Stealing from Ourselves: Derivations of the Gable Roof Form in Contemporary Architectural Design

The iconography of the gable roof form is embedded deep in our psyche. From the classic kindergarten sketch to our informational signs and symbols, the idea of House or Home is usually represented with the form of a gable roof. Even in some third-world cultures where the indigenous housing looks nothing like western forms, our media culture has become so prolific that local children represent a "house" with the iconic gable house form.

CRAIG S. GRIFFEN
Philadelphia University

GABLE ROOF ICONOGRAPHY

To demonstrate the power of iconography in my own students' minds, I ask them to quickly sketch a picture of a common object to describe it to someone who does not speak the language. The results from these 21st century teenagers can be very surprising. For example, almost all draw a phone with a tabletop base, a corded dumbbell handset, and even a few with a rotary dial; this from young people who may only own a cell phone. But when I ask them to draw a house, right on cue they draw the kindergarten image of house with central doorway, punched, symmetrical double-hung windows, a chimney (smoke optional) and always a gable roof. When I then ask them to draw a modern house, after a few smiles they all draw some iconographic version of the Villa Savoy with ribbon windows and/or curtain walls in a horizontal-oriented mass, often raised on pilotis, and always a flat roof. I use this exercise to demonstrate to them the lasting power of symbols in our culture; that these architects-in-training who are taught modern architectural history still hold the same traditional imagery of *house* as the general public. This association, of the gable roof with traditional architecture and the flat roof with modern, is just as prevalent among architects who are reluctant to use gables in their designs. However, more recently I have noticed an increase in designs that use the gable roof but in derivations of the form that clearly distinguish it as something belonging to our current culture and time.

GABLE ROOF VS. FLAT ROOF

Estimates say about 98% of the housing design in this country is not done by traditional architecture firms. Staff architects and designers who work for developers produce the vast majority of single-family housing design and except for isolated examples of regional design, almost all of the designs incorporate a gable roof. The predominant style of these houses is a questionably mannered copy of the New England colonial home. There are other "styles" employed from various

1

Figure 1: Typical Suburban Development House.

Euro-centric cultures, such as French Chateau, Spanish Colonial or English Manor which may be more dominant in certain regions or on more expensive houses, but across the country the dominant style is still the faux colonial. Faux because the architectural vocabulary of the colonial is only used a surface pastiche to represent the image of the colonial house and its associated meanings. Beyond this imagery, there is very little colonial about the houses. The proportions of the bloated homes do not reflect the original, the façade does not usually represent the spaces behind (i.e. double-hung windows based on the proportion of a human conceal a garage for cars), and inoperable shutters would not cover extra-wide windows even if they could move. Even the ever-present gable roof is sometimes used solely as an applied symbol on parts of the house that do not require it. The excessive use of multiple gable roof forms reinforces the argument of its symbolic power to convey the meaning of home. When developers are questioned why their house styles are so traditional in appearance, they respond that their clients want the look of a "house" or "home" and the gable roof is necessary to complete the image.

So if the public has an overwhelming desire for houses with gable roofs, why do architects seem so adverse to employ them in their designs? I conducted a review of 10 years of Record Houses in Architectural Record magazine from 2000 to 2010 and found that 86% of the houses used flat roofs, 8% could be labeled low one-way sloped, 3% did not easily fit into a category (geometric, bowed, etc.) but only 3% used gable roofs. Even its latest 2013 issue of Record Houses summarizes the selections as a collection of "serenely spare spaces enclosed by rectilinear volumes…. [that] still attracts editors and clients who have long admired the exploration of craft, technique and form-making integral to Modernism".[1] So the fascination among architects with flat roof homes appears strong as ever. Similarly, a review of single-family housing design competitions over the last decade revealed an abundance of flat-roof elongated boxes (sometimes publicly derided as 'trailer home aesthetic') and a dearth of gable roof homes even though the projects were often located in neighborhoods with a strong historic context of only gable roof houses. When architects are asked why they don't use gable roofs, a common response is they don't want to be "historical" or "traditional". This attitude can trace its beginnings back to the start of the modern movement in the early 20th century. The most influential architects of that movement, including Mies Van der Rohe, Walter Gropius and Le Corbusier, sang the praises of the flat roof as part of a necessary break from historical form. In 1920's Germany there was a strong public debate over the appearance of the new International Style architecture. Gropius and his colleagues saw the flat roof as an honest expression of construction and pure form that had "spiritual" significance. However the majority of the German public and conservative architects saw the flat roof as an attack on traditional culture and craftsmanship. Members of the trade guilds backed up this sentiment with the roofers being the most active group. In 1926 they devoted an entire issue of their trade magazine to the virtues of the sloped roof that they called "the German roof". "Under the heading "Flat Roofs; Flat Heads", the Roofers Newsletter attacked the "swinishness" of using flat roofs in housing developments and accused radical architects of disturbing the German landscape with a "foreign" type of building."[2]

