reordenó los elementos cruciales del espacio prehispánico; los antiguos centros, límites, rutas y regiones fueron a menudo alterados con el establecimiento de una capital, mediante la demarcación de una jurisdicción como consecuencia del desarrollo de nuevas actividades económicas: minera, pastoreo, mesta. La consolidación de áreas de mestizaje modificó sustancialmente los espacios del centro. Los españoles se mostraron perceptivos ante las estructuras e instituciones sociales y políticas que poseían elementos espaciales de fácil lectura como los *altepeme*, en los que cabía señalar centros y contornos más o menos discernibles aunque no siempre claros y definidos; pero tuvieron dificultad para comprender otras cuya espacialidad era difícilmente perceptible, por ejemplo las tribus o los *calpultin*.

Los *altepeme*, además de ser la célula básica de organización, eran pequeños espacios orgánicos que podían entenderse y aprovecharse aisladamente, sin enfrentar la complicada cuestión de estructurarlos en un espacio mayor o en una red de relaciones más extensa; por ello respondían perfectamente a las limitaciones y a las necesidades de los europeos y muy en particular a los requerimientos de la encomienda, la evangelización y el control político y económico de la población indígena.

El "Pueblo de los Indios", heredero colonial *altepetl* prehispánico, estuvo en el eje de las relaciones entre españoles e indios, debido a sus características no sólo políticas sino también espaciales. Algunas actividades diferentes construyeron su propia y novedosa red de relaciones espaciales y eso dio lugar a una superposición de dos estructuras diferentes e incluso dos concepciones distintas del espacio. Muchos de los conflictos y litigios jurisdiccionales provienen de esa dualidad.

A pesar de las transformaciones sufridas a través del tiempo, algunas regiones indígenas continúan practicando comportamientos espaciales como lo hacían sus ancestros, sólo que con nuevos "disfraces".

Los desplazamientos en el espacio tradicional de los zinacantecos ilustran claramente lo anterior. Esta etnia maya forma parte de los grupos indígenas asentados en las zonas serranas de los Altos de Chiapas, cuya organización doméstica está integrada por unidades de dos, tres, cuatro o cinco casas dentro del conglomerado. Se trata, en general, de grupos residenciales de familias patrilocales extensas que habitan unidades amplias, llamadas *Sna* (casa de) y dichas unidades se constituyen en función de los linajes.



Planta de conjunto de un solar Maya

En el esquema A se muestra el movimiento de la gente desde sus casas hasta las cruces en el centro del patio en donde oran y hacen ofrendas, luego se dirigen al temazcal; todos los movimientos se realizan dentro del sitio con un profundo significado, no sólo en las ceremonias curativas, sino a lo largo de todo el ciclo ceremonial.



Unidad de servicios de la Zona Arqueológica de Edzna, Campeche. (Modelo inspirado en la arquitectura tradicional del sitio)



Vivienda vernácula de la zona maya de Campeche. (En ella se aprecian los soportes estructurales)

Adaptación de la arquitectura tradicional a las necesidades modernas



No se hace ninguna entrada ni salida de la casa sin antes decir las oraciones en las cruces del patio. El temazcal posee el mismo significado curativo que en otras regiones mesoamericanas.

En el esquema B observamos un típico circuito ceremonial que se realiza durante la fiesta de *Kin Krus* de un *Sna*; el movimiento se hace en sentido contrario al de las manecillas del reloj. El grupo ceremonial reza al "dueño" de la tierra y dirige también sus ruegos a los ancestros que les han heredado la tierra; en este circuito de nueve grupos de cruces los participantes también trazan ritualmente los límites aproximados de sus tierras.

Hay otra figura que muestra el desplazamiento de los habitantes hacia el manantial sagrado, foco de la ceremonia de *Kin Krus* y de importancia crucial porque es la única ocasión donde participa todo el grupo.

En el esquema C vemos el movimiento ceremonial hacia las cuatro montañas sagradas durante el rito curativo. Primero, visitan en orden riguroso las tres montañas, en cuyas cimas se dicen oraciones; en la cuarta se alza el calvario y se desarrollan ritos especiales -como el sacrificio de una gallina negra- durante los cuales no se puede visitar ninguna de las otras montañas. El enfermo hace esta peregrinación ritual sin importar la distancia de su *Sna*.

Por último, en el esquema D vemos desplazamientos ceremoniales más complejos, realizados en mayores distancias geográficas y por grupos más numerosos; se efectúan desde las tierras altas hasta las bajas para trabajar las milpas en las zonas calientes. Si bien este movimiento es de carácter económico, no carece de significado ritual ya que está ligado a las ceremonias que se realizan en las milpas.

Igualmente, las fiestas traen consigo movimientos entre cada una de las poblaciones de los parajes. Zinacantán rige la vida ceremonial y política de una gran área a su alrededor; los desplazamientos ceremoniales rítmicos y de la parafernalia ritual ligan al centro con los parajes adyacentes y con los ramales situados más allá de sus fronteras. Vogt, quien ha hecho un profundo estudio sobre este grupo indígena, señala que debido a un cierto número de hechos fundamentales, esta región guarda un sentido estructural espacio desde tiempos antiguos en forma relativamente imperturbada, aunque con diferentes escalas de tiempo.

Si en el uso estructural del espacio ritual maya persisten claras huellas del pasado, éstas son aún más evidentes en el campo arquitectónico.

La casa maya en la península yucateca

A pesar de constituir una región privilegiada para el turismo internacional por sus bellezas naturales y por sus zonas arqueológicas de primer orden, y por ello sujeta a transformaciones violentas, la península yucateca continúa reproduciendo en su ámbito rural la estructura que rigió y sigue sustentando la vida comunitaria del antiguo mundo maya.

Durante los últimos cinco siglos se han registrado algunos cambios en los pueblos rurales mayas, principalmente en sus trazos urbanos. No obstante, sorprendentemente persisten muchos de sus rasgos y prácticas de la vida cotidiana de los antiguos centros de alta civilización mesoamericana. La continuidad y similitud se conservan precisamente en los modelos residenciales, así como en las prácticas de construcción de la casa maya.

Recientes estudios sobre etnohistoria del hábitat prehipánico maya en las tierras altas de Guatemala y excavaciones

arqueológicas en la península de Yucatán, dan testimonio de la permanencia de los modelos residenciales durante largos periodos.

La construcción de la choza maya actual en las zonas rurales yucatecas presenta principalmente tres tipos de planta arquitectónica: a) absidal o en culata; b) rectangular y c) rectangular con los extremos redondeados. De acuerdo al trabajo exhaustivo que sobre la casa maya moderna hiciera Robert Wauchope en 1938, la zona peninsular ya no tenía en esa época viviendas de planta cuadrada; en cambio, éstas eran comunes en los altos de las sierras chiapaneca y guatemalteca y en los registros de las excavaciones en las zonas de Cobá Dzibilchaltún y Uxmal, Yucatán, aparecían con frecuencia casas de planta cuadrada e inclusive circular.

La disposición, la forma de la planta y los elementos constructivos de la casa indicaban también el nivel social, el grupo social y hasta de la etnia a la cual pertenecía cada habitante. Las casas de planta absidal eran atribuidas a los mayas yucatecos y si, por ejemplo, contaban con banquetas interiores en forma de "c" se atribuían a los itzaes. En las regiones montañosas del Puuc o en el mismo Petén predominan las casas de planta rectangular; en cambio en la zona de Dzibilchaltún o en el actual Belice encontramos construcciones de planta absidal y circular. Las áreas cubiertas por la casa varían de rango de acuerdo a las diferentes regiones y van desde 500 metros cuadrados, en Tikal, hasta 14 metros cuadrados en la zona de Campeche. Podemos afirmar, sin embargo, que muchas de las áreas reducidas aumentan durante el periodo clásico.

La techumbre de las viviendas era de bóveda falsa en saledizo o más comúnmente de materiales vegetales como se siguen construyendo en la actualidad. La presencia y diversidad de formas en la construcción y en la disposición de los pueblos daban testimonio de la enorme gama de morfologías urbanas en el mundo maya, pero también señalaban la fuerte estratificación de la sociedad.

La forma de una casa no es simplemente el resultado de fuerzas físicas o de un factor casual único, sino la consecuencia de una serie de factores socioculturales considerados en su más amplio sentido. Las analogías específicas entre la habitación antigua y la actual en el área maya son sorprendentes, y pueden establecerse a través de un estudio comparativo entre los análisis paleoetnológicos que intentan reconstruir la vida cotidiana de los antiguos mayas, a partir del estudio de la casa como unidad y las estructuras actuales de la vivienda rural asociadas a su contexto funcional.

En las zonas residenciales de los antiguos centros ceremoniales, cada plataforma rectangular constituía una residencia familiar. Observamos que una misma forma cubría varias funciones: habitación, despensa y lugar de depósito de objetos de culto. En las mismas zonas residenciales existían, igualmente, otras estructuras de plan variado: cocinas en planta de herradura y hornos circulares para la cal. Los estudios citados demuestran y refutan la idea de que las ciudades mayas estaban vacías casi siempre y solamente acudían a ellas en ocasiones de grandes ceremonias, fiestas o mercados. En realidad había una población permanente más numerosa de la que se suponía. Podemos observar que muchas de las antiguas funciones y los espacios que las sustentaban siguen presentes; el espacio indígena sigue reproduciéndose como antes, al menos en su esencia.

El solar maya constituye en la actualidad la unidad residencial más importante de la comunidad; es el sitio físico donde la fa-

milia extensa crece y organiza la vida cotidiana. El estatus y el desarrollo del grupo doméstico se refleja en el número de generaciones y parientes que ahí viven. La existencia de casas y cocinas separadas indican también la independencia o subordinación entre padres e hijos.



