

IRISH-VERNACULAR ARCHITECTURE: AN ILLUSTRATION OF SEMIOTIC ANALYSIS

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Abstract

A methodological framework of vernacular architecture may be employed to study the interaction of culture and design. This is possible because culture and design are interwoven in such a way that studying one provides insights into aspects of the other. Houses employ powerful symbols, often representing a culture's social structure. While lack of documents often constrain the study of design, vernacular architecture may represent the historical nature of the cultural material being examined. Structural semiotic analysis provides a methodological framework for researching material culture through studying a sample of items, analyzing them in the context of supporting information, developing testable hypotheses, and proposing a supportable theory of the object's cultural meaning. The process is illustrated in this article using examples of vernacular architecture from 18th and 19th century Ireland.

Introduction

Dell Upton (1985) has categorized research on vernacular architecture into four types of studies: object-oriented, socially-oriented, culturally-oriented, and symbolically-oriented studies. Edwards (1986 and 1988), in his work on Louisiana's French vernacular architecture, provides an integrated, methodological approach to studying vernacular architecture using structural semiotic analysis. The author provides a clarification of Edward's methodology by illustrating its application to an example of Irish-vernacular architecture.

A major difficulty in the research of vernacular architecture is its dynamic nature. Constant change limits a researcher's ability to identify the cultural meaning embodied in material objects. Research is further hindered by the traditionally aristocratic bias of earlier historians. The problem of aristocratic bias is magnified because illiterate societies produce fewer written records. However, material objects provide cultural clues. Houses, in particular, provide a link for understanding key cultural meanings, and the symbolic nature of dwellings may represent the cultural image of social structure. James Duncan (1985) first classifies societies into cultural typologies and then proceeds to develop the cultural meanings manifested in their architecture. A researcher of vernacular architecture is challenged to study dwellings and "read" their cultural message. Seen in this way, material objects represent thought processes frozen in time. "Our home is the center of the world" is an example. In other cases the form of the house itself may provide a reflection of social structure (Duncan, 1985).

Methodology

Structural Semiotic Analysis

Structural semiotic analysis is a methodology which examines vernacular architecture within a cultural context. There are three phases of inquiry. The first is a detailed study of the "object category" which provides a catalog of traits or characteristics. The

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“object category” is often referred to as a genre. The second step is an analysis of the relationships between the elements or traits that identify the genre. And finally, cognitive patterns are developed through deductive reasoning and the anthropological technique of *assuming* the perspective of the group under study. A model is hypothesized based on the technological system; that is, the cultural superstructure of mythology, religion, ritual, and social order, plus the economic activities of the cultural group (Edwards, 1986).

Structural semiotic analysis provides a useful research model for studying a particular architectonic system. This technique evolved within the study of linguistics and links the organizational principles of a culture, the vernacular design process, and existing objects.

Vernacular Architecture

Vernacular is defined as a direct and unconscious translation of culture into physical form (Rapoport, 1969). Thus, vernacular architecture is the manifestation of culture in buildings. Research is limited by the informal, oral transmission of ideas and skills used in planning and constructing dwellings. Homes are frequently designed for the builder's own use. In the study of residential architecture, dwellings that meet this criteria are often limited to homes of common people. The elite can employ professional designers and builders and rely on written documents in the design process.

Identification of the Corpus and Characteristic Traits

Semiotic study begins with a clearly identified corpus or sample of the genre. It must be sizable enough to anticipate that its elements will saturate a complete system of resemblances and differences (Barthes, 1986). The corpus is selected to be as homogeneous as possible. Usually it is limited to a particular time frame, corresponds to a plateau of achievement within the state of the system, or is located within a particular geographic area.

A detailed study of the object is conducted. Traits common to the object category are cataloged. It is important at this level of analysis to limit the study to identification of existing traits. The goal is the listing of features which characterize the genre. Note that this methodology contrasts with the usual scientific approach which begins with a hypothesis and analyzes the cases for supporting evidence.

Relationship Among the Parts

Traits are organized to identify relationships among the parts. This organization provides a basis for a set of criteria classifying other objects and determining whether or not they are included in the genre under study. This stage of the analysis is particularly useful when attempting to trace cultural adaptation and diffusion. Correlation mapping of traits by location and time assist in identifying cultural change.

