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Long Distance Implantation of Vernacular Architecture Traditions: The Canadians in Early Louisiana

Résumé

Cette étude examine les contributions architecturales des Canadiens à la Louisiane du XVIII^e siècle. L'une des arènes les plus révélatrices en ce qui concerne l'histoire de l'architecture en Amérique concerne les origines de nouvelles traditions vernaculaires dans des lieux ayant été colonisés pour la première fois par des Européens. Entre la fin du XV^e siècle et le XVIII^e siècle, il y eut de nombreuses expériences de colonisation le long de la côte atlantique. Et cependant, le peu de documentation fiable en ce qui concerne les premières années des établissements coloniaux nous empêche de comprendre clairement les facteurs qui ont façonné ces transformations architecturales fondatrices. Cela a eu pour résultat une faible compréhension de l'essence même de nos traditions vernaculaires américaines. Cette étude examine un cas pour lequel il a survécu une documentation relativement fournie – celui des Canadiens en Louisiane. Elle retrace les transformations architecturales qui se sont matérialisées lorsque les Canadiens ont tenté de fonder une nouvelle colonie sur la côte du golfe du Mississippi et la vallée du cours inférieur du Mississippi, à partir de 1699.

Abstract

This study explores the architectural contributions of Canadians to Louisiana in the 18th century. One of the most revealing arenas in American architectural history concerns the origins of new vernacular traditions in locations being settled for the first time by Europeans. Between the late 15th and 18th centuries, many settlement experiments occurred along the coastlines of the Atlantic. Yet the dearth of reliable documentation from the earliest years of colonial establishment renders elusive a sound understanding of the factors which shaped these foundational architectural transformations. The result: a loss of understanding of the very essence of our American vernacular traditions. This study examines one such case for which a relative abundance of documentation survives—the Canadians in Louisiana. It traces the architectural transformations that materialized when Canadians attempted to found a new colony on the Mississippi Gulf Coast and the lower Mississippi River Valley, beginning in 1699.

Introduction

What, exactly, happens when vernacular architecture traditions are implanted into new lands or colonies far from the homelands in which they originally flourished? Most of the places along the east coast of the Americas are rife with new patterns of architecture which arose, originally, out of the settlement of western Europeans together with Africans and others. Unfortunately, credible accounts of their origins and earliest transformations are hard to come by. The problem lies in acquiring good documentation from the earliest years of settlement when the new arrivals struggled to adapt their natal architectural patrimonies to what were often frighteningly new and unpredictable conditions. Survival in the wilderness was the paramount concern; recordation was a luxury.

Vernacular architecture refers to building traditions established by communities of common people, rather than by architects or engineers. Vernacular buildings are usually constructed of local materials by people who, at least until the end of the 18th century, were predominately non-literate. In North America, the first buildings of European “initial occupance” were constructed in wood and other perishable materials.¹ After a century or two most had disappeared from the landscape. Of those fabricated three centuries ago or earlier, entire building types have utterly vanished. Little evidence of the details of their forms and construction technologies survives.

Seldom do the early builders bequeath to us much in the form of written records. We are often fortunate to be left with a few brief observations of visitors and foreign observers, their views shaded by their own cultural biases and by the temporal and spatial limitations of their observations. If we are lucky, we may benefit from the scraps and shards of all-too-rare archaeological excavations. Occasionally one discovers rude sketches or brief building contracts but even taken all together, they are generally insufficient to establish a broader view of first generation building types and technologies.²

Yet, answers to these questions remain critical to our assessments of later generations of colonial architecture. Accounts of the origins of many popular American house types succeed or founder on the historian’s ability to claim with

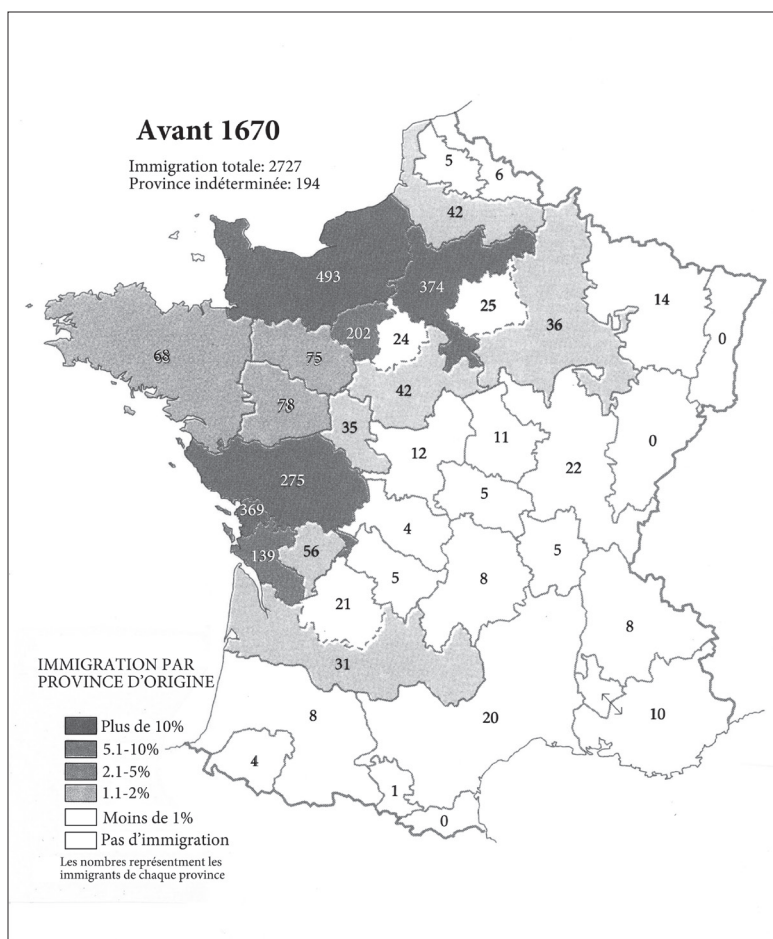
authority that a particular sequence of events occurred at that earliest critical time and place. In no little part, the very identities of the settlers rests upon a knowledge of who the earliest builders were and how they constructed their dwellings.³ Do settlers from distant lands establish new house types based more upon the wisdom of previous pioneers with whom they have had contact, or do their own long-established domestic traditions function as the default in the forms of their new settlements? Do, in fact, pioneers become new ethnicities through the intensive process of innovation in the collective struggle to better survive in a new and demanding environment? What factors dominate the creation of the first generation’s permanent structures?⁴ If we had access to the actual dated words of the earliest builders, many such debates might well be resolved or at the very least, reduced to less problematic interpretations. The relative influences of various cultures and the environmental, economic, and material conditions which reshaped them might be better understood in relation to one another, forcing historians to re-conceptualize the age-old struggle between borrowing, innovation, and the inertia of tradition.

Obviously, good answers to such questions are dependent upon a foundation of well-documented cases but, in the search for sound descriptive data, we face difficulties. Before the late 18th century few American settlement events are documented in detail. Fortuitously, the first attempts to implant permanent settlements in French Louisiana provide us with a useful case study for interpretation. A rather abundant documentary record survives in the correspondence of eye-witnesses and colonial administrators. Through this lens, a window is opened onto that critical moment in the establishment of the earliest permanent communities. In addition, that record also provides Canadians with an expanded perspective on the states of knowledge and the favoured building activities of their own builders in the first two decades of the 18th century.

When considering the historic built environments of the coastal zones of North America, a distinction between different kinds of architecture represents a useful starting point. Other things being equal, immigrants sharing an ethnic identity tend to recreate the favoured house forms of their motherland in their new

colonial settings. As we employ the terms here, “colonial architecture” refers to buildings in the form of those of the mother country. Though they may have undergone adjustments in their new homeland, the new buildings clearly fit within the fundamental geometrical and socio-spatial ground rules of their *ancienne* building traditions. It is often the case that professional carpenters, roofers, masons, brick-layers, and other craftsmen of the building arts are transported with the first colonizing expeditions in order to recreate a familiar and suitable “New ____” (insert name of motherland here). This, of course, is precisely what happened in New France at the beginning of the 17th century (Remple 1980:14). The result: a new regional form of the built environment of the motherland, as fully realized in its own way as were the existing vernaculars of Upper Normandy, Brittany, or Poitou, and as different from the others as those previously extant regional variants were from one another (Traquair 1947: 7, 11-16; Harris 1987: 47-49, 113-17 planches 24, 29, 55-56.) (Fig. 1).

Fig. 1
Map of the sources
of immigration from
France to Canada,
1608-1670 (from Harris
1987).



Beyond the readapted architecture of the homeland stand other kinds of pioneering traditions. They are created in several ways, as when Indigenous traditions are borrowed and adapted as temporary substitutes for permanent European forms. Creole architecture—the variant most relevant here—represents an amalgam of elements drawn from widely separated cultures and synthesized into something novel, but with clear attachments to its multiple forbears. Though traces of the parental building traditions survive in the newly established forms, they are now synthesized into a unique pattern which cannot be said to represent the patrimony of any single contributing culture. They are, rather, innovations that differ in both form and in social function from their antecedents.

Reformulated architectural traditions often arise when unrelated populations are thrown together on distant shores. There, settlers are forced to cooperate in the establishment of innovative forms adapted to the environment and to the sensibilities of each of the contributing cultures. All contribute, though the richness of that participation may well be subsequently masked by the biases and blindness of a colonial elite (Trouillot 1995; Edwards 2001; 2008). It is this form of a pan-participatory pioneering building tradition which we refer to as Creole architecture. How these various patterns of adaptation contributed to the development of Louisiana's French vernacular architecture shall constitute the focus of this essay.

In what follows, we shall first briefly review features of the medieval vernacular architecture of western France. Ancient traditions functioned as precursors for European settlement in French Canada. We will then turn to the kinds of buildings widely established in French Canada at the time when Canadians were undertaking the settlement of the lower Mississippi River basin and the Gulf Coast. This occurred a full century after the original settlements of New France, sufficient time for certain environmentally and culturally modified forms of European building types to have been widely established as models for new Canadian settlements. The temporal scope of this essay is limited primarily to the years 1699-1730, followed by a commentary on the resurgent impact of the Acadian refugees of 1765-1790.

Colonial Antecedents: Western France

Each tradition of vernacular architecture is characterized by features such as typical building plans, typical room types with their favoured proportions and dimensions, typical forms of construction, and more broadly, a kind of philosophy of house-building as viewed through the lens of the social order with its defined domestic spatial functions and expectations.

French peasants, and those of other north-western European countries had, over the centuries, gone to a great deal of trouble to produce stable houses which protected from the harsher elements of the climate, particularly extremes of cold, rain, and snow. The peasantry of western France adopted plans which had evolved from early medieval types (Fig. 1). By the 14th century, the late medieval peasant house had become both an adjustment to climate and to a particular level of mixed-farming economy in which farmers kept a small number of livestock and grew grain and other foodstuffs. Its *salle* (all-purpose fire hall) was heated with a fireplace, serviced with an internal chimney or a hood. For security, the harvested grain was often stored in the *grenier* or attic of the house. The rooms of peasant houses of western France measured fifteen to twenty feet in depth with the *salle* being wider than it was deep in most cases (Fig. 2). One popular form was based around the two-room “unitary house” with the *salle-et-chambre* (fire-hall and bedroom) plan. Between the 11th and 18th centuries this asymmetrical two-room core module gradually became a dominant floorplan of peasant vernacular architecture. The rectangular fire-hall (*salle, cuisine*) shrank down to near-square, while the *chambre* (*cave, cellier*) added another third or more to the total width of the asymmetrical two-room core unit (Fig. 3).⁵

Peasant houses of late medieval western France also employed a considerable variety of wall construction techniques. In many places stone was the favoured construction material but, in upper Normandy, for example, wood remained popular until well into the 20th century. Walls were constructed in “half-timber,” called *pan de bois*. This referred to hewn timber posts, with variable spacing between them. The posts were mounted on a heavy timber sill (*sole, sablière basse, semelle*) which was set upon a stone *solage*,

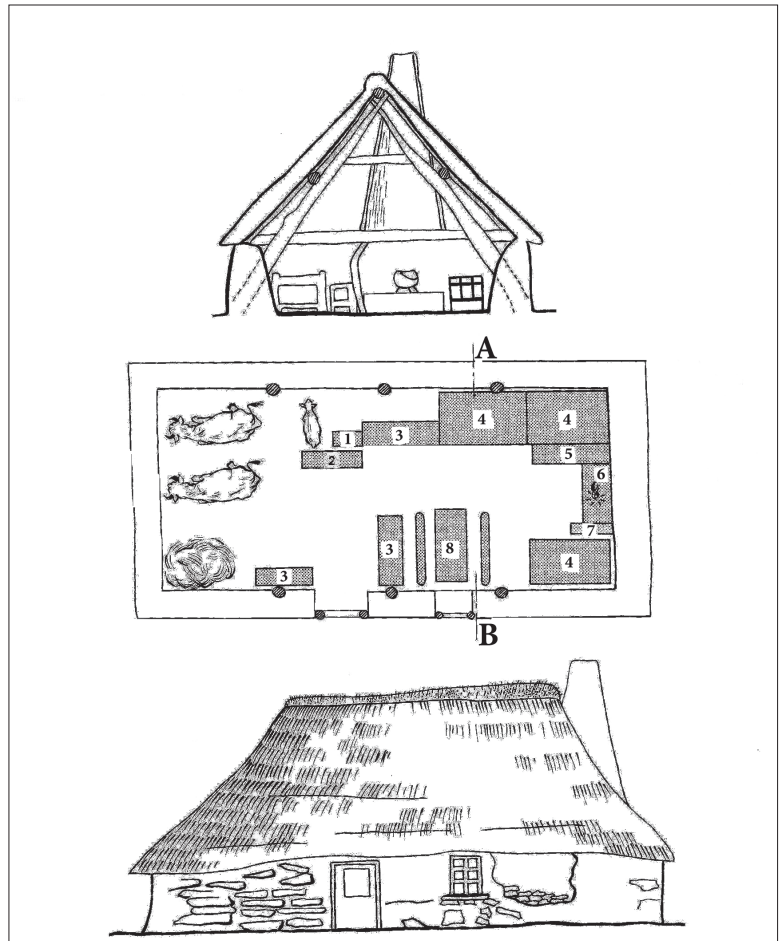


Fig. 2

French late medieval mixed-use house, Morbihan (from Chapelot and Fossier 1985). Section (top). Plan (middle): 1. Clock. 2. Bench-chest, 3. Cupboard; 4. Enclosed bed; 5. Chest; 6. Hearth; 7. Bench; 8. Table-chest. South Elevation (bottom).

ensolage, soubassement or *fondement* (continuous foundation), and stiffened by in-set wind braces at the corners (Fig. 4). Spaces between the up-rights, if any, were filled with wattle-and-daub (*argile sur clayonnage*), or *torchis*—loaves of clay and straw draped over *batons* (*bousillage sur une clissage de barreaux*; Figs. 5, 6).⁶ Bricks (*briquetté entre poteaux*), and plastered stones (*colombage pierroté*) were also used as in-fill in *pan de bois* walls. A very ancient but less popular approach to the fabrication of a wall consisted of a technique in which horizontal planks, their ends held in channels (*coulisses*) in the vertical posts, were set one atop the other (Fig. 7).⁷

Between the 16th and 18th centuries, the typical Norman house was covered with a steeply-pitched “pavilion” roof supported by a Roman style through-purlin roof truss (called

Fig. 3
Peasant House,
Cher, Loire
Valley (from
Zarka 1981).
This tradition is
clearly related to
the vernacular
architecture of
17th-century
Acadie.