Choza Maya con algunos elementos modernos



Casa Maya de planta rectangular

Estructura de la techumbre de una vivienda tradicional Maya (En ella se aprecia la colocación de la palma)



La Troje: tipología de vivienda Purepecha

Los purépechas, también llamados tarascos, habitan el noroeste del estado de Michoacán. Su territorio se encuentra en el eje neo-volcánico, a una altitud de 2,300 SNM. La región, de topografía accidentada, con algunos pequeños valles y mesetas, estuvo alguna vez cubierta de extensos bosques de pino, oyamel, abeto y roble, más de la mitad de los cuales ha sufrido deforestación a gran escala. El cultivo del maíz y del aguacate, y la venta de la madera, constituyen su economía. Las poblaciones son comunidades de alrededor de 4000 habitantes.

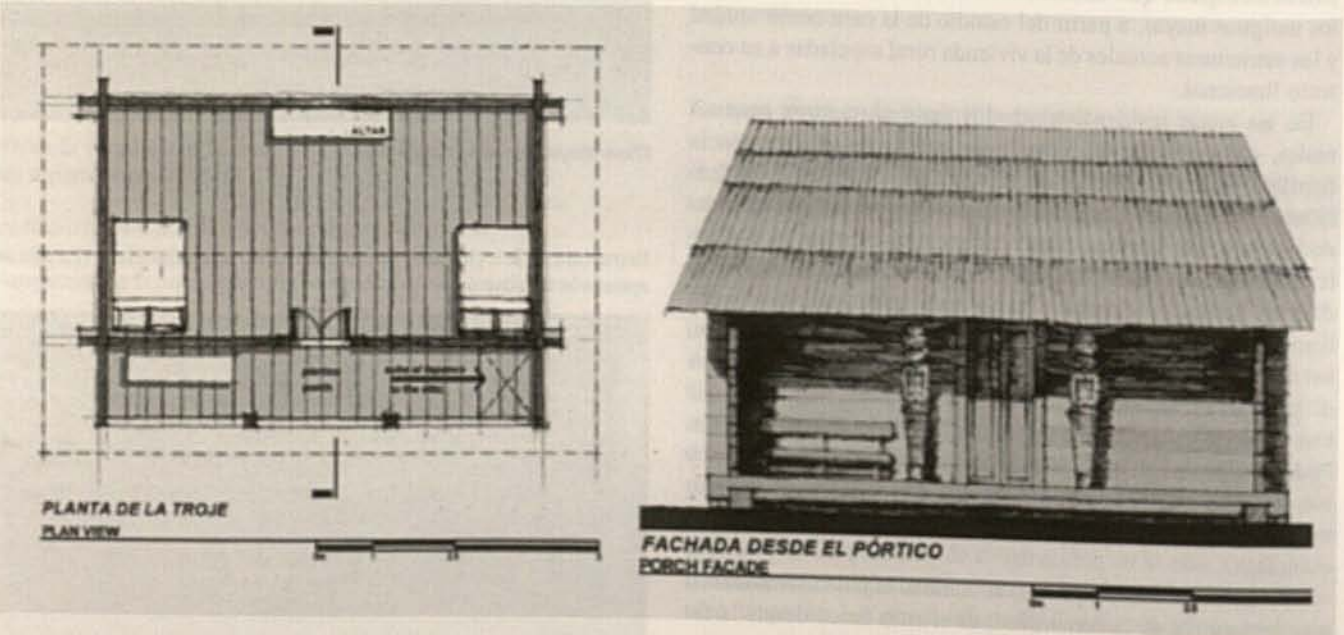
El solar familiar, limitado por una cerca de piedra, está constituido por la troje que a través de un pórtico abre hacia el patio interior, dando la fachada posterior hacia la calle. La troje se caracteriza por su doble uso: dormitorio y granero. La casa purépecha ha adoptado distintas variantes de acuerdo con las necesidades de las familias; desde la unidad básica hasta el complejo de trojes con función también de dormitorio o bien de algún tipo de comercio. El solar cuenta con un huerto y a veces, con corral. A la cocina, actualmente una construcción de tabique, se le ha agregado una estufa de gas, aunque se sigue empleando el viejo fogón de piedra, a base de carbón, sobre el que descansan las ollas y el comal, para hacer las tortillas. La entrada a la casa se resuelve por un zaguán en un extremo del predio, solo las puertas de acceso a la troje-tienda, cuando la hay, abren hacia la calle. La letrina se construye en un cuartito al fondo del patio. Al granero, en el tapanco, se llega a través de una escalera móvil que arranca del pórtico. El altar remata la vista central del acceso a la troje-dormitorio.

Los habitantes realizan la mayor parte de sus actividades en el patio de la casa, tanto en el templado verano, alrededor de 20° C, como en el invierno. Los muros de madera, orientados hacia el oriente-poniente, conservan el calor en las noches del húmedo invierno en que la temperatura desciende a menos de 10°C. Las ventanas son escasas o no existen.

La construcción de la troje se comienza por realizar un marco de vigas de 4 x 5 m, apoyado en una mampostería que eleva la casa entre 30 y 60 cm del suelo. El marco sostiene un piso de duela. Los muros del cuarto, hechos de tablones, se colocan de forma horizontal, ensamblados entre sí (ver detalle), las esquinas se ensamblan mediante muescas dejando los extremos libres. Los muros tienen hasta 2.50 m de altura. El piso del tapanco, se hace también con tablones. Por lo general, el piso del zaguán y del patio es de tierra apisonada.

Los techos a cuatro aguas son de fuerte pendiente como respuesta a las intensas lluvias que recibe la zona de junio a septiembre. La techumbre está resuelta por medio de un caballete paralelo al portal. El entramado de vigas de la techumbre descansa sobre el tapanco. Se comienza por construir los tímpanos que soportan al caballete, el cual recibe las vigas laterales sobre las que descansa la cubierta, de dos o cuatro aguas, hecha de tejamanil: delgadas tablas de pino, que se clavan sobre la vigueta delgada de la estructura de la techumbre. Hay evidencias de que los indígenas empleaban el tejamanil hecho de pino y de abeto en la arquitectura doméstica del s. XVI.

Planta de la Troje y fachada desde el pórtico

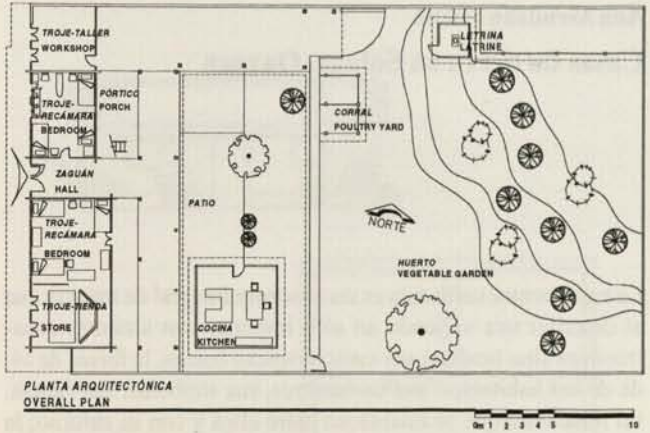
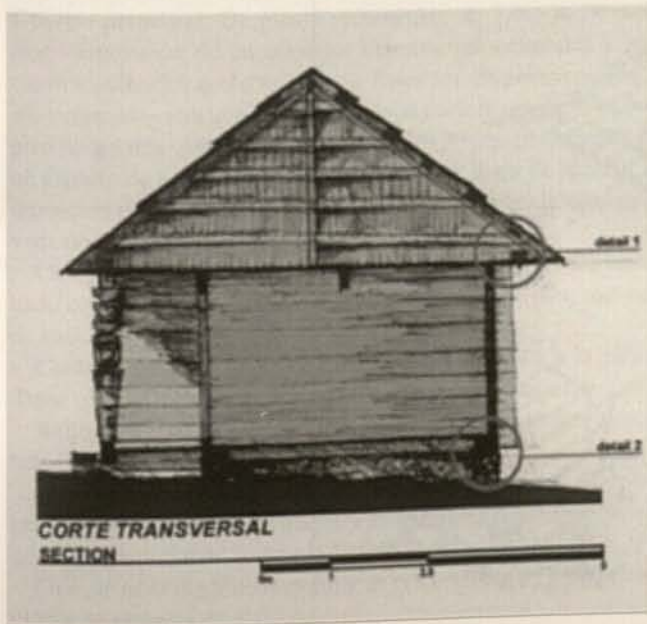


La casa se puede armar y desarmar en dos días. El tejamanil llega a tener una vida de siete años. Estas casas se distinguen porque tanto su estructura como los tablones que forman los muros, están resueltos a base de ensamblajes, sin utilizar clavos, salvo para unir el tejamanil. La profusa talla en madera de las columnas del pórtico es una técnica desarrollada por los indígenas. Las vigas de madera para construir la casa son trabajadas en el bosque para después ser transportadas al solar.

Tradicionalmente, la casa se construía de manera colectiva por las dos familias de la nueva pareja en el solar de los padres del muchacho. La migración intermitente o permanente hacia áreas urbanas del país y principalmente a Estados Unidos ha afectado la reparación y la construcción de las casas al verse los pueblos desprovistos de mano de obra masculina. El elemento que sufre el mayor deterioro en la vivienda tarasca es la cubierta de tejamanil.

La troje, característica más sobresaliente de la cultura purépecha, está en peligro creciente de desaparecer. Los sistemas de construcción de tipo urbano que quebrantan la unidad de los poblados y la identidad de estas comunidades, rompen con la tradición constructiva cuya sabiduría decantada a lo largo de generaciones, ha dado respuesta lógica a las necesidades de vida, de clima y a las costumbres purépechas.