Corbusier's greatly influential 5 points of architecture does not specifically call for a flat roof but one of the five was the Roof Garden which can only be achieved with such a form.[3] Even after the roof garden lost influence on building design, the flat roof continued as an essential element of modern design, probably as

much as an economical means of construction as a pedagogical belief. The influence of the modern masters was so dominant that few architects questioned the status quo; a flat roof is modern and a gable roof is historic, end of story. It was not until the 1960's, and designs like Robert Venturi's house for his mother completed in 1964, that architects started to question the emperor's new clothes. The Vanna Venturi House came as a slap across the face that infuriated some architects and served as a wakeup call to others who had become "bored by the blandness of what they called "orthodox modern architecture".[4] Venturi's use of the all-encompassing gable facade avoided the orthodox modern cliché of the glass box. "However, this was no mere replica of the standard suburban image, since the allusions to the humble American home were combined with witty and ambiguous quotations from Le Corbusier and Palladio. The façade had a deliberately dead-pan character which disguised the welter of internal complexities and contradictions of the plan".[5]

Through the next 2 decades the use of historic vocabulary gained increasing support from architects until the peak of the Post-Modern movement in the 1980's. Gable roof forms were tenuously accepted by architects until the mid 80's when, as can happen in art movements, the pendulum swung hard the opposite direction. The use of historic styles was criticized (many times justifiably) as surface deep, Disneyland pastiche due in part to the architect's lack of education in the principles of classical building design. Designers splintered into camps of thought that either still retained the classical traditions, found comfort in the rationalism of technology or rejected the entire notion for deconstructivist theory. Gable roofs returned to their status of anti-modern forms with exceptions for those that fell under the label of Critical Regionalism. These were more acceptable since there were viewed as an integral part of a local cultural tradition that could be maintained but reinterpreted and expanded upon at the same time.

RATIONALIZING THE GABLE ROOF

Defining the gable roof as only a decorative element misses the whole point of its origin. The sloped roof has a proven record for thousands of years as a practical method for removing rain and snow from a building to keep the occupants warm and dry. Only in arid climates do you see a predominance of the flat roof. The slope makes great use of gravity to shed water quickly so it does not have time to sit and find ways into the building; a notorious problem with flat roofs. This allows for the use of a variety of smaller units of roofing material (i.e. shingles) that can be easily installed by one person; an advantage over flat roofs that must fight against gravity and therefore require continuous membranes that may contain toxic chemicals. The double-sloped gable form also provides an efficient structural use of building material used for spanning space. The inherent triangular shape provides structural stability and allows for deep, efficient trusses that can be made out of smaller lighter members in a great variety of combinations. These are often lighter and easier to install than the heavy beams required for transferring gravity loads sideways through a flat roof. There are also environmental advantages of the gable roof over the flat since overhangs can provide built-in sustainable shading from the unwanted high-angled summer southern sun. Considering that principles of Modern architecture call for an honest expression of materials and that structure should reveal its true purpose, it seems ironic that the visual, symbolic meaning of the gable roof overshadowed its functional attributes.

But gable roof imagery has become closely linked to style which architects have been trained to avoid. Witold Rybczynski in his introduction to "The Look of Architecture" writes:

> *"Architects don't like to talk about style. Ask an architect what style he works in and you are likely to be met with a pained expression or silence. Press further and you will provoke an exasperated denial: "Serious architecture has nothing to do with style". While a writer or painter can be applauded for stylistic ability, calling an architect a stylist is considered faint praise."*[6]

NEW APPROACHES TO THE GABLE ROOF

The popularity of Post-modernism, though short lived, revealed a desire by some architects to become more expressive in the design of their roof forms. Yet the deeply imbedded principles of modernism were too strong and tried to reel in these "wayward children" who strayed a bit too far. Many thought post-modern design had become so shallow in its appropriation of history that it was discarded, while others did not see the need to "throw the baby out with the bathwater". To them elements like the gable roof when honestly expressed as a three-dimensional functional form instead of as an applied symbol, could be a useful tool beyond the aforementioned sheltering and structural benefits. It could be used to relate to existing contexts of traditional building forms. It could provide symbolic meaning to signify home. Yet with all these justifiable reasons, many architects still seem to feel a sense of guilt when they consider using a gable form that conflicts with design principles they have been rigorously taught. To counteract this feeling, I have observed several techniques architects have adopted to modify the basic gable roof to make it distinct from the traditional form. By creating these derivations, I suggest the architect is "modernizing" the form, thereby making it more acceptable to their own conscience and/or peer's. Through my research of gable roof forms design in the past decade, I have identified the 3 general typologies or approaches listed below that architects have developed to negotiate the precarious gap between reproducing the historic gable roof form and modern design.