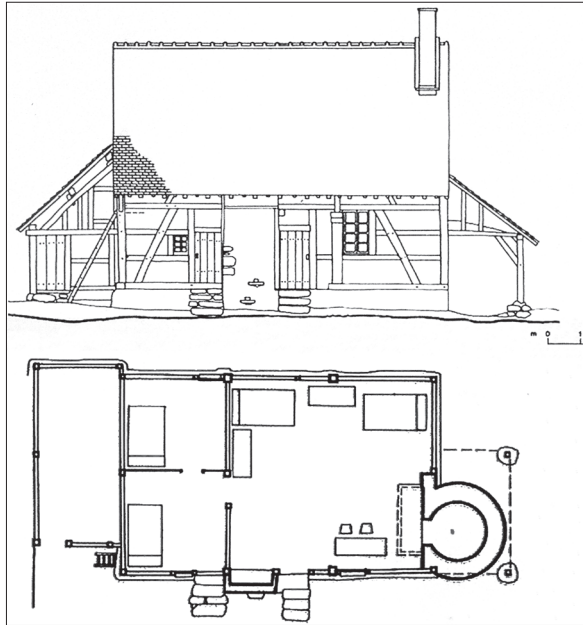


Fig. 4
Planche debout sur
sole, sur solage,
Prairie du Rocher, IL,
1984 (razed). Author
photo.

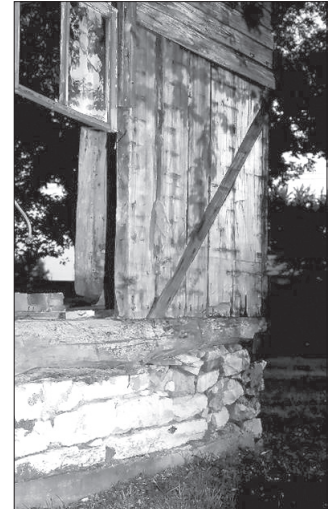


Fig. 5 (right)
Bousillage sur lattes,
Normandy (from
Fontaine 1977).

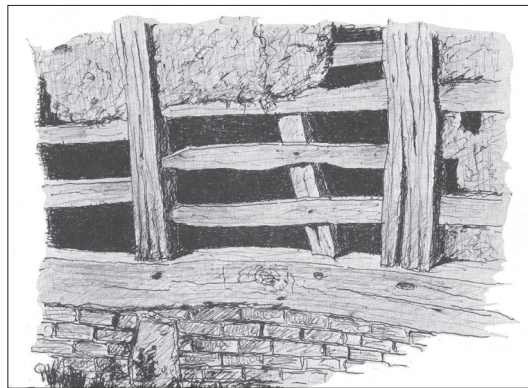
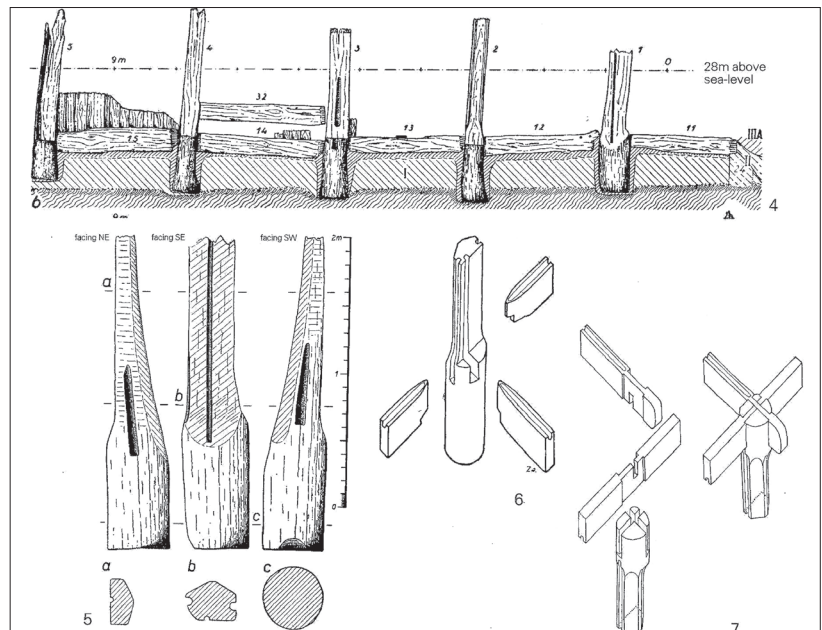


Fig. 6 (far right)
Grange (chaumière)
with bousillage
entre poteaux walls,
Malville sur le bec,
Upper Normandy,
1985. Author photo.



Fig. 7 (right)
10th-century slotted wall construction, Husterknupp, west
Germany (from Chapelot and Fossier 1985).



“Norman” in Louisiana (Figs. 8 & 9). Beginning in the late mid-17th century, the Norman house underwent further modifications. Historians differentiate between pre ca. 1750 close-studded *charpente medievale* (Fig. 10), and post ca. 1650 open-studded *charpente classique* (Fig. 6).⁸

Early Colonial Vernacular Architecture in Nouvelle France

As we attempt to come to grips with the question of the degree to which Canadian builders influenced the vernacular architecture of colonial Louisiana, two related issues appear to demand answers: What were the building traditions of French Canada in the 17th and early 18th centuries? and, as Canadians moved westward and then southward into the Gulf Coast of Louisiana, which among old French building traditions were sufficiently successful that they functioned as models?

Luckily, Canadian architectural historians have dealt extensively with the first of these questions. Ramsay Traquair (1947) and more recently, John I. Rempel (1980), among others, have gone a long way towards exploring these issues. They point out that the early phase of French settlement in Maritime Canada was characterized by both medieval European and more recent classic carpentry traditions.⁹ Some of these technologies were blended with British and German building traditions in the 18th century, but any assurance in attributing elements of Louisiana’s early architecture directly to French Canadian sources is rendered problematic by a number of complicating factors. Some Canadian traditions were derived directly from French antecedents and little-changed in Canada. Some may well have originated in non-vernacular traditions such as pan-continental military construction. Since early settlers, including builders, came to Louisiana directly from France as well as from Canada, it may not be possible to clearly identify specific avenues of introduction into Louisiana (see Cullen 1981; Deveau 1982; Hockey 1988).

Traditions of French Canadian architecture were modified and reshaped through time. Though some new homeowners preferred the permanence of traditional styles, many wished to stay up with current fashions. As

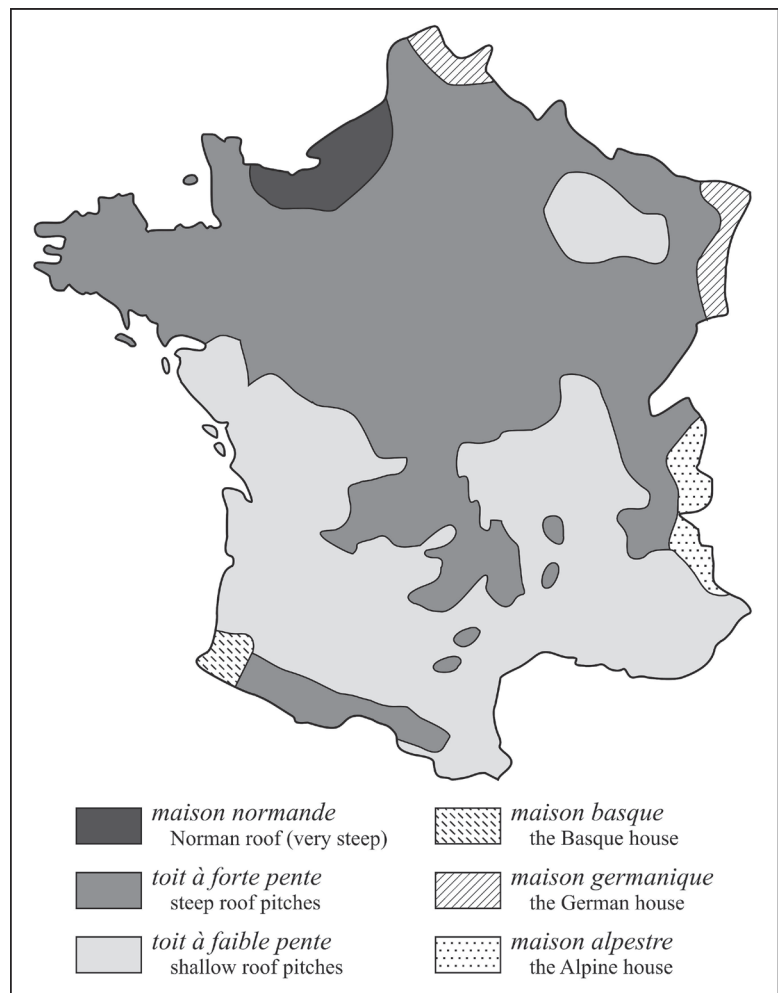
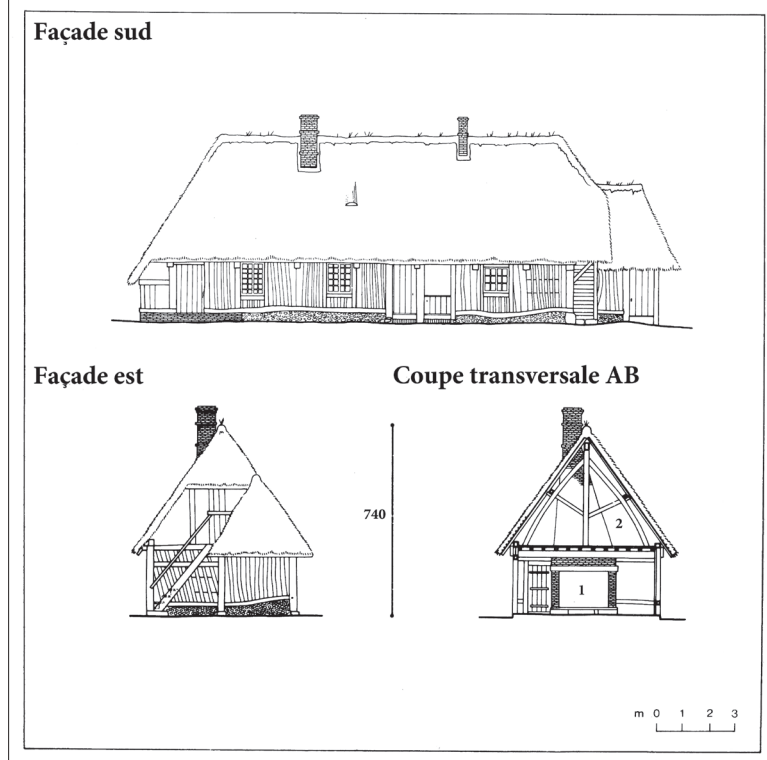
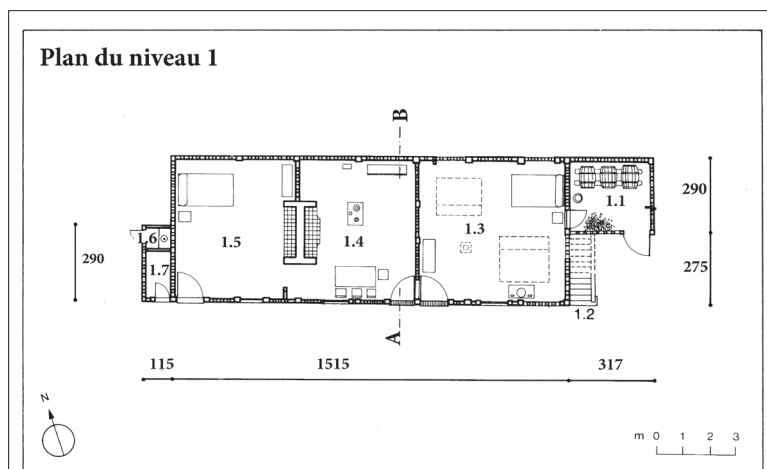


Fig. 8 (above)
Map of roof pitch angles in French vernacular architecture (from Gauthier-Larouche 1974).

Fig. 9 (opposite, top)
Close-studded pan du bois farmhouse with bousillage infill, 18th century, Harcanville, Normandy. Surveyed 1942 (see Brier & Brunet, 1984). Plan (top): 1.1 Cellier; 1.2 Accès au niveau 2; 1.3 Ancienne chambre à cacher; 1.4 Maison, salle commune; 1.5 Chambre; 1.6 Lieux d’aisances; 1.7. Poulailier. Coup transversal A-B (bottom): 1. Salle commune; 2. Grenier.

Fig. 10 (opposite, bottom)
Close-studded pan du bois farmhouse, Villettes, Normandy. Constructed 1721, surveyed 1942. D. Mitchell for the Kniffen Lab, Louisiana State University, after Brier & Brunet (1984).

Krause observes, “New England house frames were shipped [from Boston] to Louisbourg as early as 1732. New England techniques were not foreign to the French Experience” (Krause 1974: 48 qtd. in Cullen 1983: 498). As Canadian settlers moved westward from Quebec to the Upper Country of Ontario and beyond, not only did styles change, but building forms and



techniques of construction were also modified by local environmental conditions. Adjustments were responsive to the kinds of timber available and to the latest technologies such as water-powered saw mills which reduced the amount of labour required, and to the decreasing price and increasing availability of machine-made cut nails. The introduction of cast iron stoves reduced the need for large, labour-intensive fireplaces and chimneys. Many old Canadian techniques and styles were replaced, modified, or blended together with those of the newly arriving British and other immigrants. One thing is certain: a great deal of circum-Atlantic travel and cultural interchange was going on during these centuries. The result was a broadened repertoire of building techniques available to builders in many distant locations. Three examples of successful Canadian adaptations in wall construction follow.

Bonne charpente, pan de bois, Timber Framed Buildings

The earliest permanent houses and other buildings of Quebec were largely of timber frame, (Traquair 1947; Séguin 1968: 12-17; Cullen 1981). Traquair notes that frame construction was in use in northern France and in southern England from the 17th century onwards. The English settlers brought it to New England; the French settlers brought it to Canada (1947: 13). Kalman explains that simple wood-framed houses seem to have been common at all periods, from the first Habitations to the present day (1994: 48-49).