Corte transversal



La Troje: planta arquitectónica

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Casas de tierra en Solaga, Oaxaca

La arquitectura vernácula es un concepto integral de manera que al describir una vivienda no sólo importan sus sistemas constructivos sino también sus características físicas, la forma de vida de sus habitantes, sus costumbres, sus símbolos, sus fiestas, las relaciones que se establecen entre ellos y con su entorno; la topografía en la que se ubican, el clima y demás características geográficas.

Se describe a continuación un ejemplo de vivienda zapoteca. La tipología aquí descrita es común a varias poblaciones de la Sierra de Juárez, en el estado de Oaxaca como: Guelatao, Ixtlán, Zogocho, Zoochila, Yalina y el que se describe: San Andrés Solaga.

Ubicación y clima

Población de San Andrés Solaga, Oaxaca, ubicada en la Sierra de Juárez; a 120 kilómetros de la ciudad de Guelatao, los últi-

mos 12 Km de terracería. Población aproximada de 5,000 habitantes. Lengua: la mayoría de la población son bilingües, zapoteco y español.

De las edificaciones existentes, solo un 30% tiene características de arquitectura vernácula. Existe un cambio acelerado y preocupante sobre el proceso de construir así como en la utilización de los materiales.

Los habitantes son en su mayoría niños, mujeres y hombres mayores, ya que los jóvenes en edad productiva emigran principalmente a los Estados Unidos de América.

Los zapotecas tienen organizaciones cooperativas y de ayuda mutua; son obsequiosos, espléndidos y compartidos de sus productos como el café el maíz, el frijol, etc.

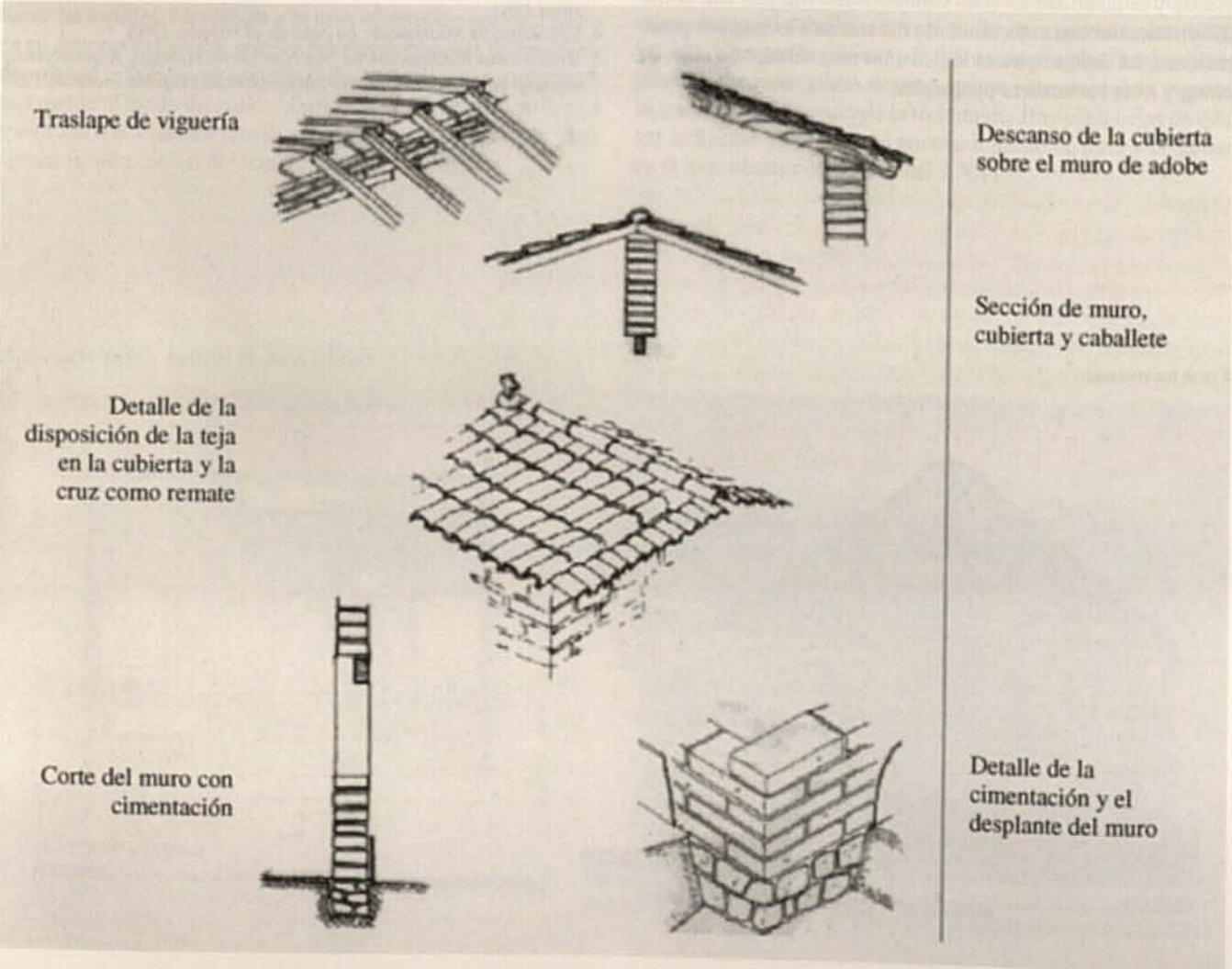
El clima es tropical: lluvioso y caluroso.

Descripción de las casas

Casas de tierra, con cimentación de piedra. Muros de adobe, reforzados con madera y cubierta a base de viguería y tablado. Cubierta de teja, como remate una cruz de barro o fierro.

Los vanos de ventanas y puertas son de proporciones pequeñas. Se conserva la temperatura fresca al interior. Los techos son inclinados. El piso es de tierra apisonada y humedecido día con día.

Las construcciones se agrupan en cinco cuerpos, el principal, otro secundario, la cocina, el baño y el gallinero. Se alinean en



conjuntos de dos o tres familias que comparten una calle privada, o un patio en torno al cual se desplantan las casas.

El pueblo está en una ladera; sus calles siguen la pendiente natural de la topografía. Existen una serie de caminos entrelazados o veredas que comunican las casas entre sí, que acortan las distancias y permite la comunicación entre los pobladores. El pueblo se entrelaza, así como se entrelazan sus viviendas. Las veredas son lugares de comunicación, de encuentros, de cercanías. Esto amplía el sentido de convivencia. El poblado es un solo tejido envolvente. Se agrupan en dos conceptos, lineal y de núcleo.

Procedimiento constructivo

Cimentación: Se traza la disposición de casa, y se excava una cepa de 60 cm. De profundidad por 40 cm. De ancho, sobre la que se desplantan los muros de carga.

Se construye la cimentación hasta el nivel de piso a base de piedra laja del lugar juntada con barro cernido e hidratado.

Muros: De adobe con barro del lugar que tiene la característica de contener pedacería de piedra laja, se mezcla con ocote, y agua. Las dimensiones promedio son: 60 x 40 x 15 cm.

Cubiertas a dos aguas, conformada con viguería de 10 x 15 cm. sobrepuesta en los muros, tablado, y teja de barro, rematada con una cruz de barro o de fierro. El techo inclinado presenta la ventaja de poder aprovechar la viguería horizontal para tapancos, que en un momento dado pueden funcionar como bodegas. El techo a dos aguas es ideal para climas lluviosos y tropicales porque permite que la vivienda sea más fresca.

Refuerzos estructurales: Como cadena de cerramiento a la altura de los vanos, se utiliza viguería de madera en toda la casa.

Las esquinas se refuerzan traslapando los sillares de adobe.

A manera de rodapié a una altura de 30 cm. se aplanan los muros, para protegerlos del agua de la lluvia y evitar el deslave del material de tierra.

Concepción de vivienda

Cuerpo principal: De planta rectangular, de 7.00x10.20 metros; disposición de un corredor cerrado que comunica a los cuartos utilizados como recámaras. Éstos son espacios cerrados, sin ventanas y con una puerta que da al corredor. A 2.30 m del piso tienen una vano de ventilación de 30x20 cm. El corredor es un espacio de uso múltiple: granero, bodega, lugar de reunión y transición entre el exterior y el interior y entre éste y la zona privada de los cuartos.

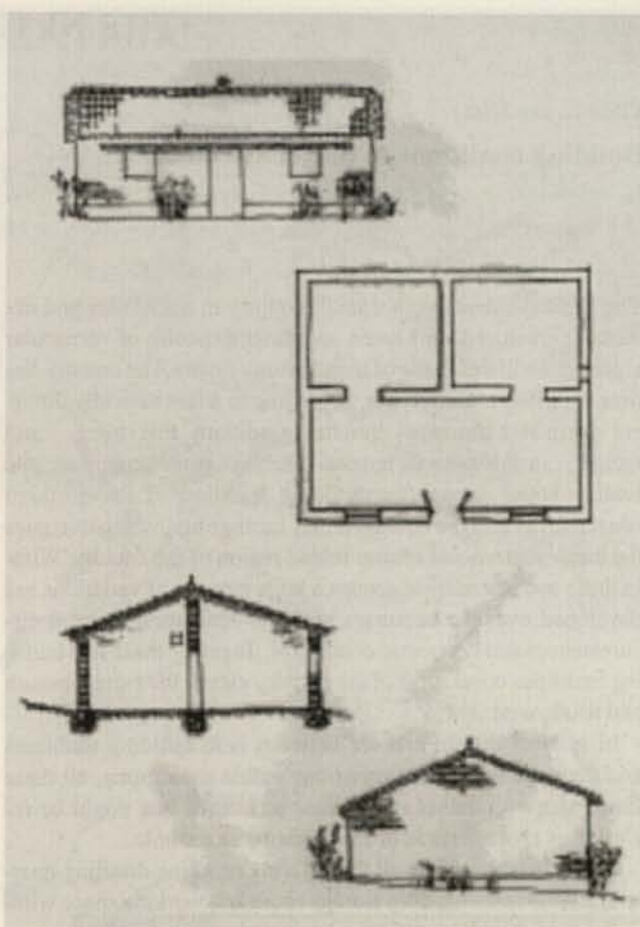
Cuerpo secundario: Consta de un cuarto y un corredor utilizado como el espacio para la producción casera de pan, molino de café, de maíz, etc.