Interpretive Model of the Design Process

Emerging patterns are used to propose a cognitive model of the design process. The model development requires a systematic study that provides an interpretation of the “rules and grammar” of the design process (Barthes, 1986). This set of “rules and grammar” underlie the generative transformations of a genre. They determine the minimal elements required for classification and the ways the base module is expanded or transformed. This stage of analysis places the object within a particular cultural context and suggests key meanings underlying the vernacular design.

Data

Examples of Irish-vernacular dwellings from personal observation and published sources provide the medium for illustrating the structural semiotic analysis process. The study sample consists of ten floor plans and elevations from secondary sources in addition to descriptions from a dozen other sources. For an ideal analysis, these data sources would be supplemented by detailed field work conducted on actual dwellings or dwelling sites. In this study the sample was verified as representative based on photographs and personal observations conducted by the author in 1975. The selected examples are located primarily in rural areas of northeastern Ireland and include the

counties of Antrim, Cavan, Gallway, Tyrone, and Clare as well as Ulster, Northern Ireland. Personal observations were also made within this geographic area. Additional secondary sources were outside the observation area, but remained consistent with the basic design.

Durable houses in Ireland were not built until the 18th and 19th centuries (Aalen, 1978) and it is from this genre that the corpus of dwellings are selected. Information from surveys of Irish dwellings by Estyn Evans (1957 and 1973), Kevin Danaher (1975), and Philip Robinson (1979) are included. Philip Robinson's information contained data on the frequency of floor-plan dimensions reported in plantation surveys.

Findings

Key Existing Traits

Irish-vernacular houses all have a rectangular shape with the front facade on the long axis. Rooms span the full depth of the building and result in a floor plan void of passageways or halls. Dwelling expansion is limited to additions at either end. The one-room-deep plan remains even after expansion. The depth of these buildings is commonly between fifteen and thirty feet with the front facade being longer than the depth (Robinson, 1979). Rooms are formed across the entire depth of the building. The length of the dwelling's front facade will vary according to the number of rooms, but two or three rooms are common (Evans, 1957). A substantial portion of the rural poor, however, occupied single room dwellings throughout the 18th and 19th centuries (Gailey, 1976 and Evans, 1957).

Building materials include a minimal amount of wood. Walls are a low, solidly built mass of mineral material, between twelve and twenty-four inches thick. In southeastern Ireland the walls are constructed of mud. Stone with mortar is used in the north and northwest. Height is limited to one story by the nature of local building materials and construction techniques used.

There is an open hearth at floor level (Danaher, 1975). The hearth location is subject to some regional variation. It is centrally-placed or located on the end walls of the dwelling. Hearth and chimneys located at the corner, front, or rear facade indicate a non-vernacular building.

Roof construction is subject to some regional variations, but in all cases the roofing material is thatch. Archeological evidence indicates that the roof of early dwellings was supported on posts inside the dwelling as well as within the walls (Robinson, 1979). However, the 18th and 19th century vernacular dwellings support the roof at the wall and ridge beam.

Two secondary features of the vernacular dwelling, the *hollanwall* and the *cailleach*, are particular to a limited geographic region (Evans, 1980). The *hollanwall* is a jamb wall located between the door and the hearth. A peephole may be provided, and frequently the *hollanwall* is decorated with symbols to protect the hearth from evil.

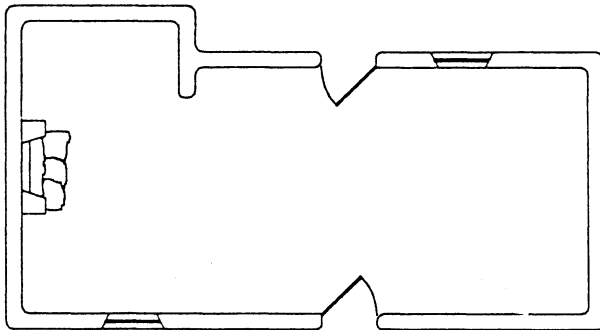


Figure 1. Plan showing outshot located near the hearth. Original illustration by Sue Mauldin, Interior Design Program Coordinator, University of Nebraska-Lincoln.