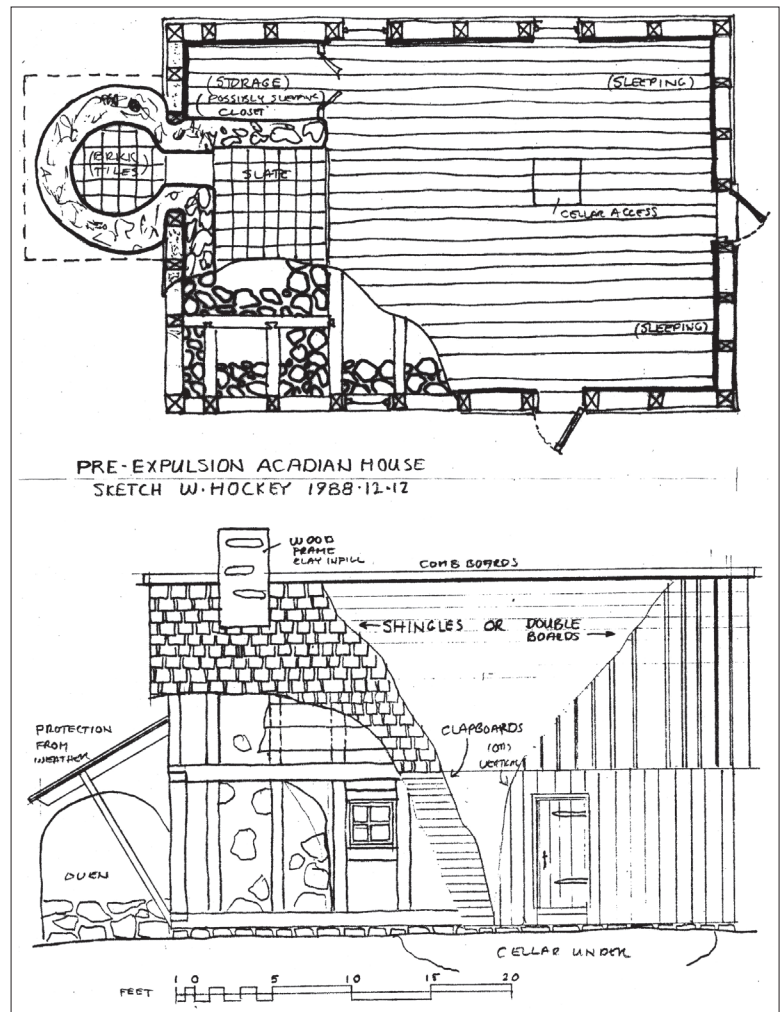
In French architectural history, the term *pan de bois*, (“half-timber”) subsumes an exceptionally wide variety of wall-framing patterns. Between the 15th and the late 18th centuries in Normandy, exterior walls were typically constructed with multiple vertical posts raised on a sill beam and set palisade-like. They were separated by spaces of perhaps one to two post-widths. We refer to this as close-studding; in French, *poteaux verticaux serrés* (Figs. 9-10). In 17th century Quebec close-studded walls were known as *à la gasparde*, and were attributed to the rural architecture around Rouen (Séguin 1968: 23-24). In the later 17th and the 18th centuries, the distances between the upright posts grew wider, so that any variety

from close-studding to open-studding appeared in Norman-inspired Canadian houses.¹⁰

In 1663, Pierre Boucher of Trois Rivières described three styles of Canadian house common to his portion of Quebec. Houses with thick stone walls were beginning to become popular.¹¹ Another was described as “*de collombages ou charpente et massonnées entre les deux*,” that is, of *colombage pierroté* or plastered masonry infilling between each pair of posts (Kalman 1994: 40). No known standing structure of this type of construction survives from the 17th century in Canada, to my knowledge.¹² A less expensive variant often employed for outbuildings consisted of small earthfast posts, round or partially hewn, and referred to as *piquettes*. These were chinked and plastered and often covered with clapboards or vertical planks (Cullen 1983: 493; Ross 1991: 1-2).

A once-popular variant of *colombage* framing is the Norman technique in which a mixture of clay, animal dung, straw, and perhaps lime are used as infill between the vertical posts (Maygarden 2006: 224-26; Blokker 2009). It is referred to as *bousillage entre poteaux*, *colombage bouzillée*, or, in Louisiana, simply *bousillage* (Anglicized pron.: /búsillage/). Examples, for which there are records, existed in Acadie.¹³ Traquair observes that “clay-filled frame buildings appear in historic written records of Acadia from the 1680s to the first quarter of the eighteenth century” (1947: 46-51). Visitors to Port Royal in 1688, including Governor Menneval, described “wretched dwellings of mud and wood,” and “*Chanvieres [sic. chantieres] fort mal bousillées, avec des cheminées d’argille*” (Fig. 11). Monseigneur de Saint-Vallier, visiting the 150 settlers at Beaubassin in 1685, described their chapel as “*de torchis environné de pierres, la couverture n’est que de pailles*.”¹⁴

It is not difficult to discover vestiges of pre-expulsion housing techniques in Acadie. The foundations of many old Acadian houses still dot the landscape. One of the oldest standing houses in Annapolis Royal is the Sinclair Inn on George Street, enlarged from two houses constructed on rue Dauphin before the British invasion of 1710 (Cullen 1983: 497). Several houses on this renamed street survived the siege of 1710 and were taken over by the British. A local silversmith, Jean-Baptiste Soullard, worked there in that year. In 1992, this author photographed portions of



another house in Annapolis Royal with Norman-style *bousillage*, essentially indistinguishable from those in Normandy and Louisiana (Fig. 12; Fig 13, details 17-18).

Fig. 11
Pre-Expulsion Acadian House, reconstructed. Sketch by W. Hockey (1988). Compare with Fig. 3.

Pièce sur pièce, assemblées à queue-d'aronde, Log Cribs with Full Dovetail Notching

Historically, the most mysterious and contested of all the kinds of construction surviving in French Canada is the method of locking horizontally lain hewn timbers together at the corners of a rectangular crib with full dovetail notching. This method is not recorded as being much-used in the vernacular architecture of post-medieval France (Chapelot and Fossier 1985: 251-52). Superficially, it resembles ancient folk techniques employed in Germany and Scandinavia, but comparative research has demonstrated that it is

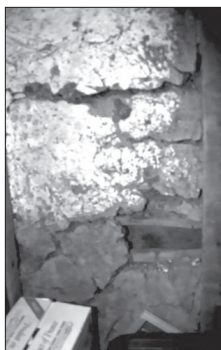


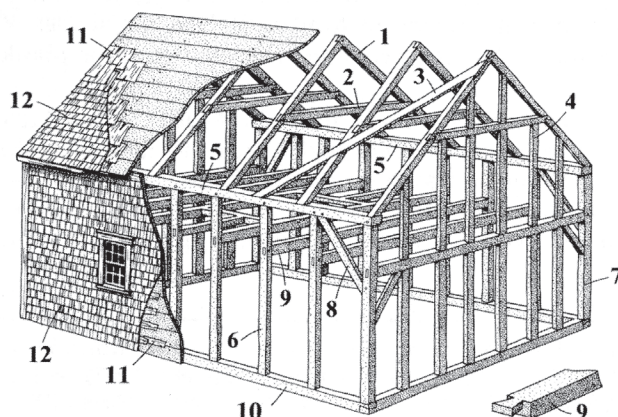
Fig. 12 (above)
Bousillage entre poteaux wall in pre-1710 building, Annapolis Royal, Nova Scotia, 1992. Author photo.

Fig. 13 (right)
Acadian New Brunswick construction techniques. Sketch by Leroux (2008).

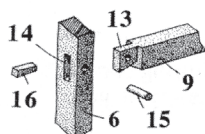
Fig. 14 (bottom)
A modern house in pièce sur pièce, Isle of Orleans, Quebec, 1992. Author photo.

CONSTRUCTION TECHNIQUES USED IN ACADIAN HOUSES

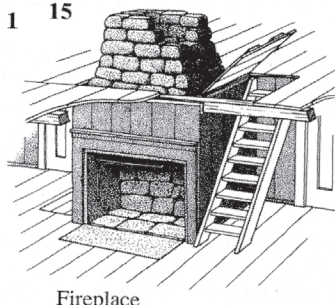
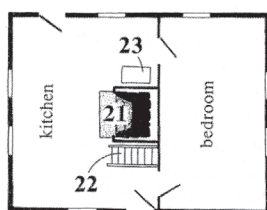
FRAME HOUSE



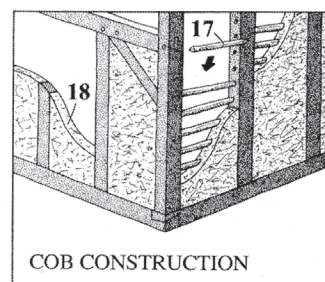
Assembly (Joints)



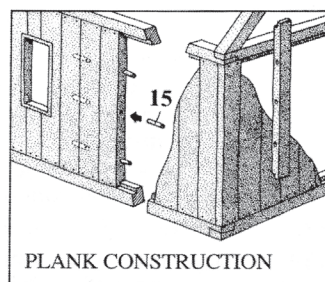
Floor Plan



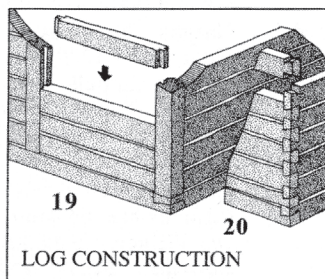
Fireplace



COB CONSTRUCTION



PLANK CONSTRUCTION



LOG CONSTRUCTION

Legend: 1 - Rafter. 2 - Tie beam. 3 - Wind brace. 4 - Gable post. 5 - Top plate. 6 - Post. 7 - Corner post. 8 - Brace. 9 - Joist. 10 - Sill plate. 11 - Birchbark. 12 - Shingles. 13 - Tenon. 14 - Mortise. 15 - Wooden peg. 16 - Wedge. 17 - Horizontal stake. 18 - Daub (clay and straw mortar). 19 - Slotted-post technique. 20 - Dovetail joint technique. 21 - Fireplace. 22 - Stairs. 23 - Trapdoor leading to cellar.

sufficiently unlike the European forms for them to have functioned as a direct source of inspiration in America. The populations of those areas of Europe had little known impact on early 17th century Canada (Roberts 1984: 15-48). Still, the method entered early into the vernacular architecture of Acadie and to a lesser extent, Quebec, where it persisted as an occasional construction technique into the 20th century (Fig. 13, detail 20; Fig. 14).

Pièce sur pièce assemblées à queue-d'arounde is an elaborate technique, beyond the skills of vernacular builders unless they are thoroughly



trained. It has many advantages, including the fact that one might shake the entire structure, as in the strike of a cannon ball, and yet its various pieces would not be dislodged. Held by gravity, they would simply slide back into their original positions. The corners are so cleverly designed that rainwater drains towards the outside from all surfaces of the corner notches providing superior long-term stability through resistance to rot.

Harold Kalman and Robert-Lionel Séguin have collected evidence bearing on the introduction of *pièce sur pièce* construction into Canada. It is clear that this technique was being widely used by the middle of the 17th century. References from Canadian explorers in Texas in 1685, and along the Gulf Coast in the first decades of the 18th century, refer to buildings built “in the style of Canada” and “in the Canadian manner.” These are described as being piece of wood set on piece of wood, fastened at the corners with “swallowtail” notches (*à queue-d’arounde*). The technique was said to be particularly popular around Montreal after the middle of the 17th century.¹⁵ In Acadie in 1687-88 at Port Royal, Gargas reported that “All of the houses are low, *faites des pièces de bois, une sur l’autre* (made of wooden timbers one on top of another), and covered with thatch” (Deveau 1982: 40; see also Kalman 1994: 51; Séguin 1968: 12-17; Ennals 1992: 33-38).

Because no early documented source for the use of timber crib close-fitting *pièce sur pièce* construction in the houses of New France has been authenticated, we are left to speculate about its origins. It is likely that some combination of the French and British (or Scottish?) military played a central role in spreading a knowledge of its advantages in the early to mid-17th century. The military supplied many of the professional carpenters responsible for the erection of habitations, bastions, block houses, *entrepôts*, and military buildings of all kinds.¹⁶ Wherever *pièce sur pièce* fortifications were built by Canadians and New Englanders 1650-1720, houses built with the same technique seem to appear.¹⁷

Although, perhaps, the Acadian folk versions of this technique were shaped entirely with hand tools such as the broadaxe, the adz, the chisel, and the hand saw, some examples of their handiwork maintained the sharply defined proportions of the more sophisticated military

forms described above.¹⁸ Whatever its origins, as Acadian folk builders learned of its benefits in the early to mid-17th century, it also became a model for their humble houses (Fig. 13, detail 20). In its French Canadian vernacular forms, the professional origins of the style survived in the skill with which the timbers of 18th and 19th century houses and barns were so perfectly fitted and aligned that very little chinking needed to be used to insulate the building. The military form appears to have been characterized with widely flaring dovetails. Perhaps trestle saws were used by the Canadians to shape the individual timbers (Cunningham and Price 1976: 29-39; refer to their Fig. 29, lower right corner). The resulting walls are heavy and provided good insulation against the cold, particularly when sheathed with clapboards. Dovetail notched crib construction was taken up throughout eastern Canada, and carried westward by builders into Ontario and beyond, where many examples have survived.

Pièce sur pièce, tenon en coulisse, Channelled Post Construction

As we have seen, slotted post or *tenon en coulisse* construction is an extremely ancient technique, widespread in the vernacular of northern Europe. In France, however, it had largely gone out of style by the beginning of the 17th century (Chapelot and Fossier 1985: 270). There, using thin sheets of paneling, *menuisiers* or carpenter-joiners had adopted the technique for wall paneling in fancy buildings such as chateaux. Perhaps this helped to keep the technique alive. In the early 17th century, however, channelled post construction was revitalized for wall construction in the buildings of Quebec and the Maritime provinces. It fitted perfectly with the needs of Canadian pioneers as they moved westward. Soon, it was competing with, and surpassing, log crib construction in popularity.

In Quebec, horizontal planks (*madriers*) and hewn timbers (*pièces*), were both employed for inter-post wall infill. The *pièces* measured roughly four to six inches thick, forming a wall as heavy as that of a log-walled building (Rempel 1980: 140). Each of the horizontal members was held securely through end-tenons inserted into substantial channels cut into the wall-side faces of

large vertical posts. These were positioned usually about four to five feet apart (Fig. 13, detail 19; see also Fig. 15). So popular did this method become that by the early 19th century, it was added to the descriptor “in the Canadian style.” It was adopted by the Canadian military and by the great trading companies for post buildings all across Canada. As it spread westward, the technique was modified and given many different names, some of them geographical (Rempel 1980: 14-24, 140; Richardson 1973: 77; Séguin 1968: 34-37).¹⁹ According to John Rempel,

When introduced into Quebec, builders began to use logs with a tenon extending from each end. Since the winter temperatures were so much more severe in Quebec, and wood was so plentiful, the use of logs instead of planks was a natural development in the New World. (1980: 14)²⁰

The method was quickly adopted by the British. An iconic sketch attributed to Lord Selkirk in 1817 of his Red River (Manitoba) settlement shows numerous buildings built with this technique (1980: 19).

Fig. 15
Top section of tenon
en coulisse post, the
Lasource-Durand house,
Ste. Genevieve, MO,
1998. Author photo.