Cocina: Un solo cuarto con comunicación directa a la calle. Tiene un fogón con chimenea y el combustible es la leña.

Baño: Separados el WC y la regadera. Es un espacio compartido con una o más familias.

Gallinero: Se localiza en la parte posterior, entre los cuerpos principal y secundario, de adobe y techado con teja; de muy pequeñas proporciones, imitando la forma de las casas.

La calle es el lugar de reunión y de convivencia de comunicación y de estancia.



△
◁ Casas de tierra en Solaga, Oaxaca

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THE NETHERLANDS

Ellen L. van Olst

Building traditions in the Netherlands

The Netherlands, though a small country in actual size and extremely urbanised, still retain an amazing wealth of vernacular architecture in the shape of their historic farms. The country has over 30 different farm types, belonging to a few basically different northwest-European building traditions that meet – and merge – in the Low Countries. The two main groups are the Frisian house group (the building tradition of the northern coastal area) and the so-called hall farm group, which occupies the entire eastern and central inland region of the country. Within these two main house groups a large number of variations has developed over the centuries, through adaptation to local circumstances and economic conditions. Together these two building traditions cover most of the country except the extreme south and south-west.

In spite of the differences between both building traditions and the large number of variations within each group, all these farms share a number of distinctive features that might be regarded as characteristic of Dutch farms as a whole.

Multi-functionality: all these farms combine dwelling quarters, animal housing, crop storage room and working space within the same building and often even under the same roof.

Timber framing: As the Netherlands have no stone, wood was the only local building material in the past that was strong enough to support the load of the roof. All traditional Dutch farms therefore have a timber-frame structure consisting of a number of box-frames, coupled by plates.

Aisled buildings with low side walls: the free-standing timber-frame structure divides the building internally into three zones: a wide central nave and two narrow aisles. The roof projects on both sides far over the arcade plates and the side walls are low.

Within this system of timber-framed, aisled, multi-functional buildings, there are large differences between the different building traditions. The distinctive features of the two main house groups or building traditions are not in the shape of the building, but in their historical development, interior arrangement and structure.

The Frisian house group

The present farmsteads of the northern coastal area are large aisled buildings, with huge sloping roofs and extremely low side walls. These buildings did not come into being until the second half of the 16th century. Until then, this coastal area was long-house territory with low, narrow buildings containing only a dwelling and cowshed. Crop storage was in separate small barns or haystacks. Now all longhouses have disappeared. The huge barns, as built from the late 16th century onwards, have a pine timber-frame structure of extremely high box-frames with a super-imposed tie beam, and no attic floor. The cattle stalls in this area differ basically from the stalls in all the rest of the country. On these 'Frisian' raised stalls with deep manure channels, the

cows stand paired between wooden partitions, heads facing the exterior wall. The cowshed as a whole is situated in one of the aisles. Crops are stored on ground-floor level in large storage bays in the nave. In Frisian farms the working floor is situated in one of the aisles, which means that the double doors are always to one side of the façade.

The hall-farm group

The hall farm was developed during the Middle Ages. Of their predecessors little is known, though it is generally assumed that these were in their turn derived from the prehistoric longhouse. The buildings of the hall-farm group share a box-frame structure (in the past generally of oak) of the anchor-beam type. The lowered position of the tie beam creates a large attic space for storing crops. Cattle stalls in the sandy regions used to be sunken stalls, dug out to the depth of one metre. In these pits the cattle stood on their own excrement to which large measures of dry organic material were added to ensure a great quantity of manure. When artificial fertiliser came on the market, the sunken stalls were all converted into ground-floor level stalls with manure channels. The stalls are situated in both aisles, with the animals facing inwards towards the nave. Crops were stored in the attic above the nave, on a floor of sapling poles placed on top of the (lowered) tie beam. In hall farms the wide central nave of the working area of the building is open and houses the threshing floor.

Building materials

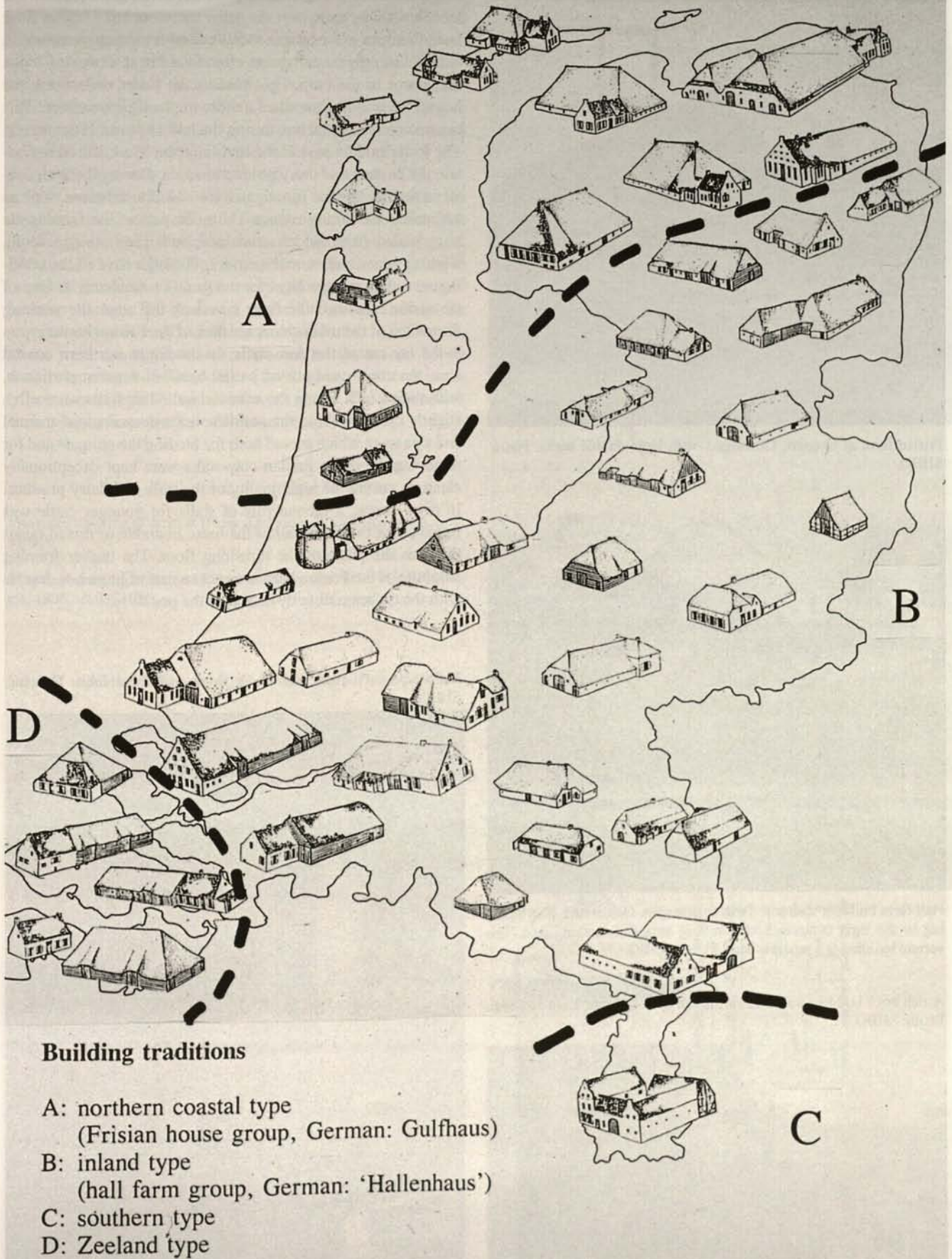
As the Netherlands have no local stone, all traditional buildings used to be constructed from perishable materials such as wood, mud, wattle and daub, straw, reed, heather etc. From the 15th century, brick became available as a building material for vernacular buildings. The introduction of brick was a slow process, which started in the western parts of the country around the medieval cities, in the central river area, and in the northern provinces, where clay was easily available. In the sandy eastern regions fully timber-framed buildings with walls of wattle and daub could still be found around the beginning of the 20th century. In the course of time, clay pantiles replaced thatch as a less perishable roofing material.

Frisian 'kophalsromp' farm

Perhaps the most typical of Frisian farms is the 'kophalsromp' (literally: head-neck-body) type, named after the silhouette of the farm in the landscape, when seen from afar.

The head is the house, extending from the large barn. This contains one or more rooms, often with a large cellar under-

Building traditions of The Netherlands around 1900



Overview of farm types and main building traditions in the Netherlands. Plan: SHBO, The Netherlands.

neath. The cellar was used for the dairy production. Here the milk was set to rise for 24 to 36 hours, after which the cream was skimmed off and made into butter by the use of a horse-drawn churning mill. The skimmed milk was made into low-fat cheese.



Frisian farm at Usquert, Groningen, with large double barns. Photo: SHBO.