Nooks which extend out from the wall are called "outshots." They are similar to the contemporary "bump out." The *cailleach* is an outshot which projects from the wall at the chimney end of the kitchen as shown in Figure 1. This outshot is just large enough for a bed. Its dimensions are less than 4 meters by 3 meters (Gailey, 1976). Outshot houses are located in an area from Cushenden to southwest Galway and correspond to other northwest cultural distributions (Evans, 1957). Three outshot houses in County Tyrone are described by N.F. Branner (1983).

There is a striking lack of decorative features in the Irish-vernacular dwelling. Furniture is of a functional design. Stools and chairs have short legs so occupants may keep their heads low in the smoke-filled rooms. Sturdiness rather than elegance is stressed. This austerity is often attributed to the newness of the industry in Ireland since they were traditionally a pastoral, nomadic people (Evans, 1957).

Household objects tend to be utilitarian (Lynd, 1909). Examples include simple, three-legged iron pots located near the fire. Eating utensils such as bowls, plates, and mugs may be placed on a wall-mounted shelf or in an open-shelved unit void of decorative features.

Other decorative features are minimal and even during this century remain limited to religious pictures or family photographs (Glassie, 1982). The limited development of decorative arts contrasts with the extensive tradition of performing arts; storytelling, conversation, and dancing are highly developed vernacular art forms (MacLysaght, 1950). These artistic expressions are also evident by the manner in which everyday work is performed. Fields are orderly; thatch is well laid; buildings are whitewashed regularly; and bread is baked in perfectly-round, hot loaves with a cross on the top. Ornamental gardens are rare. Time and effort are focused on kitchen gardens and hay fields (Day, 1984).

Basic Traits of the Vernacular Dwelling

The vernacular Irish dwelling is structured around a central room referred to as a "keeping room." Food preparation and most family gatherings take place there. It has been hypothesized that this feature evolved from the central hearth in the round or oval houses of antiquity (Evans, 1957). While the hearth identifies the center of the activity, it is not necessarily the geographic center of the dwelling. In addition to this "keeping room," a smaller room called "the room" is often added. This space may serve as the master bedroom as well as the parlor. If there is only one hearth in the dwelling, "the room" is located behind the chimney wall. This results in a central chimney location. If there are two chimneys they will be located on the end walls of the dwelling. A small bedroom or storage room may be located off the central "keeping room" opposite "the room" (Evans, 1957).

Openings in the Irish house are few and relatively small. Most dwellings have one door placed asymmetrically on the front facade. Occasionally there are two doors, but one is used exclusively to regulate the hearth fire (Evans, 1957). Windows are square in shape. If glass is present, it will be set in four equal-sized panes. Windows are located only on the front and rear facades, not end walls.

The Phillips maps of the London Companies' settlements in county Londonderry show houses with two window openings, one on either side of a centrally-placed door (Robinson, 1979). The central door placement found in Ulster indicates an English-vernacular tradition rather than the Irish-vernacular tradition. Window openings on end walls also indicate an English rather than an Irish-vernacular design.

Model of the Vernacular Design

In a research project such as this that employs data from secondary sources, the development of a generative transformational analysis of building types is difficult. However, some general rules apply. The two-room module, noted by Branner (1983), forms the first generative transformation in Irish-vernacular architecture. The addition of the "small room" is the next stage in the generative transformational process. Succeeding additions to the house are linear so that the plan remains one-room-deep as shown in Figure 2. Modifications to a dwelling which do not represent a generative transformation

are apparent in the temporary quality of the materials used. For example, subdivisions of a space to provide privacy are formed with lightweight walls as shown in Figure 3. Even when modified, the rectangular form is only pierced by openings on the front and rear facades.