Settlements in Lower Louisiana and the Mississippi Gulf Coast

With this background, we may now turn our attention to the settlement of the Louisiana Gulf Coast at Biloxi, Dauphine Island, Old Mobile and New Orleans (Fig. 18). Pierre Le Moyne d'Iberville was born in Montreal in 1661. As part of a large family, he entered the French military and performed brilliantly in the final decades of the century. He was recognized for his skill as a “shrewd tactician” and for his daring in battle against the British in North America. Advancements followed. In 1698 he was given command of an expeditionary force assigned to map and to develop a permanent French presence along the central Gulf Coast (McWilliams 1991: 2). The aim was to control access to the Mississippi River, and thereby, the center of North America.

Sailing from Brest, Iberville arrived in the colony of Saint-Domingue on the island of Hispaniola with an assemblage of Canadians, soldiers, and settlers from the western ports of France. He spent twenty-seven days in Saint-Domingue refitting and obtaining supplies. Before departing, he hired a group of about a dozen West Indian buccaneers (the good kind) to accompany the expedition. Together, they explored the lower Mississippi River and the Gulf Coast. They established posts, first at Biloxi (Mississippi) and then on Dauphine Island (Alabama). Fort Maurepas on Biloxi Bay at Ocean Springs Mississippi was begun in 1699. Iberville wrote:

I put ten men to squaring logs for the bastions made of *pièces sur pièces* a foot and a half thick.... The work goes slowly. I have no men who know how to hew. Most of them are a day in felling a tree, which are, in truth, quite large—hard walnut and oak.... (Wilson 1987: 44-45)

In 1702, Pierre Le Moyne d'Iberville and his brothers Bienville, Lavassier, and Sérigny, designed and began the construction of a fort at Twenty-Seven Mile Bluff on the Mobile River north of Mobile, Alabama. There, they laid out a town which came to be called “Old Mobile” (Fig. 16). In an entry from Iberville’s journal, dated March 3, 1702, he described the buildings

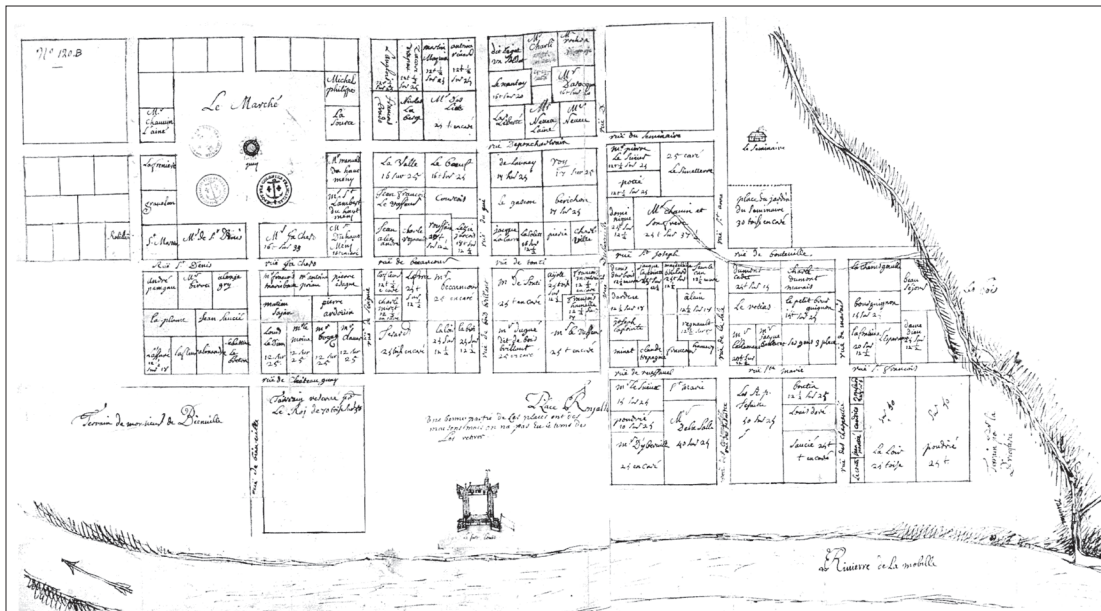


Fig. 16
1704 survey map
of Old Mobile, 27
Mile Bluff, AL (from
a reproduction in
Higgenbotham 1977).

of the colony: “I found my brother, Bienville, busy building a fort with four bastions, laid up pièce sur pièce and dovetailed at the corners” (167-68). The fort was christened Fort Louis de la Louisiane. Nicolas de la Salle, Ordonnateur de Marine, reported the following in the 1704 census of the Louisiana colony (468-70):²¹

In the [first] Fort at [Old] Mobile: An [administrative] house 68 feet long by 16 wide of one story of dressed timber laid *pièce-sur-pièce* (log cribwork, joined by full dovetail notches) with a roof of *charpente* (timber frame) covered with shingles [of oak measuring 6 inches by 18 inches] and a gallery [six feet in depth] from one end to the other on the side facing the river. (see Fig. 17)²²

This is the first historical reference to a full-length, Atlantic Creole-style in-set gallery in any building in North America known to me. The “gallery” on Champlain’s Quebec City Habitation (1608) was not roofed and was not used as a living space, though the French military seems to have been familiar with the concept of galleries, both covered and uncovered, in the 17th century.

All previous descriptions of buildings built by French Canadians between Texas, the lower Mississippi River Valley, and the Gulf Coast, mention buildings constructed in the “Canadian fashion” or buildings built with timbers joined at the corners with dovetails. There is no prior mention of galleries. For example, Henri Joutel,

who accompanied Robert Cavalier de La Salle on his abortive attempt to establish a colony at the mouth of the Mississippi River in 1685, described the buildings at Fort St. Louis (Jackson Co., Texas):

The first was built in the Canadian manner, and the other almost the same way. As the *pieces* of the latter one were quite straight and thick, they were much better fitting; the pieces were closed with dovetail corners with a good wooden peg, so that they would be most unlikely to slip. (Joutel 1998: 105; *en Français* see Margry 1876-1886, vol. III: 178-79)

At the Arkansas Post in July 1687, those returning from de La Salle’s abortive mission discovered a house built “in the French [sic. Canadian] manner.” The house was “built of large pieces of timber, jointed with each other forming a dovetail up to the height of the roof. It was built of beautiful cedar wood and covered with bark which was not bad for roofing” (Joutel 1998: 270).²³

Deterioration of wood used for buildings and for boats became a serious problem for the Canadians in the first years of their Gulf Coast settlements. As Mandeville wrote in 1709, “Wood does not last at all [around Mobile Bay]” (51). At first, most of the houses in Old Mobile were built with posts in the ground or set on ground sills. Although hardwoods and pine were available in abundance, the disadvantages of using these

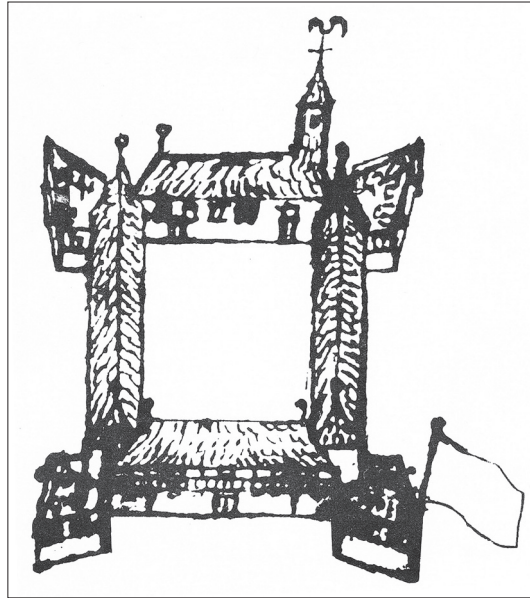


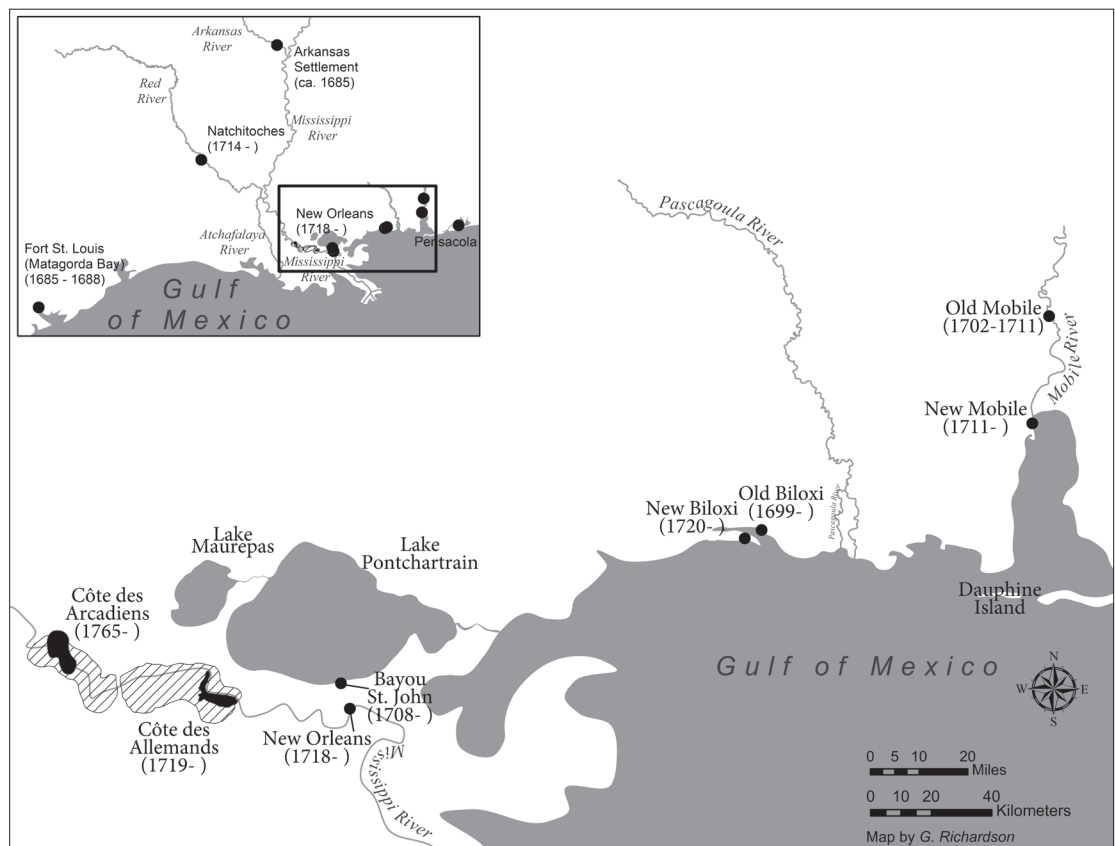
Fig. 17 (above)
Fort Louis de la Louisiane. Detail from 1704 survey of Old Mobile (from reproduction in Higgenbotham 1977). Note the ancient Coq Gallois symbol atop chapel steeple, common to 17th-century Québécois churches (see Bailey 2018: 391, 392, 394).

methods became evident within a few years, as their structures became riddled with termites and with rot. In searching for a solution, they adapted in a most scientific manner:

Having set out by order of Sieur de Bienville, the commandant, to go to Massacre [Dauphine Island] with a detachment of eighteen men for the safety of the King's property from the fifteenth of June till the end of August, I sank ten different sorts of wood in salt water to see which would resist the borers best. The result was that ... there was only one sort to which the borers did not attach themselves and all the others are completely riddled. It is a very common wood, tall, easy to saw and to work, being very tender.²⁴

That species was the Bald Cypress tree, *Taxodium distichum*, a deciduous conifer. Subsequent experience revealed also that this species of wood was resistant to rot as well as to insects, and its durability was a most important characteristic in a region where wooden buildings soon fell into disrepair.

Fig. 18
Map of French settlements along the Gulf Coast, ca. 1720 and later. G. Richardson for the Kniffen Lab, Louisiana State University.



Timber framed versions of the one or two-room cabin were employed almost from the very beginning by European settlers. Within a year or two it was discovered that Gulf Coast landscapes were subjected to periodic inundation. In response, the floors of most houses were raised a foot or more above grade on cubical or trapezoidal blocks of cypress, later brick pillars (Fig. 19). Trestle-sawn planks of cypress or pine were laid for flooring. Archaeologist Wade Tharp suggests that from the beginning of settlement, French settlers paid close attention to the landscape. They distinguished between elevated and low-lying house sites and quickly learned to elevate their houses on raised sills where there was danger of flooding, preferring less-demanding *en-terre* construction where inundation was not a problem (Tharp 2014: 58).

What about the houses at Old Mobile? Unfortunately, there is little contemporary graphic information on them. In May of 1703 a visiting Spanish officer reported that: "They have built more than a hundred very pretty houses in the plaza, and the lands and forests are very good...." Also in 1703 the settlement of (Old) Mobile was described as: "Eighty wooden one story houses covered with palmetto leaves and straw ... all being raised on posts 1-2 feet high, to protect them from the damp."²⁵ These structures survived for less than a decade before being razed by the colonists when they moved south to the present site of (New) Mobile. An archaeological sampling was conducted by Gregory Waselkov's teams at Twenty-Seven Mile Bluff beginning in 1989 (Waselkov 1991). Several houses were excavated to the extent that a clear footprint could be established, though the building materials had been removed or burned. Typical forms were sketched for a report by architectural historian Philippe Oszuscik (1994; see Fig. 20). Based on a few contemporary sketches he believes that most houses in Mobile and on Dauphine Island were Canadian in form, with steeply-pitched hip roofs and without galleries.²⁶ Contemporary observers contradict this view.

On January 15, 1714 the French missionary-geographer, M. François Le Maire, S. J., wrote a letter from Pensacola (Florida) back to the French colony at Dauphine Island. Le Maire had worked as a missionary in Old Mobile and at Dauphine Island from 1708-1713. He wrote a description



Fig. 19
Cypress trapezoidal
sill support block, the
Ram Trouille house,
St. Landry Parish, LA,
2005. Author photo.

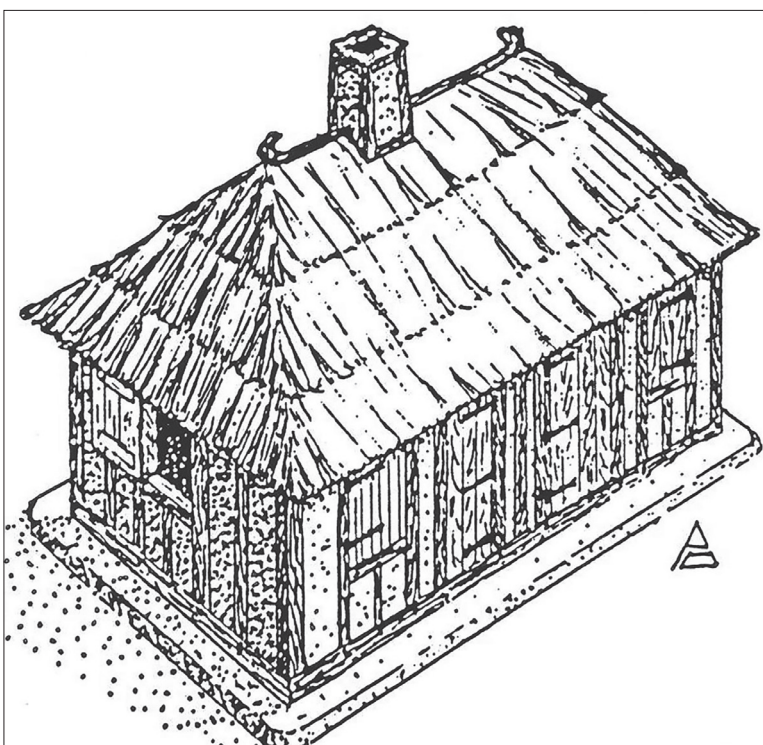


Fig. 20
Reconstruction sketch of
pre-1711 Structure No.
3, Old Mobile, MS. P.
Oszuscik, based on an
archaeological survey
(from Waselkov, 1999).