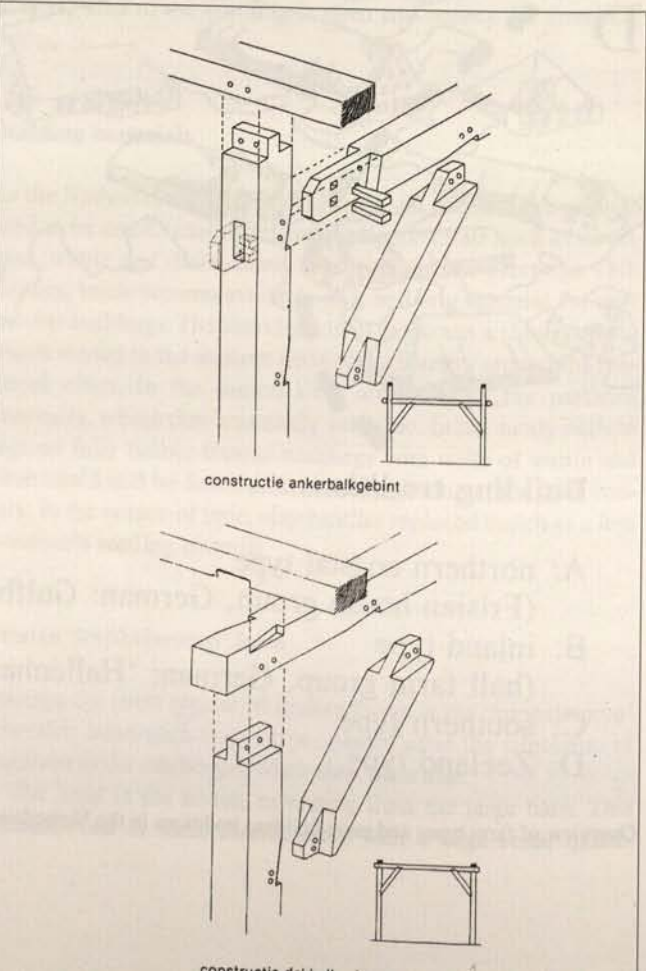
Hall farm building tradition: farm at Eibergen, Gelderland. The building to the right contains both dwelling area and working part. The second building is a separate barn. Photo: SHBO.

A rich brick building tradition, farmstead at Hoogmade, Zuid-Holland. Photo: SHBO.



With the large dairy herds of farms in this area, the cellars had to be large to contain the entire day's produce. Because of the high groundwater level, cellars could not be built entirely underground. The cellar is usually set half below ground level and half above. The room over the cellar therefore has a higher floor level than the other rooms and is called a mezzanine room. In older buildings, the cellar was often found in an extension to the kitchen or in the barn. By situating the cellar underneath the house, the building assumed a more imposing appearance. This became common practice during the late 18th and 19th century. The lower middle part of the building (the 'neck') used to contain the kitchen and dairy production area. During the 20th century other residential functions were added to this area, such as bedrooms and sitting-rooms. The main part of the farm is the huge aisled barn, which contained both crop storage room, working space and animal quarters. The high nave of the building served as storage bays for the grain or hay harvest. One of the aisles contained the large cowshed, the other the working floor. One of the main characteristics of the Frisian house group is the lay-out of the cow-stalls. In the entire northern coastal area, the cows were placed paired between wooden partitions, with their heads facing the exterior wall. The stalls were often slightly raised. Behind the animals was a deep manure channel and a passage which served both for feeding the animals and for removing the dung. Frisian cow-stalls were kept exceptionally clean, to ensure the high quality of the milk and dairy produce. In dairy farms, a second row of stalls for younger cattle was found along the back wall of the barn. In arable or mixed farms this was the place of the threshing floor. The timber framing structure of the Frisian barn always consists of huge box-frames with the tie beam directly on top of the posts.

Main types of timber framing in Dutch aisled buildings. Drawing: SHBO.



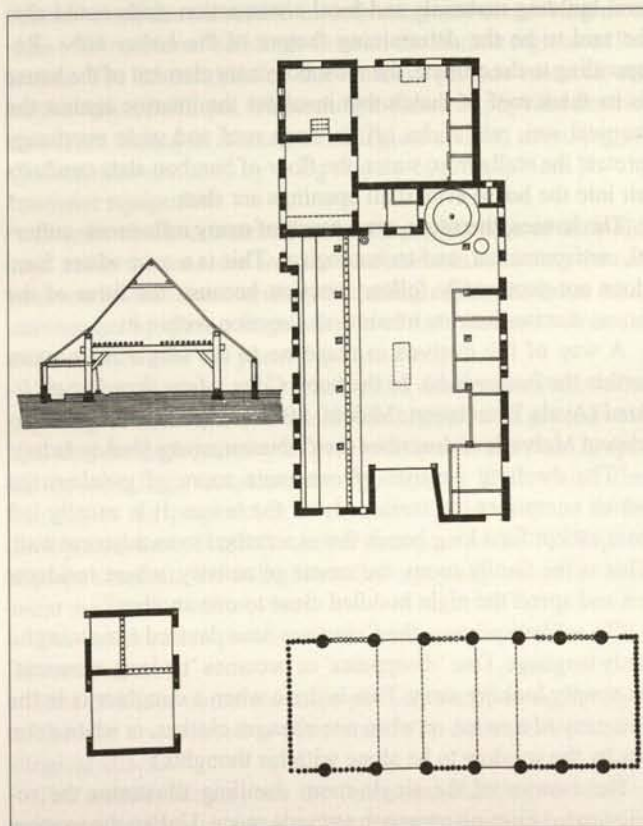
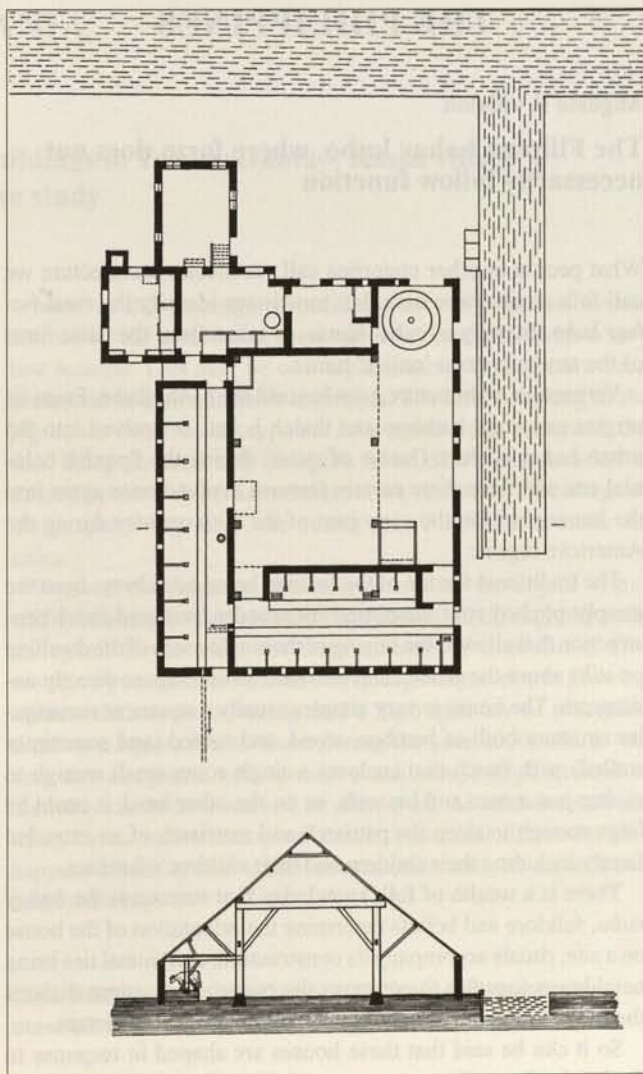
Drenthe hall farm with lateral threshing floor

The farm (which is a listed monument) is a rare example of a historically valuable monumental building that is still fully used as a working farm. The farm largely dates from 1786, as stated in the ornamental wall clamps of the façade. The original interior of the dwelling part is almost entirely intact, with its huge living room with highly decorated tiled walls, fireplace, and panelled wall containing a row of box beds and cupboards. Next to the living room is a cellar and mezzanine room, which serves as bedroom. The cellar, which served for the storage of dairy produce and provisions, is accessible from the kitchen. The extremely wide nave in the working part of the farm contains the threshing floor, with cow-stalls on either side in the aisles. The high double doors are situated in the centre of the rear façade. Because of the low height of the exterior walls, the doors had to be placed in a recess. The attic over the threshing floor was used for crop storage. The area next to the kitchen still houses the original pump. Here the milking pails and other dairy implements were rinsed. This area also used to contain the horse-drawn churning mill. The walls of the washing area traditionally have a tarred plinth, with whitewash above. The original oak anchor-beam framework is still intact.

Measured drawing of farm at Broek. Drawing: K. Uilkema, 1926, Coll. SHBO.

Measured drawing of farm at Ruinerwold, Drenthe. Drawing: K. Uilkema, 1926, Coll. SHBO.

Detail of anchor beam framework of hall farm group. Photo: SHBO.



THE PHILIPPINES

Augusto F. Villalon

The Filipino bahay kubo, where form does not necessarily follow function

What people in other countries call vernacular architecture we call folk architecture here, but mostly we identify the rural *bahay kubo* (literally a 'cube' house, as taken from the basic form of the structure) as a 'native' house.

Vernacular architecture goes beyond the *bahay kubo*. From its origins as a rural bamboo and thatch house, it evolved into the urban *bahay na bato* (house of stone) during the Spanish colonial era, and from there certain features evolved once again into the houses built in the early part of the 20th century during the American regime.

The traditional feature of the 'native' house has always been the steeply pitched roof supported by wooden post-and-lintel construction that allowed the raising of the single room of the dwelling on stilts above the ground and provided an open space directly underneath. The house is very simple: usually a square or rectangular structure built of bamboo, wood, and roofed (and sometimes walled) with thatch that encloses a single room small enough to shelter just a man and his wife, or on the other hand, it could be large enough to sleep the patriarch and matriarch of an extended family including their children and their children's families.

There is a wealth of folk knowledge that surrounds the *bahay kubo*, folklore and beliefs determine the orientation of the house on a site, rituals accompany its construction, communal ties bring neighbours together to construct the house, and custom dictates the lifestyle lived within the small confines of the structure.