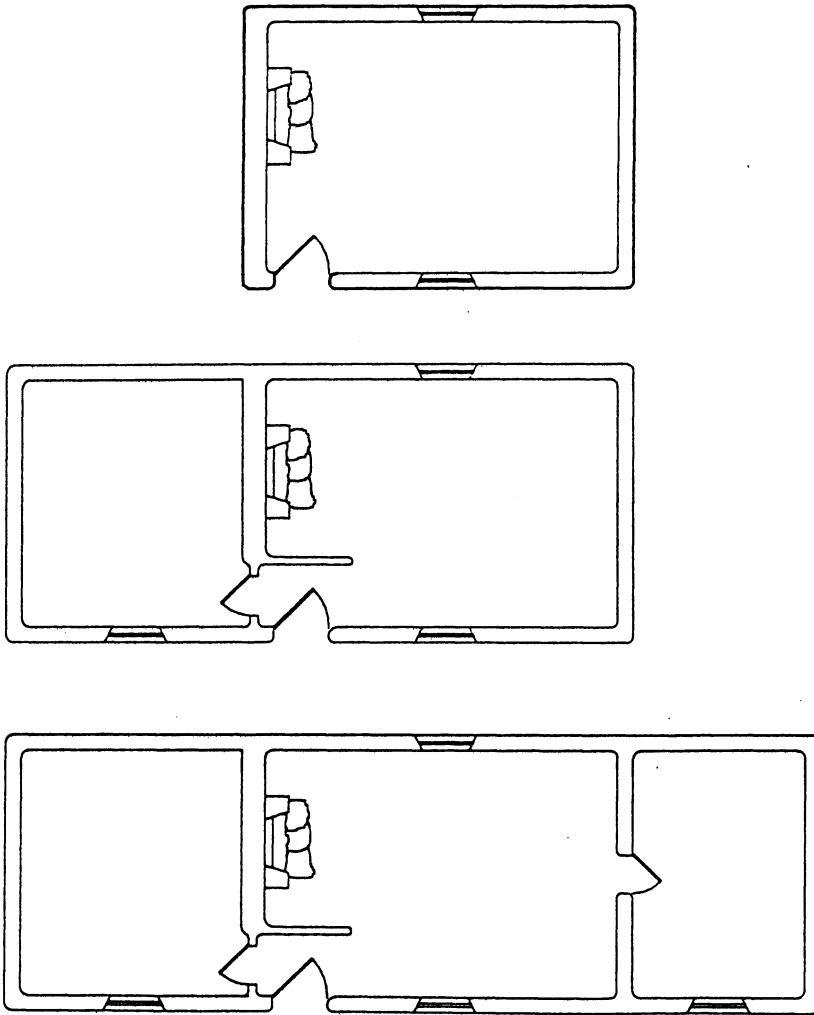


Figure 2. Expansion transformations illustrate the basic elements of the module with subsequent design modifications. Original illustration by Sue Mauldin.

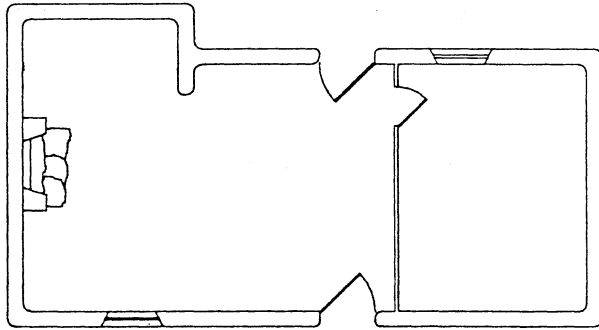


Figure 3. Subdivision of space does not necessarily indicate a generative transformation of the plan as the partition wall illustrates. Original illustration by Sue Mauldin.

Orientation of the dwelling on the site is inconsistent. However, a majority of dwellings are aligned east and west. This orientation reflects cultural superstitions rather than climatic concerns. Expansions were added to the east side of the building to avoid disturbing the fairy paths believed to be on the west side of the dwelling (Messenger, 1969).

The vernacular house is often interpreted as a model or analog of the social structure, religious belief, or cosmology of a society. Irish society is divided into two distinct classes. These are reflected in the separate architectural traditions of the vernacular dwelling and the great house. Religion dominates much of Irish culture. Ancient Celtic traditions are incorporated into Christian beliefs. Throughout the historic development of Irish architecture, the centrality of the hearth is maintained. The importance of its central location predates existing dwellings and is a reflection of the temporary, circular structures of nomadic societies. The turf fire, an ancient Celtic symbol of the soul, is the primary feature of peasant dwellings (Evans, 1957).