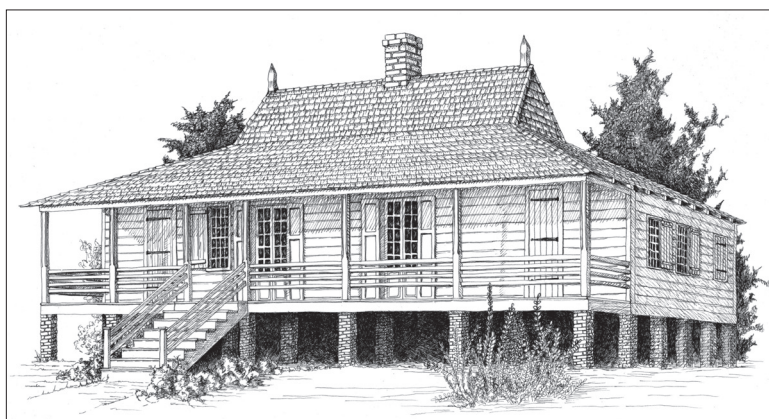
of the houses of this colony, some about a decade old at the time:

Now for the manner in which the French build their houses in this country. All the houses are of timberwork (*charpente*) and one story high, there is only one house which has two stories. The dwellings are comfortable enough. The walls are made of mud [*bousillé entre poteaux*] and white-washed outside and inside. The lime is made of local oysters and other shells. The houses are elevated two or three feet above the ground to protect the timber work



Fig. 21
The 18th-century Lastrapes House, St. Landry Parish, LA. HABS photo by Richard Koch, 1936. Courtesy Southeastern Architectural Archive, Tulane University.

Fig. 22
Sketch of a typical Louisiana 18th-century Class II Creole cottage. M.L. Eggart for the Kniffen Lab, Louisiana State University.



from the dampness. Some of these houses have a solid brick foundation, but most are raised on rudimentary wooden piles or stones. [Borrowing from the houses of the Antilles, or simply because of the excessive heat and humidity] most have a gallery all around, and those few which haven't are covered from top to bottom with overlapping clapboards. The poorest in appearance is constructed of stakes planted in the ground ... covered with rush or reeds, of which there were many on Dauphin Island. The chimneys are suitable enough, made of wattling cemented with clay. Until now only the fireplace has been

made of bricks. Nothing would prevent building brick flues [stacks] or having all of the houses built of bricks as well as the fort itself, if a few brick-makers were sent from France. Brick clay is as plentiful here as in Carolina, where all the houses are built of bricks. (qtd. in Delanglez 1985 [1937]: 150)²⁷

Le Maire's 1714 description is supported by the observations of Manuela Sánchez Navarro, wife of Chavalier de Louis Juchereau de St. Denis, founder of Natchitoches. She lived for a time in Old Mobile and provided a description of the creolized houses:

They were either of wood or of wooden frames filled in with plaster made from native [oyster] shell lime. They seemed flimsy and unstable to one who had known the solid beauty and simplicity of Mexican Adobe. A peculiarity of the architecture was the roofs, which sloped to the front and to the rear, with a sheltering eave protection. This was the gallery which meant to the French what the patio meant to the Spaniard. Some of the roofs were of straw or leaves, though the more pretentious buildings were roofed with tile. Brick or clay-mud chimneys flanked the gabled ends. The houses stood in parallel lines facing the River (Phares 1976: 165).²⁸

Private houses were covered with bark or thatch, implying steeply pitched (Canadian style) roof pitches. Most were two rooms wide and one room deep, but many had full-width front and rear galleries, their roofs pitched at a lower angle (similar to the 18th-century Louisiana Creole houses illustrated in Figs. 21 & 22). Influence on the first generations of Mobile-Dauphine Island domestic architecture arises from the Caribbean, from whence the ships had recently arrived (Oszuscik 1988). The presence of full-width galleries on so many houses appears too quickly to have been developed on the spot in the impoverished Louisiana colony. Neither were galleries borrowed from Indigenous populations, nor from France or French Canada. This implies that the form of architecture described by Le Maire and Sánchez Navarro was popular, if not dominant, in French Saint-Domingue at least among buccaneers, by the last decade of the 17th century. We know that it has origins in the houses

of Spanish Creole settlers in Saint-Domingue from the early decades of the 17th century. At least one such house survives in northern Haiti, and others are reported in Cuba and Spanish Jamaica (Fig. 23).²⁹

The oldest house in North America with a surrounding two-story gallery for which we have hard evidence is the plantation house of Canadian Joseph Simon de la Pointe on the east bank of the “Fish River” (now Pascagoula River) near what is now Pascagoula, Mississippi (Fig. 24. Compare with Fig. 23). Sketches of it and a nearby un-galleried two-story *maison de maître* on the Chaumont concession were sent to Dumont de Montigny in a letter from M. de la Chaise, October 30, 1726. Around 1730, Dumont added the two sketches to his “Chart of the Pascagoula River.” De la Point received his concession on Nov. 12, 1715 from Antoine de la Mothe Cadillac, then Governor of the Province of Louisiana. In the explanatory key, the house is described as: “*Maison de M. La pointe, de deux etages et un balcon tout au tour.*” We can safely say that this Creole style house was in existence prior to November 1726, and that it might be as old as 1716.³⁰

The Houses of *petits habitants* (common settlers) in Louisiana, 1699-1730

First Generation Palmetto Cabins; *Cabannes de latanier*

Reasonably good descriptions of the earliest houses of Louisiana have survived. Directions for the construction of a first generation cabin were penned by M. Dumont de Montigny in the late 1720s:

With respect to the cabins, they do not require a great deal of effort, and their manner of construction is quick. First of all one selects as many poles or timbers with a forked end as are necessary, according to the desired length and width of the cabin. These poles should be at least twelve feet long. One places them in the ground equidistantly at a depth of two and one half feet into the ground. One joins them together by crossbeams [joists/tie-beams?]

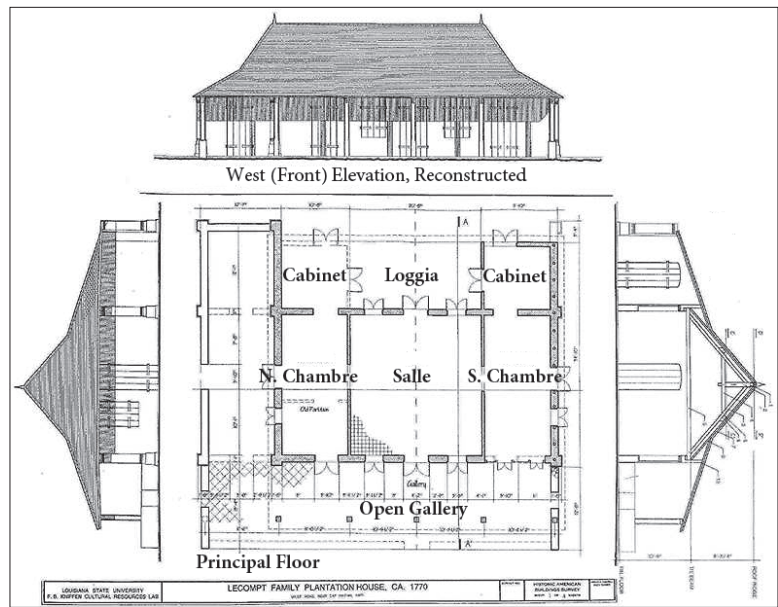
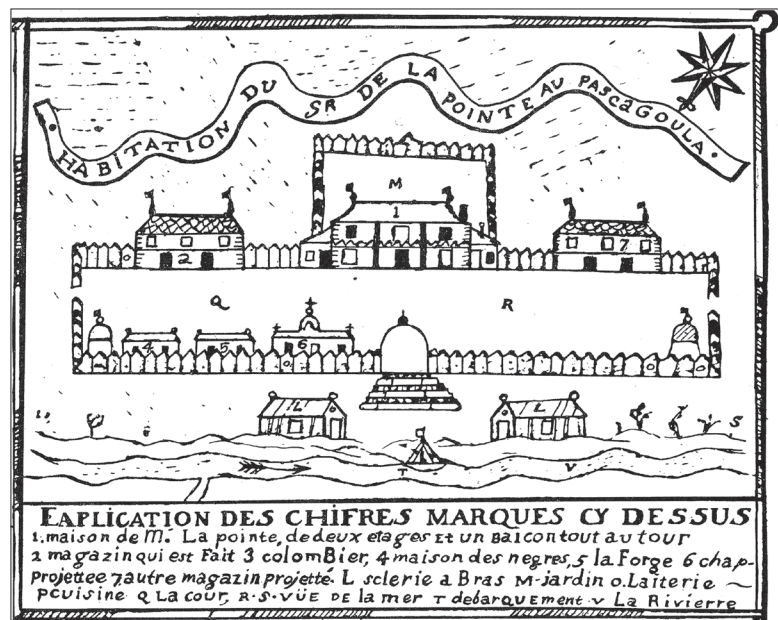


Fig. 23

The ca. 1600 Broussard-Laguehaye House, Petite-Anse, Plaine du nord, Haiti, as rebuilt by a French planter in the 18th century—a typical 17th-century Spanish Creole colonial planter's house, expanded. Beatriz Mendez for the Kniffen Lab, Louisiana State University.

Fig. 24

The de la Pointe habitation, on the Pascagoula River, MS. A sketch by M. de la Chaise, 1726, as redrafted by M. Dumont de Montigny, ca. 1730 (from Wilson 1987: 84).



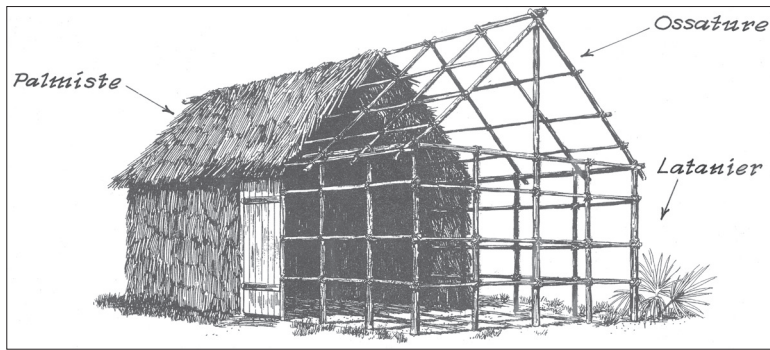


Fig. 25
A Louisiana palmetto house. C. Funderburk for the Kniffen Lab, Louisiana State University.

Fig. 26
Cabanes de latanier (Palmettos) at the Ledu de Guiche Camp, New Biloxi. Detail of a drawing by Bouteux, December 1720. Newberry Library, Ayer Collection, map 30, no. 77.



which are placed above [on wall plates]. This forms a long rectangle of which the two narrow sides serve as gables. In the center of [each of] the two narrow sides, one erects other timbers [posts] of sixteen to eighteen feet in height, upon which one rests the ridge pole. After this one nails the rafters to the center beam, which are also nailed [at their feet] to the cross-beams [joists]. The shell of the building is erected in this manner. One closes it in with cypress *pieux* [staves] which are stuck one foot into the ground and rise to the plates, where they are also nailed, taking care to allow for the doors and windows on the long and narrow sides. One then covers the walls with cypress bark or palmetto fronds

and, *voilà*, you have a cabin. One realizes that in a country as heavily wooded as Louisiana it is not difficult to provide shelter for oneself, because, for little cost one can build such a cabin in twenty-four hours.³¹

Dumont is mixing a description of two framing methods. The earlier and more temporary cabin type is often referred to as a “palmetto” in Louisiana. Instead of hewn timbers, this quickly constructed version is framed with canes or round poles cut from local trees (Fig. 25). These were lashed together with vegetal ties taken from vines in the fashion of the Indigenous inhabitants. They were depicted in the detailed illustration by Michel Le Bouteux, dated December of 1720 at John Law’s camp at New Biloxi (Fig. 26). It resulted in an abode which was warm and dry in winter when heated by a fire in the middle of the floor. Even women built such huts.

First Generation Earthfast Gable-Roofed Timber Frame Cabins

Apart from its lightweight frame, the “palmetto” was identical in overall form to a more robust cabin employed by French and German settlers. At first, both forms were *poteaux en terre*, the wall posts sunk in a trench as described by Dumont. The rectangular ground plan was similar, and almost certainly based on earlier French models such as those from Norman and Canadian *salle-et-chambre* houses. These differed significantly from the contemporary square or circular houses of Indigenous Muskogean and Chitimacha-speaking tribes of southeastern Louisiana (Kniffen, Gregory, and Stokes 1994: 110-15, 123; Creppel 1982).³²

The pioneering timber frame cabin of Louisiana was not distinctively Canadian. It might have been employed by almost any group of French speaking colonists in the early 18th century. One exceptional feature was, of course, the optional in-set open gallery which functioned as a daytime living room across the front and often across the rear of the house.

Urban Vernacular Cabins and Houses in the Early 18th Century

In New Orleans as in Old Mobile, elevated houses built by experienced professional carpenters from France and Canada quickly became substitutes for earlier earthfast forms. As brick became available in New Orleans after 1725, it was increasingly used for pillars to support the sills and floor joists of new houses. Brick was also used as nogging in the timber frame walls, gradually replacing the *bousillage* infill which had dominated earlier. Bricks were fired in large kilns built of loose piles of unfired bricks surrounded and covered by firewood, the entire construction covered with earth except for some holes and passages for airflow. When the fires were lighted, those bricks set at the outside edges of the brick piles in the kilns were less completely fired, producing softer bricks. It was those bricks which were used for nogging (wall infill), rather than for structural purposes such as pillars, chimneys, and walls.³³

The very first illustration of houses in New Orleans taken from direct observation is a crude sketch by English traveler Johnathan Darby dated 1719, three years before the streets of the Vieux Carré were laid out by 2nd Engineer, Adrien du Pauger (see Fig. 27). Darby's depiction shows two Company of the Indies *magazins* or storehouses (A and B), a barracks building constructed in *bousillage entre poteaux* (C), and five one or two-room *salle-et-chambre* cabins "for the workmen." The buildings face the Mississippi River and are surrounded by a cypress forest (Wilson 1968: 4).³⁴ All have steep pavilion roofs with even steeper *croupes* (end sheds) in the Canadian fashion. The doors and windows of the *magazins* have segmental arched tops, indicating that they were constructed by professional builders—probably military. A more detailed sketch of a similar *magasin* in New Biloxi was rendered by Michel Le Bouteux the following year (Fig. 28). This building would be disassembled and reconstructed on lower Dumaine Street in New Orleans in 1728.