So it can be said that these houses are shaped in response to the local culture. However, geography and climate, available natural building materials and local construction skills could also be said to be the determining factors of the *bahay kubo*. Responding to the climate, the most dominant element of the house is its thick roof of thatch that insulates the interior against the tropical sun, rain slides off its steep roof and wide overhangs protect the walls from water, the floor of bamboo slats conducts air into the house even if all openings are shut.

The houses, therefore, are a result of many influences: cultural, environmental, and technological. This is a case where form does not necessarily follow function because the form of the house dictates how its inhabitants function within it.

A way of life evolved in response to the single main room within the *bahay kubo*. In the book *Cebu, More than just an Island* (Ayala Foundation, Makati, 1997), respected Cebuano architect Melva Java describes the *Cebuano payag* (*bahay kubo*):

"The dwelling consists of one main room of *guinlawasan* which comprises the main body of the house. It is usually left bare except for a long bench that is attached to an adjacent wall. This is the family room, the centre of activity, where residents eat and spend the night huddled close to one another."

"To achieve privacy, the Cebuanos have devised a meaningful body language. One 'disappears' or becomes 'no longer present' by simply looking away. This is done when a daughter is in the company of a suitor, or when one changes clothes, or when a son sits by the window to be alone with his thoughts."

The interior of the single-room dwelling illustrates the sophisticated Filipino approach towards space. Unlike the western



concept of space where each space is assigned a function – sleeping, dining, cooking, etc, Filipino space is open and multi-functional. An eating area is cleared away at night and sleeping mats rolled out for the family to sleep on, or where turning one's back on the central shared space of the room creates privacy. It is a simple open space but its usage complex – where walls are not necessary for privacy, where spaces layer upon each other, where a big communal space gives way to smaller individual spaces.

Rodrigo D. Perez III writes of the *bahay kubo* in *Folk Architecture* (GCF Books, Manila, 1989): "The utter simplicity of the house is all the more impressive in the perfect correspondence of exterior form and interior space. The exterior form defines the totality of space in the one-room dwelling, while the interior space enjoys the full expanse of the structure. There is no dead or buried space within."

"Though small in scale, the native house reveals a sense of architectural mass. It embodies an appreciation of the power of simple volumes – pyramids and the combination of rectangular and triangular masses."

One can speak of the *bahay kubo* in architectural or cultural terms, even look at it as something that we have in common with our neighbours since it appears in one form or another in all Southeast Asian countries.

However, in this day and age these traditional houses have become an anachronism. Over time and generations the more fortunate residents have built new houses of cement with galvanised iron roofing. It matters little that the new house is not safe from floods, that it is oven-hot in the summer and that typhoon rains deafen the residents as they drum on the thin roof. The concrete house is the supreme status symbol.

The less fortunate have moved to the fringes of cities, where they live in urban versions of the *bahay kubo*, temporary shanties constructed of whatever material they have salvaged.

The traditional *bahay kubo*, or *payag* in Cebuano, stands either alone or in small clusters in rural areas, some of them a distance away from the nearest road, without water supply and sewage, without electricity and communication. Life in a *bahay kubo* is not easy.

It may be time to take a good look at traditional architecture, to find ways for rural life to continue in the *bahay kubo* and to bring in elements of the 21st century so that the residents will not feel left out of the mainstream. If steps are not taken, then we may as well write an epitaph for traditional architecture.

Ioana Tanasescu

Problems of physical deterioration on vernacular buildings in Transsylvania – Râșca village and open-air museum “Astra”, Sibiu – a comparative study

Introduction

The built vernacular heritage is the fundamental expression of the culture of a community and its relation with the surrounding territory – a continuing process of adaptation and transformation.

Due to the progressing homogenization of culture and the socio-economical transformations on a global level the built vernacular heritage is extremely vulnerable.

In addition and completion to the “Venice Charter” the General Assembly of ICOMOS held in Mexico 1999 adopted the “Charter on the Built Vernacular Heritage” and the “Principles for conservation of historical wooden structures”, both formulating basic principles for conservation and practical restoration work. In this way the general methodology for protection and conservation of vernacular structures and their cultural message are defined.

The alterations of building materials used in vernacular structures caused by time and climate cannot be treated separately. The problems of physical deterioration also have to be related to the biological analysis and need to be included in considerations on structural solutions, especially because vernacular structures are currently erected using local building materials from places of resources already disappeared.

Case study – traditional housing in Râșca village, Cluj county

Râșca municipality located in the Western Carpathians is the biggest settlement of the area, covering about 58 km². The boundaries include the villages of Râșca with the hamlets of Onicești, Plesu, Upper Râșca and Cristești, Dealu mare, Lapuștești and Marcești. The settlement is spread over several hills and along three small river valleys collected by the river Râșca. A medieval castle dating from the Gelu period is mentioned both in written and oral documents of the area, but after several excavations and also ethnographical studies were without results research was given up.

The Râșca area as well as a rather large part of the Western Carpathians are listed protected areas both for nature and history.

The recording of vernacular architecture is very difficult due to the large dimensions of the area but especially to the transformations which started already in the 1950s by replacing the traditional roofing by industrial materials on almost all the traditional houses. Therefore the identification of authentic old houses is very difficult. Most of the few preserved old buildings are either abandoned or in very bad condition, inhabited by very old people or looked after sporadically by some relatives of the former owners. The local administration is not interested in any conservation or repair because of the lack of funds, but also because the building of new houses increases the income of the population living from forestry and timber constructions.

Most of the investigated buildings are very modest houses erected by the inhabitants themselves, a population with a very low income. This may be one explanation why they have been preserved in their authentic condition. The houses belong to the log-house construction type set on a small stone basement, the roof being covered with shingles. Most of the deterioration is caused by the lack of maintenance work related to the old age of the people living there, the young ones migrating towards the cities.

Physical deterioration is mostly caused by the degree of humidity in the air, which is very high almost all through the year, the speed of the wind, the large amount of snow for c. five months a year and also numerous springs on the slopes growing to torrential rivers in spring and a high quantity of precipitations on a square meter. Even during the year 2000, which was very dry compared with normal conditions, a high amount of humidity could be observed on almost all the timber constructions, but no active biological attack. Structural alterations also happened both to the timber construction and the stone basement masonry.

Case study – traditional structures inside the open-air museum of “Astra”, Sibiu

Founded in 1963 as a “Museum for Popular Technology” the “Astra” museum succeeded in collecting and conserving more than 150 traditional buildings from all the distinct regions of Romania. The laboratories of the museum provide research and conservation facilities, where the problems of physical deterioration are treated in relation to biological attacks, executing periodical measurements by using thermo-hygrographical, ph- and luxmeter equipment.

In order to assure a mostly authentic presentation of the buildings inside the museum area the placement is following the natural conditions of the territory including a lake, the latter being surrounded by quite a large number of the exhibited vernacular constructions (see the plan of the museum).

The measurements of the last years documented the rather high degree of humidity in the air, the high level of groundwater and also the high quantity of precipitations in the area. In spite of the very high temperatures registered in 2000 which contributed to the evaporation of a relatively high amount of humidity from the soil and the timber structures of the buildings inside the museum, the rising humidity especially inside the basement masonry is still obvious.

The deterioration problems have been analyzed by categories of constructions:

First of all the numerous mills placed directly along the shore of the lake are exposed to deterioration by air, humidity and biological attack.

The second category are the farmstead buildings erected on masonry basements, some of the latter being covered by clay



Traditional wooden house in Râșca village



plaster. Deterioration observed is caused mainly by their placement on a slope, producing a difference in height of around 50 cm between the basement masonry on the valley side and the hill side. Infiltrations have produced exfoliation of the plaster or even complete decay, in some cases cracks and also dislocated stones inside the masonry. On most of the houses the impact of humidity on the plaster can be observed. The rain water has an immediate impact on the shingle roofing but also on the side walls especially when the eaves are too narrow. At the same time the lack of any draining system normally increases the quantity of water remaining on the soil surface which is absorbed by the building materials. In this case the timber reacts like a filter, absorbing the humidity from the lower part of the building and – when the posts are fixed directly in the basement masonry – leading it to the horizontal logs and the ceiling construction. Thus the development of fungi cultures is being promoted. The presence of fungi is always the confirmation of a high percentage of humidity inside the structures of a vernacular unit. Prevention measures are necessary, especially for the timber elements. Special treatments are executed in the laboratories equipped with fumigation utilities, impregnation basins, vacuum treatment, deep freeze utilities of 4 m capacity, high temperature and humidity treatment against fungi etc.

First aid methods for vernacular structures

The cracks inside the masonry are pointing at the changes inside the structures. Most frequently the increased ground water level is responsible for structural deformations and the deterioration of the wall timber. The monitoring of cracks is necessary, using plaster marks for observation. The very high ground water level

must be reduced by a draining system. If the soil level in front of the basement masonry is too high, it should be reduced in order to avoid remaining water on the soil level.

The cracks inside the masonry could be filled by using a mixture of clay with straw (if the mortar is clay-based) or with lime mortar. As most of the old vernacular buildings have no eaves gutter, the lower parts of the exterior walls are exposed to rain water and melting snow. The simplest preventive measure would be the execution of a draining ditch filled with gravel not deeper than the foundations level. As the shingle roofing was never executed to last for hundreds of years (without periodical replacement of deteriorated parts) the repair of the roofing by replacing the deteriorated parts is the only way to save the structures.

Conclusions

The comparative study has pointed out the importance of regular maintenance work on traditional buildings and also the risk of producing considerable problems when creating artificial groups of buildings, like in open-air museums where the developed microclimate is promoting and even intensifying biological attack which cannot be stopped or eliminated. Such conditions are not or only rarely met at vernacular constructions remaining *in situ* even if they are in very bad condition.