Regional variations in detail appear to result from the importation of the English-vernacular in the Ulster plantation. By appearances, variations are also due to the economic differences of pastoral and agricultural life-styles between the northwest and southeast. The availability of building materials resulted in different construction techniques, but the form of the buildings remained consistent.

Hypotheses

From this analysis, the following hypotheses are proposed for further classification of the genre for Irish-vernacular dwellings of the 18th and 19th centuries:

Hypothesis 1. The following traits will be present:

- a) a rectangular plan one-room-deep
- b) depth of the rooms will be less than 20'
- c) the interior plan will be void of hallways or passages
- d) wall construction materials will be of mud or stone
- e) roof material will be thatch and constructed so that the weight is supported directly on the exterior walls
- f) openings will be minimal and limited to the long axis of the dwelling
- g) decorative embellishment will be absent

Hypothesis 2. The basic module for the dwelling will consist of one rectangular room. Transformations will follow a pattern which includes the addition of a small "parlor-like" room located behind the hearth expanding the dwelling in a linear fashion.

Hypothesis 3. Subsequent expansion will result in a dwelling which retains a narrow rectangular form one-room-deep. Occasionally, interior subdivisions are made using walls of a very light construction, contrasting dramatically with the substantial exterior and primary interior walls. These subdivisions do not constitute a transformation of the design.

Conclusions

All vernacular architecture is constrained by available resources and environmental conditions. Since vernacular builders often face transportation constraints, the majority of building materials are local in origin. The design of a dwelling is further constrained by the cultural context within which it is built. Dwellings tend to be consistent with cultural values, often reflecting the occupants' status within the community. The builder is also constrained by limitations of economic resources, time, and skill. Thus, as a genre, vernacular dwellings reflect the society in which they are constructed (Aalen, 1978).

The uniformity of the Irish-vernacular dwelling reflects the universal limitations of the economy. Regional variation was introduced during the 18th and 19th centuries by the English development of plantation agriculture in the Ulster area. A marked contrast is found between the Irish-vernacular dwelling and the English-peasant dwelling. The English cottage, while constructed of similar materials, had a square floor plan and symmetrically placed openings.

In Ireland, an elite ruled over masses of peasant farmers. This stratification of the population resulted in the majority of dwellings being one- or two-room with minimal transformation of the basic vernacular design. The architectural styles of the landlords' great-houses followed English tradition and the evolution of European styles. They utilized imported plans, professional builders, and architects. In contrast, the common dwelling throughout the 18th and 19th centuries followed the vernacular design process and depended upon oral transmission of construction planning and execution.

The vernacular design of Irish dwellings results in the use of available materials, simple design, and an absence of embellishment. In this manner, the buildings accurately reflect the socioeconomic and cultural condition of the society which created them.

Structural Semiotic Analysis

Architecture is an arrangement of lines, planes, volumes, voids, colors, and textures. As such, a house can be seen simply as a work of art (Glassie, 1982). Yet in addition to being art, vernacular houses also serve as silent images of society. To develop insight into the meaning of the design within the cultural context, observation of the dwelling is supplemented by residual cultural elements and historical documents. A preliminary description is thus framed. It is one in which the image of Irish culture, evoked by vernacular architecture, is that of utilitarian functionalism. A common plan is evident in the vernacular dwellings. The building provides shelter and does not impinge on the life that goes on within and around it. The house is a means to other ends (Glassie, 1982).

Using a systematic analysis, the similarities of traits and patterns may emerge, and a researcher can then understand a design within its cultural context. It is this interaction of architecture and culture which enhances the depth of understanding. In the process of analyzing a building, one should not separate it from the culture which created it. Alternatively, it is the interaction of society's members which determine culture, thus the objects created by that specific society reflect the culture itself. Semiotic analysis provides a framework or approach that assists the researcher in keeping the symbolic relationship in focus. In addition, this approach can be used to study vernacular architecture for which there is little or no written historical record.

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