In the most complete overview of the earliest colonial architecture of New Orleans, architectural historian Sam Wilson, Jr. described the post 1722 houses:

The first buildings were of a simple *colombage* construction, a frame work of heavy timbers mortised and tenoned together, set on wood sills placed directly on the ground and roofed with rather steeply pitched hip roofs. The walls were



Fig. 27
A view of New Orleans in 1719 by Jonathan Darby, redrafted from an original sketch, now lost (from Wilson 1968: 4).

covered on the exterior and sometimes inside, with wide horizontal boards, a sort of ship-lap siding, the structural timbers being so arranged as to form the jambs of doors and windows. Batten shutters were used on all the openings and only the most important buildings were provided with sash, occasionally glazed, but more often covered with cloth. (1968: 99)

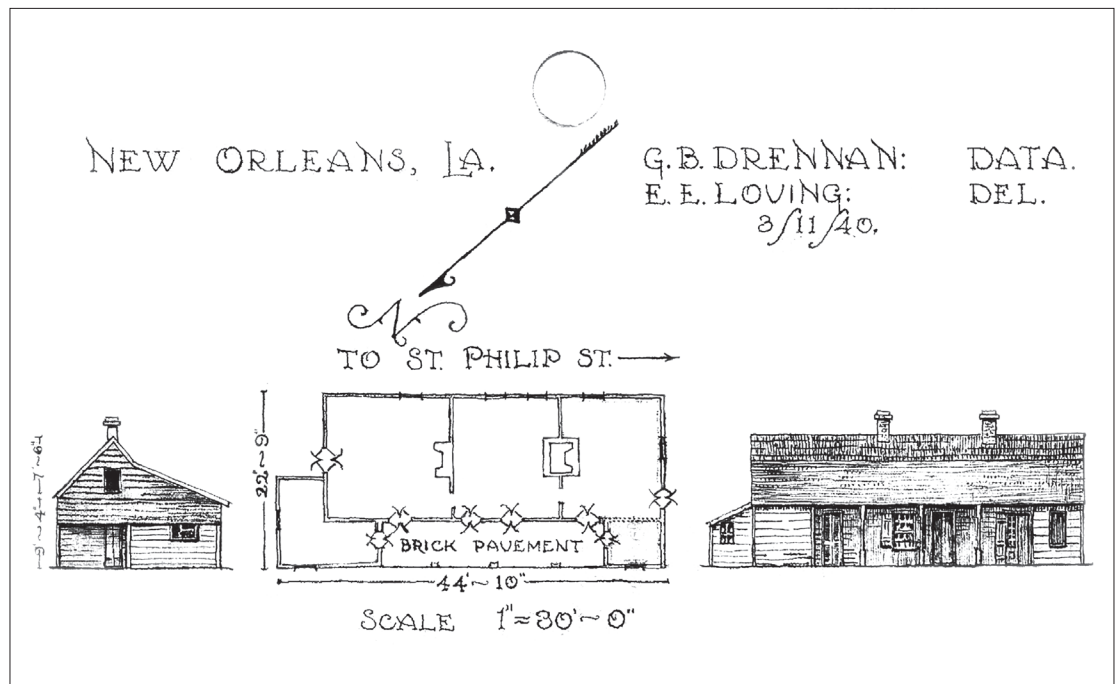
Assistant Engineer of New Orleans, Franquet de Chaville, provides a brief description of the houses which were rapidly constructed following the hurricane of September 11, 1722: "The architecture of all the buildings is of the same model, very simple. There is only one story, raised a foot above the level of the ground, resting on carefully placed foundations and covered with bark or boards." They were described as being "half-timbered" (qtd. in Marc de Viller 1920: 237). All of this was fully within the Canadian tradition of vernacular architecture, including the geometry and layout of the houses and cabins.

Terms such as *baraques*, *cabanes*, and *chantiers* were used by travellers to describe the smaller wooden houses of New Orleans. No buildings from the 1740s or earlier have survived. A few buildings from late French and from Spanish colonial times do survive, but these are larger and more elegant structures such as the rebuilt Ursuline Convent (1749-1753) and the frame of the Peyroux-Ossorno house (1781,



Fig. 28
The magazin of the Company of the Indies, New Biloxi. MS. Le Bouteux sketch, December 1720. Newberry Library Ayer Collection, map 30, no. 77.

Fig. 29
Troxler Cottage, 919 St. Philip Street, New Orleans, ca. 1780. Historic American Buildings Survey (HABS) index card, verso, from a 1940 survey, LA-196. Prints and Photographs Division, Library of Congress.



expanded and creolized ca. 1794). Thus, we are largely dependent on travellers' accounts for our understanding of the vernacular architecture of the French Colonial period. But because of the excellent level of recording of surviving 18th-century buildings in 19th-century New Orleans,

we know something about the nature of the smaller dwellings.

The majority of the colonial era buildings of New Orleans were destroyed in the devastating fires of 1788 and 1794. Only the houses around the fringes of the city survived, and these were

mostly wooden vernacular structures with relatively shorter life spans. One such cottage was recorded in an Historical American Buildings Survey (HABS) in 1940—the Carlotta Troxler Cottage—located at 919 Saint Phillip Street. It stood over a block outside the limit of destruction of the 1788 fire. The house was built or expanded prior to 1782. It closely resembles many earlier houses from the “back of town” fringes of the French colonial city. Sometime after its original construction a full-length gallery six and one-half feet wide was added down one long side, with a small cabinet room set at either end. The original gabled roof was steeply pitched in the Canadian manner, the portion expanded to cover the gallery sloped at a lower pitch (Fig. 29). The openings were protected by double batten shutters, and the windows and doors glazed with small panes of glass in double rows.

A *salle-et-chambre* cottage of unknown origin and location was captured in a 19th-century sketch by W.R. Shaw, who specialized in sketches of early vernacular houses in New Orleans (Fig. 30). The house is constructed with walls, *briqueté entre poteaux*, elevated on a raised sill. As is common in the vernacular houses of West Indian peasants, multiple doors open in the *façade*. This enhances through-ventilation in the hot months. A large chimney is set in the wall between the *salle* and the *chambre*, probably with fireplaces serving both rooms. This places the house firmly within both the northern Canadian and the tropical Creole traditions. The roof is a steeply pitched pavilion, in Canadian style, and is covered with large shingles sometimes called *merrains* in New Orleans. The *étres*, or overhangs of the roof, are on the order of four feet in front. These broad roof extensions—urban substitutes for front galleries—were commonplace throughout New Orleans after 1789. They were referred to as *abat vents*, though *abat pluie* might have been more appropriate in this sub-tropical city. Here, we see an almost perfect example of a Canadian style cabin, partially modified through tropicalization.³⁵

Finally, in ca. 1871, a professional drawing of a timber-frame house was rendered by the famous mid-19th-century illustrator, A. R. Waud (Fig. 31). This *salle-et-chambre* plan house stood at the corner of Esplanade Avenue and Royal Street (638-640 Esplanade). Its floorplan was deeper than it was wide on the street. The

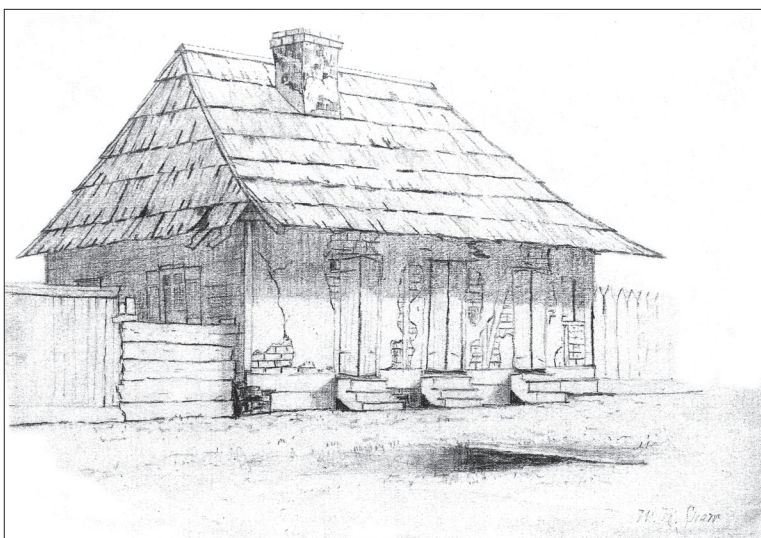


Fig. 30
French vernacular
cottage on Washington
St., New Orleans. A
19th-century sketch by
W. R. Shaw. Historic
New Orleans Collection
(HNOC) acc. no.
1983.170.10.

plan was probably a *semi-double*, backed with the standard cabinet-loggia range of rooms. This room arrangement was popular for urban cottages in the late 18th and the early decades of the 19th centuries. The hip roof was shingled, but it was less steeply pitched than those of the previous two examples. Like the earlier cottages, the roof extended about four feet beyond the walls, which were constructed in classical French and French Canadian timber frame with full-height wind braces at the corners. All openings had double storm shutters. The house illustrates the last stages of creolized Canadian vernacular architecture in New Orleans before the complete transition to cottages in West Indian Creole and high-styled forms.

Rural Vernacular Architecture in Early 18th-Century Louisiana

The establishment of farms and plantation concessions along the lower Mississippi River began at about the same time as the first settlement of New Orleans. In 1708, eight Canadian families—farmers who had come down from Illinois and Natchez—were transported from Mobile to Bayou Saint John, prior to the establishment of New Orleans.³⁶ Their settlement was located near the Bayou Road, about one-and-one-half miles from the edge of the future city (Fig. 18). The intent was to supply vegetables and wheat for the settlements at Biloxi and Mobile, where farming had proved unsuccessful. However, aside from that of a single farmer, Antoine Rivarde de



Fig. 31

Old House, Quartier Français. Esplanade Ave., New Orleans. Sketch by Alfred Waud ca. 1871. Historic New Orleans Collection (HNOC) acc. no. 1965.34.

Lavigne from Île Dauphine, Canada, the farms proved insufficient to meet the needs for which they were intended. Lavigne soon acquired most of the other concessions, selling one to Le Page du Pratz in 1718 (Giraud 1974: 190-91; Wilson 1968: 3).³⁷ None of these first Bayou St. John houses survived, but they were briefly described by their residents:

The Sieur Lavigne, Canadien, lodged me in a cabin of the Aquelon-Pissas, from whom he had bought the village; He gave others to my workmen to lodge themselves.... I was seeking a site on Bayou St. John at a short half league from the spot where the capital was to be founded, a spot as yet marked only by a hut roofed with palmetto leaves that the Commandant [Bienville] had had built to lodge himself and, after him, M. Paillou whom he left as Commandant of this post.... I built a hut upon my settlement, about forty yards from the creek of St. John, till I could build my house and lodging for my people. My hut was composed of very combustible materials.... (Le Page du Pratz 1975 [1774]: 20-21)

What Le Page du Pratz describes as Bienville's cabin, and the one he had built for himself on Bayou St. John, were palmetto *poteaux-en-terre* cabins of the type seen in Figs. 25 & 26.

Post 1720 Architectural Influence of Settlers from Alsace, Switzerland, and the Maritime Provinces of Canada

John Law became the French Minister of Finance when he assumed directorship of the Company of the West in 1720. He recruited families from southwestern Germany and Switzerland to come to Louisiana as indentured servants to work as miners and farmers. Between 1720 and 1721, some 2,600 people were involved in the scheme, though most never made it to their intended destinations. They died of sickness in French ports, at sea, and from starvation on the beaches at New Biloxi, where no provision had been made to accommodate or feed the new arrivals (Blume 1990: 7-22). A number of the "German" indentured servants were eventually settled on the banks of the Mississippi River about thirty-one miles above New Orleans. In order to keep



Fig. 32

The Badin-Roque house, Natchitoches Parish, LA, on Cane River. One of the last surviving poteaux en terre buildings in Louisiana, 1980. Author photo.

a few hundred survivors in Louisiana, Bienville released them from their indentures and permitted them to become *habitants*, or free and independent small farmers. He supplied them with land and with the basic means for establishing farms, but not with slaves. Within a few years the new settlers of the Côte des Allemands (German Coast) were successful at supplying New Orleans with local foodstuffs, carrying their agricultural products downstream to market in their pirogues, and helping the city to survive and prosper.

Houses constructed by the first German colonists established a tradition which survived well into the 19th century. A somewhat standardized form of the Canadian cabin was developed. It began as a small one or two room en-terre house with a gable roof pitched eventually at about 45 degrees without a break in pitch, an inset front gallery, and usually a rear gallery or cabinet-loggia range of rooms. Following disastrous floods, the house was elevated on blocks. Fred B. Kniffen, who surveyed the folk architecture of Louisiana 1930-1936, referred to this kind of house as the “built-in porch type with sideward facing gables,” later renamed by him as the “Louisiana Creole house” (Fig. 32).

From ca. 1720 on, the same house type was always used, differing primarily in size according to the financial status of the owner. As new settlers arrived, it spread from the German Coast, both upstream and downstream (Fig. 33). With certain modifications it was quickly adopted by the Acadians, who began to arrive from Saint Domingue in February of 1765. Many were provided lands in what came to be called the “Acadian Coast,” just upstream from the German



Fig. 33

The Guillot house, a German style Creole cabin on Bayou Lafourche near Thibodaux, LA. David Hutchinson for the Kniffen Lab, Louisiana State University.

Côte des Allemands. Cajuns also settled on the Bayou Lafourche distributary and upstream in St. James and Ascension Parishes. Soon, they intermarried with the established Germans, mixing their cultures together and adopting Cajun French as their shared vehicle of communication. From there, the Creole cabin spread across much of southern Louisiana throughout the lands settled by the Cajuns and others (Fig. 34a, 34b, First Stage).

The German Creole house was, almost certainly, borrowed directly from the earlier-settled French Canadians who built the first examples between 1708 and 1720 (Fig. 35):

After a few years both large and small concessionaires adopted the method of building houses on posts or piers.... In general, the houses were built completely of wood. Very durable swamp cypress was used for building these houses.... The entire roof was covered with cypress wood shingles rather than palmetto fronds, as had frequently been the practice.... Galleries were constructed on houses at least on one side, usually on two, and occasionally on all sides.... Even modest houses as the one described above had galleries on two sides and were built on posts.



Fig. 34a (left)

The Germain Bergeron Cajun cabin, Thibodaux, LA, as partially restored to its original form and removed to the LSU Rural Life Museum, Baton Rouge, 1998. Author photo.

Fig. 34b (below)

Evolution of the Germain Bergeron Cajun house in Thibodaux, LA, ca. 1810 - 1912. Kniffen Lab, Louisiana State University, HABS sketch, 1995.