As a conclusion the development and implementation of a recording program for vernacular architecture in the hill area of Cluj county is absolutely necessary. At the same time the small amount of funds for restoration work should be directed from the artificial groups of buildings towards the original ones *in situ* which are in bad condition.



Astra open-air museum, windmill



Traditional wooden house in Râșca village

SLOVAK REPUBLIC

Gabriela Habánová

Peasant House in Sucháň no. 7

The peasant house dating from the 2nd half of the 19th century originates from a small village named Sucháň, which is situated in the low highland area in the south of middle Slovakia. It was built according to a younger building tradition using stone and clay mortar. The older tradition of wooden houses in this village expired after fires in the 19th century.

According to the local tradition this compact building has a simple rectangle ground plan, whereas the residential part and the two rooms – the store room and the stable – were added later.

The house has two storeys on its front side: the main room and the cellar underneath. Different parts of the house have their own entrances to the yard side, the cellar entrance is on the front side of the house. All rooms are gathered under a common roof and beside a loft. The pitched roof is carried by a wooden rafter ridge beam construction and covered with rye straw. The expression of this building is very simple, squared by the archaic type of small simple windows, set deep in the wall. The only international decoration of the exterior is the blue border around the windows on the front side, which contrasts with the smooth white façade.

The main room is the living room. It is used for everyday life as well as for the festivities of the peasant family. This room has also played an important role as the place for social representation.

The main room is heated by a more recent type of brick stove. The room is entered through the entrance hall, which also served as a kitchen and where a brick bread oven and a brick stove are placed under an open chimney. The chimney alludes to the older way of cooking on an open fireplace, though the latter was not preserved. It was probably replaced by a younger type of stove around the turn of the 19th century.

The third space of the house – the store room – was used for storage of cereals, food-stuffs, tools and clothes, but it also served as temporary bed room of the newly weds. The store room was not heated and was lit by only two very small windows. In the stable big farm animals were kept – a horse and a cow. The hay was stored in the house. House no. 7 is a cultural monument. Its original role as a peasant house has been lost. Since the restoration of the monument in 1995 it has served as a local ethnographical museum.

Félix Benito Martín

Arquitectura tradicional en Castilla y León

Las construcciones de vivienda tradicional aquí seleccionadas constituyen ejemplos representativos de la arquitectura de Castilla y León, que es la región (Comunidad Autónoma) de mayor extensión de las existentes en España.

Se han seleccionado seis casos, que comprenden distintos modos de vida y de construcción existentes en el país:

En primer lugar, una palloza, construcción muy primitiva que engloba en un espacio único, con cubierta vegetal, el conjunto de la vivienda e instalaciones agropecuarias.

Después se incluye una edificación de la montaña septentrional, compacta, con galería exterior delantera en Boca de Huérgano.

Se incluye también una construcción con corral delantero, que muestra una interesante disposición en los dormitorios del piso superior. Junto a ella se ha seleccionado otra casa de la zona de los páramos, estructurada en torno a un patio que organiza el conjunto de la vivienda e instalaciones auxiliares.

El grupo seleccionado se completa con dos viviendas de corral posterior, tal como es habitual en los núcleos agrícolas de las llanuras del centro de la meseta. Uno es de las llanuras meridionales, con fachada de ladrillo y elementos casi formales y otra es de la comarca de Tierra de Campos, al norte, donde toda la construcción es de barro.

Estos ejemplos están incluidos en el libro "Arquitectura tradicional de Castilla y León", publicado por la Junta de Castilla y León (Gobierno autonómico) y del cual fui el autor. La obra es de 1998 y recoge un trabajo realizado desde 1993.

En la publicación viene recogido un centenar de construcciones tradicionales como ejemplos de su arquitectura más representativa. De cada ejemplo se aportan los planos, planta baja y superior en su caso, el plano de situación, una descripción del inmueble y su interés dentro del estudio de la región, así como un conjunto de fotografías, tanto exteriores como interiores.

La mayor parte de esta obra abarca la descripción sistemática de la arquitectura de la región a través del análisis de los Modelos de Asentamiento – se han definido trece – y de los Tipos Edificatorios derivados – cuarenta y nueve –, correspondientes a este esquema. Estos modelos de asentamiento comprenden desde los núcleos situados en áreas de montaña a los de los páramos colindantes, todos ellos de fuerte presencia ganadera, hasta llegar a los niveles compactos del centro de la Meseta. Son estos últimos, lugares agrícolas por excelencia, donde la configuración de lo urbano alcanza sus mayores cotas de definición.

SWITZERLAND

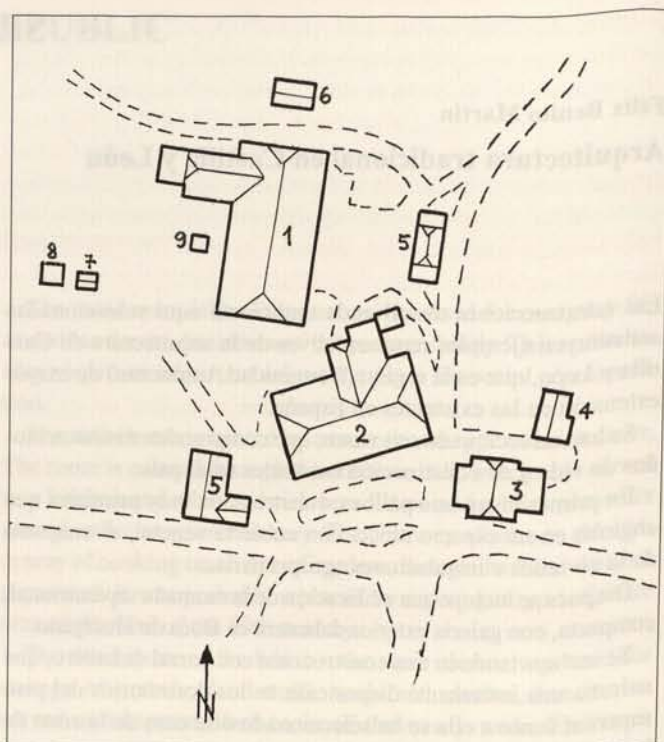
Max Gschwend

Granaries in Switzerland

When we speak of vernacular architecture, we think first of residential buildings or of barns. Both are remarkable. They have a spectacular form, they are big and sometimes elaborately decorated. In reality these buildings form an important element of rural farmsteads and they are simultaneously characteristic of the settlements.

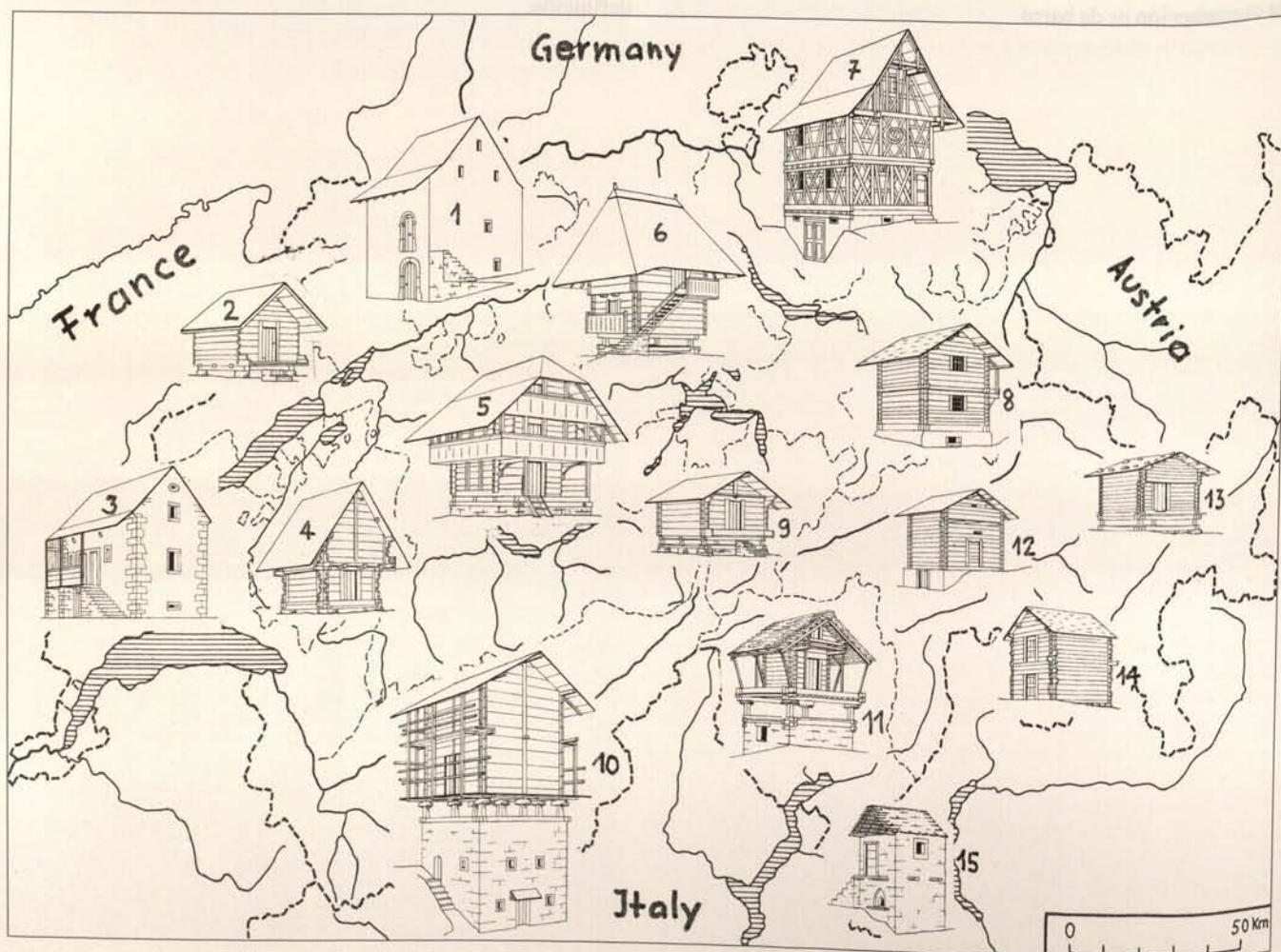
But when looking more closely, we can see that near the farms and villages there are small buildings. In the first figure a farmstead with principal buildings dating from the 18th century can be seen. Very important are the numerous small-sized outbuildings, for example the baking oven, the wood shed, the hen house, the bee house, the well house and especially the granary dating from 1688.