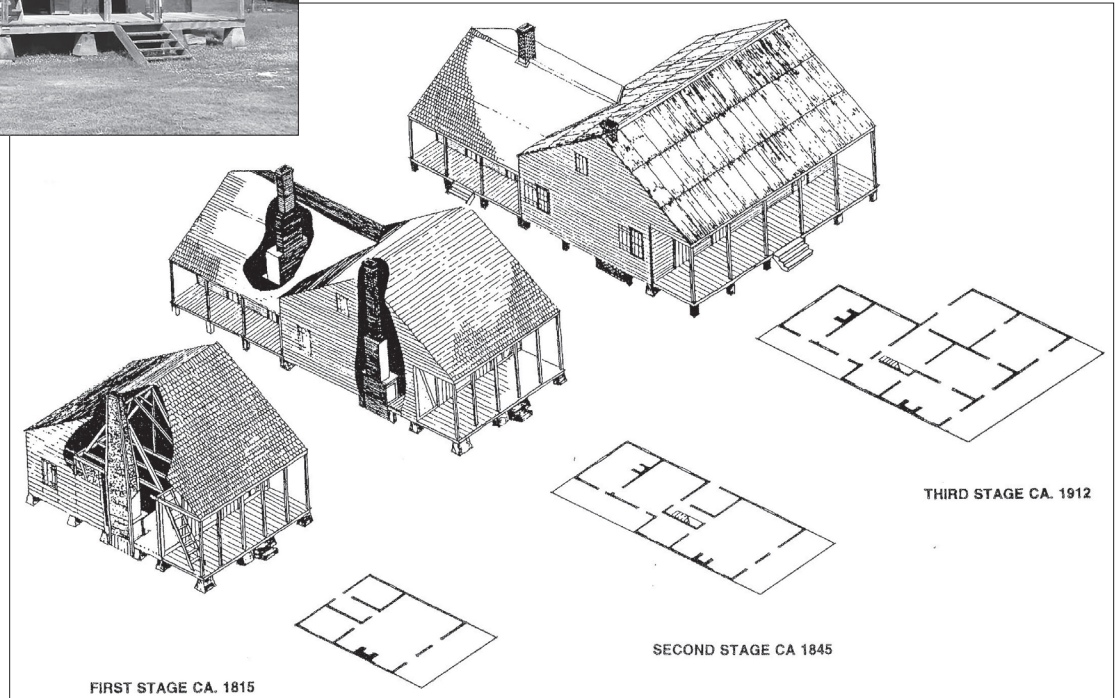
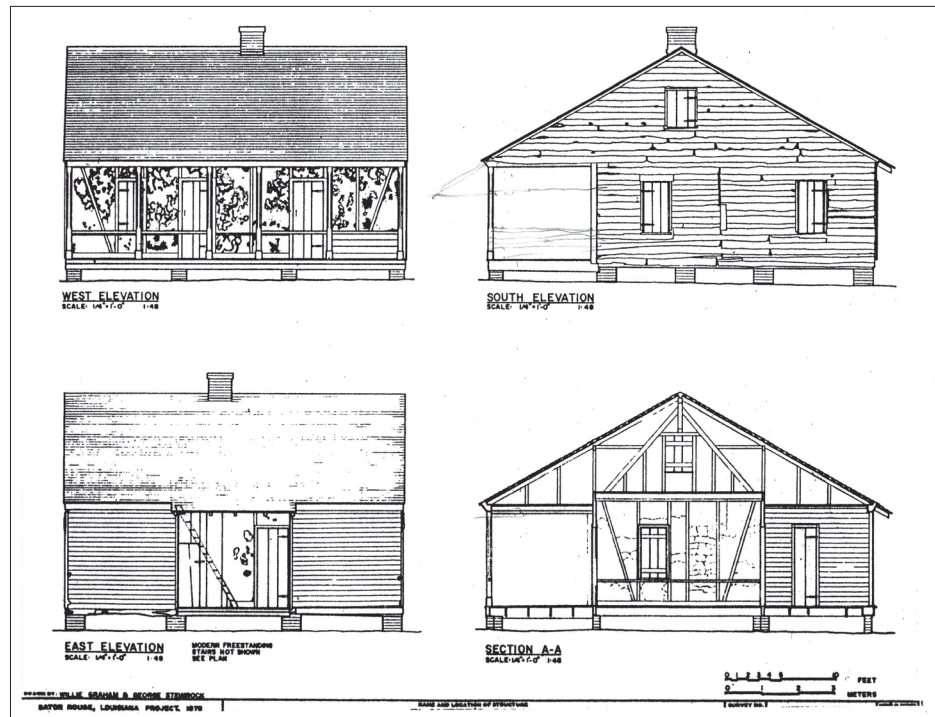


Fig. 35

Leland Richardson 18th-century bousillage planter's cabin. Baton Rouge, LA. Note location of stairway to grenier. HABS survey LA-1135, sheet no. 3, elevations, 1979.



A building contract from the year 1730 contained information about a house which D'Ausseville was having built.... It was to have three rooms 12 windows, a gallery 1½ meters wide, a length of about 15 meters, and a width of seven meters or more. Joists were to be close together to support a second floor in the Canadian style. In addition, the house was to stand on piers 1½ meters above the ground. (Blume 1990: 76)

The German settlement occurred at about the time that a better form of wall construction was being applied to small houses, both in New Orleans and in the countryside. This was the local Louisiana version of the French and Canadian technique, *bousillier entre les poteaux* (Figs. 34a, 35). This age-old European method correlates closely with Acadian building techniques described in Nova Scotia from as early as 1680—*colombage bousillée, en torchis, and à la gasparde* (Figs. 12; Fig. 13, nos. 17-18).³⁸

While the newly arrived Acadians adopted a Germanic form of the Louisiana Creole cabin as one of their primary forms of residence, they placed their own unique stamp upon its forms. They creolized the floorplans into something quite unlike the house of their Acadian forbears (Fig. 11). Under creolization, the external appearance of the Cajun house, and the relations between its interior and the exterior, changed dramatically. In Louisiana they added steep stairways to the *grenier*. In the east it was often set in a cabinet or on the rear loggia (Figs. 35 & 36), while west of the Atchafalaya River stairs were generally placed on the open front gallery (Fig. 34a). As in Nova Scotia, the *grenier* became the bedroom for the young men of the family. Large, door-like windows were often set in the side gables to enhance through ventilation in the hotter months (Fig. 37). Older daughters often slept in a rear cabinet which typically opened exclusively into the *chambre*, or parents' bedroom (Fig. 34b, first stage). Louisiana Cajuns used the front gallery as a warm-weather setting for handwork, for hospitality, and for courting.³⁹

The Acadians continued to employ a repertoire of building techniques based upon those they had depended upon in early 18th-century New France. Particularly for out-buildings, they employed *tenon en coulisse, pièce sur pièce*

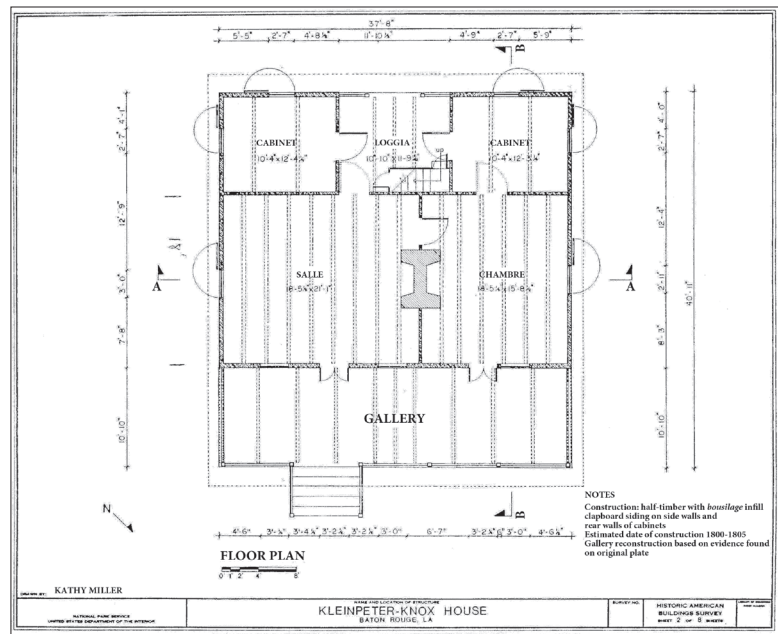


Fig. 36 (top)
Kleinpeter-Knox Creole House, ca. 1787, Baton Rouge, LA. HABS survey, LA-0355, sheet no. 2, plan, 1986.

Fig 37 (above)
Tall gable windows in a larger Acadian house as viewed from the rear. From a survey by Fred. B. Kniffen, ca. 1948. Courtesy Kniffen Lab, Louisiana State University



Fig. 38 (top left)

Canadian style pièce sur pièce construction with widely flaring dovetails and close-fitted planks, about 3.5 inches thick. The Pointe Coupée Museum, 1980. Author photo.

Fig. 39a (above left)

Curet Barn at the Bonny Glen Plantation, Pointe Coupée Parish, LA, 1989. South end view. Author photo.

Fig. 39b (top right)

Detail, one inch thick madriers en coulisse, Curet Barn, Bonny Glen Plantation, Pointe Coupée Parish, LA, 1989. Author photo.

Fig. 39c (above right)

Inner wall, Curet Barn, Bonny Glen Plantation, Pointe Coupée Parish, LA, 1989. Note disused coulisse, centre. Author photo.

assemblées à queue d'aronde, and other long perfected French Canadian methods. More primitive methods such as close studded *poteaux en terre*, *bousillage entre poteaux* were in use until well into the 19th century, particularly for pioneer cabins, rural outbuildings, and slave cabins (Fig. 32).

Today, evidence of popular Canadian wall construction technology survives thinly scattered across southern Louisiana. A few farm buildings such as barns and houses in *pièce sur pièce à queue-d'aronde* survive. Some of these preserve the widely flaring dovetails of their military-inspired predecessors (Fig. 38). Gable-roofed Cajun and Creole barns were surrounded with broad galleries divided into animal stalls, the interior crib being employed for the storage of fodder. The skill with which their beautifully handmade walls were shaped still amazes those who see them. *Pièce sur pièce*, *madriers en coulisse* also survives in rare examples. A short distance from the house depicted in Fig. 38 is the Curet Barn. Exceptionally well-preserved, it is located on the Bonny Glen Plantation in Pointe Coupée Parish (Fig. 39a). The original date of construction has not been determined. It might be ca. 1805, when Antoine Grosserand established his plantation called "Home Place," but it shows several phases of construction, one of which might well be even earlier. Clearly, these buildings across rural Louisiana, and many others like them but now long gone, were inspired by, and constructed using, Canadian technology (Fig. 39b).

Even into the 1850s, larger Cajun cabin-style houses maintained much of the same appearance as their smaller progenitors (Fig. 37). In all, many hundreds of these cabins were constructed across southern Louisiana, some gradually expanding into increasingly larger forms (Fig. 34b, Third Stage). Nearly universal in rejecting the popular Louisiana-Canadian style of house with its "witch's hat" roof (Fig. 22), the Cajun gabled-roofed house reflected a kind of alternate identity of rural attainment which survived past the middle of the 20th century (Figs. 37, 40).

Conclusion

Returning to the questions raised at the introduction to this article concerning the factors which dominate the reshaping of architectural traditions



Fig. 40

The Henri Penne (Robert E. Smith) House, ca. 1821, an expanded 19th-century style Acadian house with Creole naval colonnettes, Anse-le-butte, Lafayette Parish, LA, 1986. Author photo.

in new environments, our historical review reveals that answers to such questions reflect the complexity of the settlement process. It is useful, perhaps, to view the process of architectural reformulation as a multi-leveled decision-making matrix. The several layers each involve their own forms of problem resolution, while at the same time causal interactions between the layers are commonplace.

At the base or technical level stands the relatively simple problem of identifying solutions to the specific problems of an unfamiliar environment. These issues were addressed quickly and directly by the Canadian settlers. From the First Nations, they learned to reformulate their traditional *bousillage* with local clays mixed with a Spanish moss binder. This was substituted for the plastered stones of their familiar *colombage* construction, resulting in a near universal solution for timber frame wall construction in rural areas of the new colony. Other techniques such as *tenon en coulisse* persisted in the new environments for special purposes. The settlers tested the various unfamiliar species of trees and settled quickly upon bald cypress as the essential basis for timber-frame building. To avoid the destruction wrought from frequent and unexpectedly powerful flooding events they replaced *en terre* cabins with those raised one to three feet above grade. They learned from Indigenous inhabitants to employ poles, canes and palmetto, tying them together in the construction of temporary cabins.

At the second or architectural level, they faced the question of the suitability of their traditional Canadian and French peasant architectural forms to life in a semi-tropical environment (Figs.

3, 11-13). Here, discomforts, the result of heat, humidity, mosquitos, and abundant and violent rainfall, shaped the direction of their innovations. Although direct historical evidence is imperfect, it appears that the principal adaptation of the basic French and Canadian cabin into a creolized form began almost immediately and was widespread by 1711. By that time the fledgling Gulf Coast settlements had experienced repeated contact with the populations of French and Spanish West Indian colonies, particularly those from the islands of Hispaniola and Cuba where both small settlers' houses and grand *maisons de maitre* (*casas de vivienda*) were augmented with broad open air living spaces—the tropical Atlantic Creole gallery (Fig. 23). Soon this well-ventilated space was transformed into a principal daytime living area of the Louisiana house (Figs. 21-22, 24). It was rendered even more attractive and prestigious by the fact that in 1702, the colony commanders Iberville and Bienville built such a gallery into the front façade of the original officer's residence at Fort Louis de la Louisiane in Old Mobile. Various forms of gallery were soon incorporated into the typical small settlers' houses all along the Gulf Coast and the Mississippi River valley. A rear gallery (*'ti galerie*), set between cabinet rooms, was borrowed directly from the 17th-century houses of Saint-Domingue where it functioned as the principal summer dining room (Figs. 23, 36). Even as their language and core identity as Frenchmen survived in the new and distant colony, the spatial layout and dimensions of the interior of the old French Canadian peasant house was also retained. But to it were added a new zone of tropical living spaces. Later in Louisiana, the Acadians would refashion the early Creole cabin to better suit their own unique social and aesthetic preconceptions (Figs. 34-37).

The third and most abstract level of adaptation involves the transformation of the identities of the settlers into something new and distinct from that which they brought with them from their homelands. Recognizing that in its early decades, Louisiana French society was riven with internal turmoil and conflicts—political, economic, and religious—and that factionalism

divided the settlers into competing groups with differing identities, there remains abundant evidence that the Canadian core of the society—the Bienvillians—experienced profound changes to their self-conceptions. Interacting intimately with both West Indian Creoles and First Nations, and borrowing freely from the cultures of both groups as well as Spanish Creoles, they began the transformation of self into French Creole Louisianans. The new identifier, “a creole of this country,” was introduced as early as 1704 when the first local births to Canadians and Frenchmen occurred (Gould 1996: 36-37).

Culture change lay at the heart of the new identities. Bienville, himself, learned several of the Indigenous languages. Even by the second decade of settlement, he and his compatriots had begun a long struggle against the domination of Canadian power and the parsimonious control of impossibly remote French bureaucrats. They successfully gained economic control over the upper Illinois country. By the time of the layout of New Orleans (1722), the process of acculturation with Amerindian, Atlantic Creole, and West African cultures was well under way. Everything changed: the language, the cuisine, the modes of dress, the etiquette, and the architecture. Within decades, an entirely new variant of the French colonial had been established—a Creole Canadian culture.

One indication of the environmental unsuitability of the architectural traditions of Canada and northwestern France is the fact that borrowing from local sources began immediately and occurred swiftly. While moderate innovation and the retention of some earlier Canadian French traditions did occur, borrowing from the proven traditions of Atlantic Creole settlements soon dominated the visible form of the new varieties of vernacular architecture. That appears to be the primary story of the patterns of transformation of Canadian into Creole traditions. Together, early architectural and other innovations set the standard for a new cultural variant which provided a strong foundation for the next stage of Louisiana's economic and cultural development—the rise of monocrop plantation agriculture following Louisiana's transfer to Spanish control in 1765.

NOTES

This paper is expanded from an oral presentation delivered at the conference “Rediscovering the Discoverers: French Canadian and Native American Encounters and the Founding of Louisiana, 1699-1718,” sponsored by the Consulate General of Canada and the Louisiana Historical Society, November 2, 2018 in New Orleans.

1. Kniffen explains “initial occupancy” as “the first post-pioneer, permanent settlement imprint established ... by migrants” (1965: 550).
2. These difficulties have been recently and vividly described by Gregory Waselkov (2019).
3. In considering the early architecture of New France, these questions have been explored by H  l  ne C  t   (2008).
4. Geographer Fred B. Kniffen considered these questions in his earliest surveys of the vernacular architecture of Louisiana: “It has been found unsafe to assume that material traits characteristic of French Louisiana necessarily originated in France.... The practice of thatching houses with the native palmetto, once common in south Louisiana, is most certainly a borrowing from the local Indians” (1960: 1-2).
5. Many 17th to 18th-century farm houses of western France maintain these proportions. Three ancient French houses from central France illustrated by Chapelot and Fossier had a mean depth to length ratio of Depth = 0.575 Length (outside dimensions) (1985: 221). The *salle-et-chambre* unit persisted as a core in much of the higher-style domestic architecture described in Doyon and Hubrecht (1979: 55-64; see also Canadian Museum of History virtual exhibit “Vernacular Architecture in New France” (n.d). The wide variety of floorplans popular in 17th-century western France, together with the widely dispersed homelands of the future American-bound settlers, precluded any single plan or geometric pattern from dominating the architecture of the Canadian settlers.
6. For a richly detailed description of Norman vernacular building techniques, see Brier and Brunet (1984: 33-65). For detailed illustrations of construction techniques, refer to Fontaine (1977); Donald (1995); Boithias and Mondin (1978).
7. *En terre* or earthfast posts were gradually replaced by posts mounted on heavy raised sills (*sur sole*), though the earlier method continued Normandy, where it sometimes drizzles for days in the winter, thick, steeply-pitched thatched roofs shed rain water more efficiently.
9. Refer also to: Ennals (1992: 33); Ennals and Holdsworth (1981); C  t   (2008); Crepeau and Christianson (1995); Canadian Museum of History virtual exhibit “Vernacular Architecture in New France” (n.d.).
10. The Lamontagne house in Rimouski-Est, Quebec is a surviving example of a close-studded building (Dupont 1995: 87; Kalman 1994: 49). In addition to spreading the distance between the vertical posts, the curved oaken or other timbers which had previously been used in France for cruck supports or curved truss blades in the attic trusses were now less used by builders, largely due to the increasing demands for naval timber required by the warring navies of Western Europe. A contemporaneous diminishing and simplification of timber frame elements occurred in Canada.
11. The Villeneuve House in Charlesbourg, Quebec, is taken by architectural historians as the classic example of a stone-walled house of the late 17th or early 18th century (Kalman 1994: 43-44). He notes that such walls were often covered with exterior planking. In the 17th century, houses with thick stone walls gradually replaced the timber frame varieties due to their greater insulating properties (S  guin 1968: 17-23).
12. Inter-post distances were not specified, but may have varied between roughly 0.2 meters and 2.6 meters (Richardson 1973: 77). In a related form of construction, the uprights were palisaded, side by side, either *madr  iers debout* (heavy upright planks) or round or partially hewn logs (*pieux debout en terre*, or *pieux debout sur sole*; refer to Fig. 4).
13. Canadian architectural historians do not seem to have discovered many surviving buildings in Quebec constructed like the late 17th and early 18th-century peasant houses of Normandy in which an infill of *bousillage* was supported

- on a lattice of horizontal bars jammed tight between the posts (Figs. 5 & 6). For Canada, see: Richardson (1973: 81); Kalman (1994: 85); Traquair (1947: 16). For France, see: Fontaine (1977: 59, 126); Brier and Brunet (1984: 51); Boithias and Mondin (1978: 19-20).
14. *Chantieres* were the temporary cabins of French forest workers (Deveau 1982: 40; Edwards & Kariouk 2004: 51). In Port Royal (Acadie), they were: “badly in-filled with bousillage with chimneys of clay.” This term was Anglicized as “shanty” in French Canada and in New Orleans in the 18th century (Cullen 1983: 494). Richardson notes at least one house in Montreal in 1659 with wall infill of *bousillage* (1973: 78). *Torchis* (torch-like) refers to muddled bundles of vegetal fiber wrapped across a *clissage* or trellis (ladder-like framework) of split oaken sticks (*lattes*, *rayes*, *barreaux*, *palissons*, *batons*, *entremises*) and used as infill in timber frame buildings. This was common in France, the Maritime provinces of New France, and also in Louisiana. See also Taylor 2012: 10-20; Crépeau and Christianson 1995.
 15. The unusually high proportion of *pièce-sur-pièce* houses in Montreal in the 17th century may be related to the localized threat of First Nations raids, and the search for a more secure and protective form of wall construction (Séguin 1968: 7-11). Candee describes a similar hypothesis concerning the horizontal log construction of garrison houses of Maine and New Hampshire, 1630-1720 (1976: 266-68). He adds that a large number of Scots worked in the saw mills of this area in the 1650s. Sawn timbers promoted the use of solid, close-fitting *pièce-sur-pièce* walls with full dovetail notches.
 16. On early timber French (often Canadian) forts in the Mississippi Valley, and particularly, the buildings of Robert Cavelier de La Salle, ca. 1683 and later, refer to Wilson (1965).
 17. Earlier attempts to trace the diffusion and evolution of the chinked (loosely-fitted) variety of Anglo full-dovetail notched cribs may be found in Kniffen and Glassie 1966: 56, but they do not mention the presence of sophisticated Canadian style *pièce sur pièce assemblées à queue-d'arounde* construction employed in southern Louisiana, though many examples survived at the time. See also: Jordan and Kaups (1989); Fricker and Fricker (2012); Canadian Museum of History virtual exhibit “Vernacular Architecture in New France” (n.d.).
 18. Observations of 17th-century military log crib construction by vernacular builders mention that the horizontal pieces were often secured with heavy wooden trunnels (pegs) as well as full dovetail notching. Refer to: Kalman (1994: 51; 82-87); U.S. National Park Service (1992: 41-46); Richardson (1973: 79-81); Varin (1992: 44-47); Wilson (1965: 106-11).
 19. *Pieux en coulisse, pièces sur pièces de charpente, charpente entourée de madriers, poteaux et pièce coulissante*, Red River frame, Manitoba frame, and Hudson's Bay Frame, among others.
 20. Perhaps the oldest surviving example of this construction in Quebec is the Paradis House in Charlesbourg, a classic *salle-et-chambre* plan house in the pavilion-roofed style of old Quebec (Traquair 1947: 46-51, 66).
 21. Royal Commissioner acting as CFO—Louisiana was governed, in part, by a naval officer who was a subdelegate of the Intendant of New France throughout the French Colonial Period.
 22. Nicolas de La Salle, *Dénombrement de l'état de la colonie de La Louisiane*, August 31, 1704. Ministry of the Colonies, C13A, r.f. pp. 468-69 (Census of the Louisiana colony); see also Higgenbotham (1977: 49-52); Rowland and Sanders (1929: 18-19). See also: *Dépôt des Fortifications des Colonies. Louisiane. III 6 PFB 120. Centre des Archives d'Outre-mer. Aix-en-Provence*, cited in Waselkov 1999: 60. The bastions and the curtain walls were built in “*double pièce sur pièce*” construction, using local red pine. The roofs were steep “in the Canadian manner.” Among the builders were the Frenchmen Jean-Baptiste La Croix dit Grimauld of Harve de Grâce and Pierre Gasque of La Rochelle (Higgenbotham 1977: 50-51). Those who were the movers and shakers of the early colony are identified in governmental reports. For example, in a 1707 letter to Pontchartrain, Bienville extolled the abilities of the Canadians: “[of] the [French] soldiers that we have, three-fourths are young and incapable of enduring the wars of these countries. I admit to you my lord that I do not know what would have become of this colony if I had dismissed the Canadians as Mr. Bégon, the Intendant at Rochefort, writes me to do.... These Canadians are men suitable for everything on whom one can count, whereas the soldiers and sailors that we are obliged to send to sea, desert at the first Spanish land [Pensacola], and we find ourselves obliged to employ men at exorbitant prices to

- bring back the vessels (Bienville to Pontchartrain, February 20, 1707: 12-13, in AC Series C13, Vol II: 5-31). Translated in Rowland (1932, Vol. III: 38-39). An excellent short summary of the ethnicity of the Louisiana colony in 1717, including the names and professions of many of the prominent Canadians may be found in Giraud 1993: 123-31.
23. In French, even very large timbers are often referred to as *pièces*. For Fort St. Louis (Texas, 1685-87) visit the Texas Beyond History website (2009).
 24. From the 1709 letter of Sieur Mandeville included in Intendant Michel Bégon, *Memoir on Louisiana*, Mississippi Provincial Archives, 1701-1729, French Dominion, Vol. II. (Rowland and Sanders 1929: 51). Original in Mandeville C13A 1. f. Vol. II : 477-78; April 27, 1709. See also Moore (1983: 25-47); Colten (2003: 463-77; "Planks and Timber," Rowland and Sanders 1929: 403).
 25. In a letter to (Spanish) Governor Zñiga. May 25, 1703, from Captain Jacinto Roque Pérez (in San Luis, FL), translation published in Boyd, Smith, and Griffin (1999: 42-43); Giraud (1974: 44-47). We know that most of the houses were constructed by Canadians and by "craftsmen from La Rochelle" (Thomason 2001: 18).
 26. Oszuscik's sketches show houses constructed in *charpente* infilled with *bousillage*, or lime plaster, but without the almost essential wind braces at the corners. Philippe Oszuscik was the first scholar to write that the galleries of the houses of the Alabama Gulf Coast settlements were borrowed from the French West Indies (1988, 1992). The 1704 seminary sketch is reproduced in Higginbotham (1977: 500).
 27. François Le Maire was present at Old Mobile, and at New Mobile during the first years of its establishment. As an inhabitant of New Mobile, he resisted the movement of the capital to New Orleans in 1718-1720 (Marc de Villiers 1920: 180-81). This description was abstracted from C13A 4, f. 599 – C13C 2. f. 132-33, Le Maire, January 15, 1714. For a somewhat different translation, see Giraud (1974: 285), original in C13C. Pénigaut, MS français, 14613, f. 196. Cartes, B.N. 138, 10, 2.
 28. Le Maire, a Frenchman, and Sánchez Navarro de St. Denis, a Mexican, may have been using the word "gallery" to refer to wide extended eaves (*étras*, *avant toit*, or *larmiers*), but because full galleries appear on first generation Gulf Coast houses, and because they are compared to Spanish patios, they were both probably using "gallery" in its Atlantic Creole sense, as a broad open-air roof-covered space for daily living and relaxation (Edwards 2006: 237-67; 2008: 172-77).
 29. For more detail, see Mendez (1997) in the Prints and Photographs Reading Room, Madison Building LM337, Library of Congress, acquisition no. PR 13 CN 2016:118, no. 3.
 30. See Wilson (1987: 4-5, 83-84); Higginbotham (1977: 156); Falcon (1980: 17-18). Portions of one of the outbuildings depicted in this sketch are said to survive in the extant "Old Spanish Fort." Katz claims that this building is "one of the five surviving poteaux en terre houses in the U.S.—as of 1975" (2004: 20-21).
 31. Dumont de Montigny (1753: 80, 64-65). See also Dumont's description, abstracted by Le Page Du Pratz (1975 [1744]: 211-12).
 32. Compare the ground plans of Indigenous houses with those of Canadian *salle-et-chambre* houses described in surveys such as those commissioned for the Fortress of Louisbourg (Pouyez 1972: 30-32). One hip-roofed cabane measured 18 x 32 pieds, for a W to L ratio of 0.56. The mean W to L ratio of eight, two-room *charpente* houses, listed in this manuscript report was Width = 0.66 Length. The houses were dated 1719-1758. The W to L ratio of the excavated pre-expulsion Acadian house at Belleisle, Nova Scotia, was W = 0.65 L. House no. 1 measured 7.5 x 11.5 m. This house was apparently standing until 1755 (Christianson 1984: 21-23; Crépeau and Christianson 1995: 98-99).
 33. A lesson often forgotten during later restorations, in which it is assumed that all locally made bricks were soft.
 34. The sketch was redrawn from an original manuscript, now lost. It appeared in the Records of the American Catholic Historical Society of Philadelphia, June 1899 (vol. 10: 201); The French term *magasin* (storehouse) was, and still is, often spelled *magazin* in Louisiana French. In April of 1719, Pellerin described New Orleans: "There are in New Orleans three Canadian houses and a store [house] belonging to the Company, where we stopped." Arsenal, MSS. 4497, fol. 54, cited in Marc de Villiers (1920: 190).
 35. A second W.R. Shaw illustration shows a rather crude pavilion-roofed house with a gallery surrounding its two sides which face the streets—a small corner shop. The roof was covered with sheets of bark and the walls appear to be

- clapboarded with hand-sawn clapboards about a foot in width. Historic New Orleans Collection (HNOC), acquisition no. 1983.170.7.
36. For a history of this period of the original Bayou St. John settlement, see Freiberg (1980: 28-34).
37. New Orleans Notarial Archives, Acts of Pedro Pedesciaux, N.P., 1818. vol. 55, no. 462.
38. The Louisiana formula for *bousillage* was modified when the local Indigenous inhabitants living on the Mississippi River in the year 1700, taught Canadian missionary Paul du Ru, S.J., to mix Spanish Moss (*Tillandsia usneoides*) into the clay (Giraud 1974: 34-35). See also Marchand (1943; 1965); Blokker (2009: 20); Blokker and Knight (2013: 27-48).
39. Compare the descriptions in J.A. Breux (1901), published in French in Ditchy (1932), with the Canadian forms described in Cullen (1983: 494-516).

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