Such detached granaries are very remarkable objects. Our country, situated in the middle of Europe, is surrounded by different cultural regions (see below). Their influences are reflected in the various construction forms. In the west and south there are stone structures, timber-frame carpentry has come from the north, in the Alps the log house is predominant. It is self-evident that the original materials in our country are also used for the construction



Typical farmstead in Kiesen, Canton Bern

Various types of granaries in Switzerland



of granaries. This applies to the regions of the Jura and of the Alps, where forests still exist today. In these parts of our country pure wooden constructions as log or pillar buildings can be found.

In general there is a difference in the size of detached granaries, depending on the varying fertility of the soil and the quantity of the stored products. In regions with a very rough climate or a weak economy, such as in the Jura and in the Alps, one finds tenants with small plots of land breeding cattle. Here agriculture is less and granaries are small, whereas large granaries are characteristic of the plains with intensive agriculture.

Particularly in the economically privileged regions the granaries serve not only to store crops but also contain meat, dried fruit or cheese, sometimes even dresses, cloth and thread, and not rarely also documents, manuscripts and money. Therefore they are named the farmer's "treasury".

It is not astonishing that this type of building is decorated with wood carvings and pictures. In former times people believed that a figure beside the door could frighten a thief. Safest was the position of many granaries in the central plain of Switzerland, where they could be controlled from the windows of the farm-houses.

Farm buildings, such as granaries, represent a very important part of traditional rural architecture. They are especially in danger of disappearing. Changes in modern agriculture and infrastructure (electricity, water supply, sewage) make these buildings superfluous. As they are not used or maintained they are often destroyed. Many granaries are very small, and it is therefore difficult to find a new and suitable use. Their conservation would lead to considerable additional expenses for the farmers. Nevertheless, it is important to at least save some of these buildings in the open-air museums where they can be preserved.



Painted figure on granary in Tafers, Canton Fribourg



Typical granary from Lütschental, Canton Bern

VI Magnetic Prospecting in Archaeological Sites

VII Building Archaeology 2012

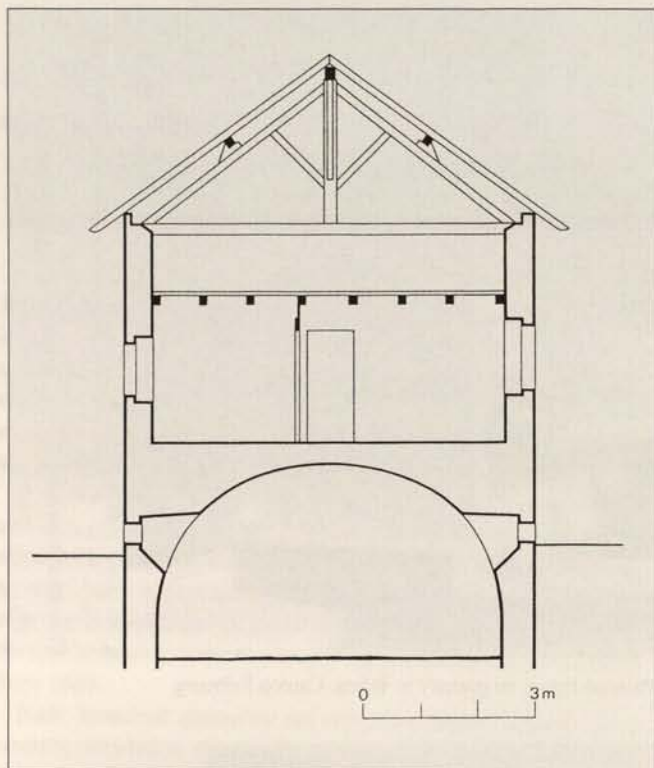
Archaeological Sites in the Swiss Alps



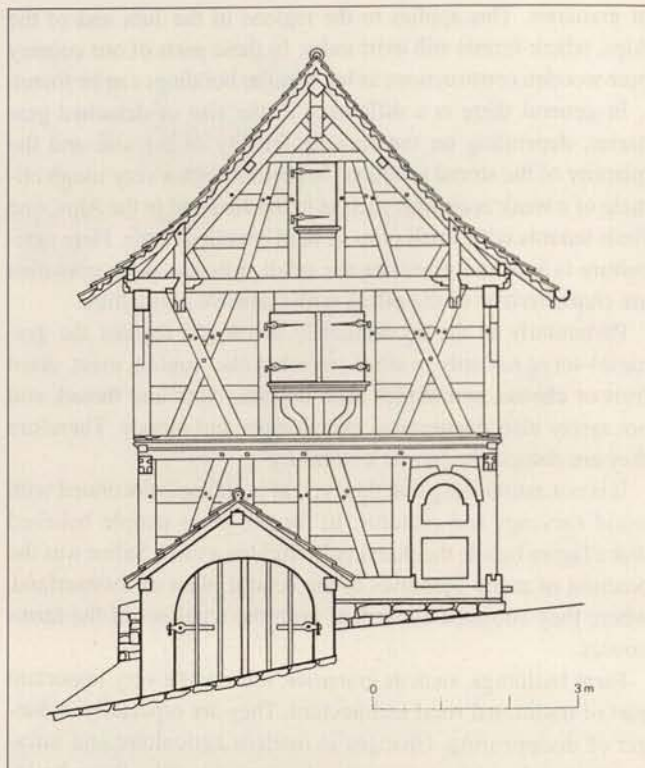
Granary in Visperterminen, Canton Wallis

Granary from the middle plain in Ostermundigen, Canton Bern



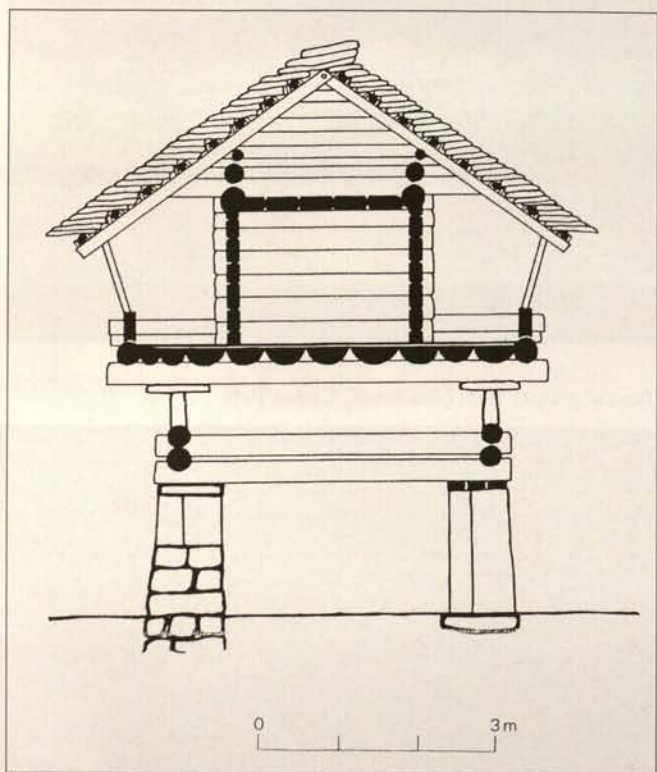


Three-storied granary in Chouilly, Canton Geneva

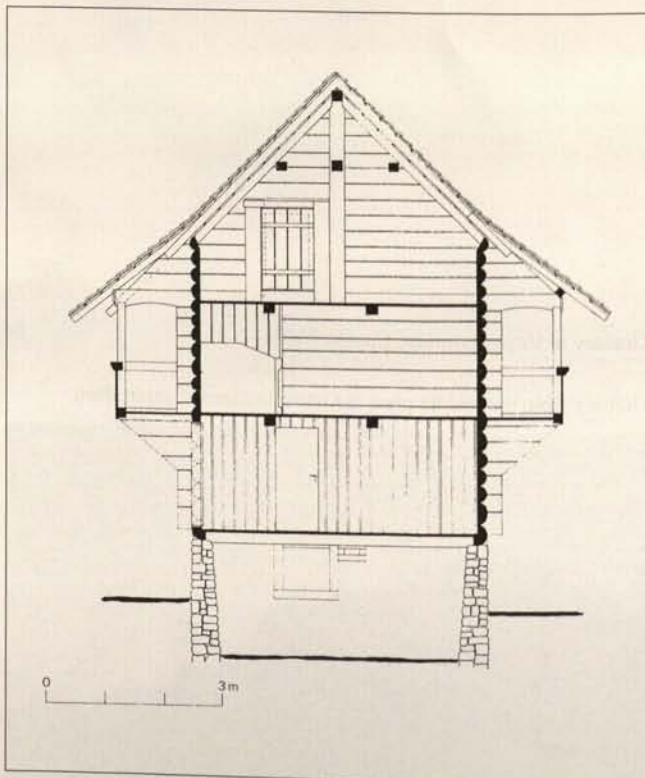


Large granary with timber-framework in Oberwenigen, Canton Zurich

Small granary of log construction (1661) in Fusio, Canton Tessin



Four-story granary in Kerzers, Canton Bern



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