2

Figure 2: Monopoly House Examples by NORD Architecture and Rick Joy.

MONOPOLY HOUSE

This first of the three types strips down the form of the traditional house to a minimal iconographic image as found in the house-shaped game piece in a Monopoly set. The building type is typically monochromatic with both the walls and roof of the same or similar color and material so the form reads more like a

solid mass than a series of connected planes. Detail is kept to a minimum, which makes the scale harder to read, and reinforces the abstract reading of building as symbol. To characterize this model, the roof does not overhang the walls below but meets them at a sharp corner to reinforce the notion of building as one piece. Instead or using traditional vertical oriented windows typically associated with this form, fenestration is kept to a minimum and trim, lintels and sills are absent in favor of the clean planes of unbroken walls. To compensate the interior is often lit from above by skylights. By making the building monolithic, the roof form is de-emphasized as a separate element and is seen as an irremovable, integral part of the whole.

3

PARTY ABOVE; BUSINESS BELOW

In this type, the traditional gable roof form is placed on top of a modern vocabulary base. Here the roof is less integrated with the overall form giving it a more symbolic role like a person wearing a whimsical hat with a tailored suit. Take off the gable form and the building would still read as a straightforward modern building. The base reflects and respects the rules of modern architecture that the architect has been taught, sometimes making the contrasting roof feels like a guilty pleasure.

The architect may use several techniques to identify the base as modern even if using "traditional" building materials. Fenestration avoids traditional double-hung punched windows in favor of large expanses of glass and square or horizontal shaped punched openings. The smaller window openings and roofs are often arranged non-symmetrically to contrast the rigid symmetry of the colonial house and reflect the modern practice of representing the space and structure behind. Building corners may be cut-away to deny the traditional solid, structural 4-corner form, a method embraced by the free-flowing modern design attitude towards space. In works such as David Salmela's Sauna House, the gable "slides" out from the base and its ends are glazed instead of the traditional solid, identifying it clearly as a modern building. Through this approach, the architect may take advantage of the expressive language of the gable form while still feel comfortable that they are remaining ethically true to their principles.

TWISTED TRADITION

In this last type, geometrical manipulation plays the major role in the "modernizing" of a traditional house form. Following some of the tenets of Kenneth Frampton's theory of Critical Regionalism, the architects seek to respect the local contextual forms and materials while adapting to contemporary living needs to take advantage of the potential of modern design. Many houses of this type

Figure 3: Party Above; Business Below Examples by David Salmela and architectsAlliance.

4

employ vernacular elements like double-hung windows, overhanging roofs eaves and so-called "traditional" building materials like wood, brick, stone and standing seam metal roofs. But now the form is pushed, pulled, skewed and twisted off of the orthogonal, an irrational move rarely found in traditional buildings, to clearly identify the structure as contemporary. Walls may be cut at an angle and roof ridges may be oriented non-parallel to the walls below to create distorted geometries that sometimes meet in quirky junctions. Manipulation of the traditional form, made easy by computer generated design, allows the designer to play with the form to quickly test different massings. In the case of the Vashon Island House by Domestic Architecture, beyond the use or vertical wood siding and double-hung window forms, a large section of the overall massing was removed with the remaining portion above supported on steel columns. This move clearly identifies the house as modern as this structural feat would not be possible, much less make sense, with older colonial house construction techniques.

COMBINED TYPOLOGIES

While each of the three typologies above has a distinct identity, I discovered many overlaps in which houses employed 2 or more. The Dune House in Suffolk, England by Jarmund / Vigsnæs Architects is a good case study for this. The upper level of the house has several aspects of the Monopoly House. The entire level is wrapped in a monochromatic material whose tone and color is similar to that of the roof material. Also the lack of roof overhang creates a feeing of a solid mass. As in the Twisted Tradition type, the roof form itself makes reference to the local housing styles as the multiple gables ends relate to the neighboring houses (as seen in the background) but the ridge lines are skewed well off the orthogonal. The most obvious connection is to the Party Above; Business Below type. Here the upper level of the house is an expressive explosion of skewed roof angles and asymmetrical windows. But the base of the house is a stunning contrast, at least stylistically. The first floor plan is a comparatively restrained, ordered, Miesian open layout almost completely surrounded by floor to ceiling glass walls. In clear contrast, the upper level plan reveals the multiple gables on the skewed grid with few parallel walls. The program of the house as a seaside vacation mini-hotel drove this distinction. Private rooms upstairs "are encased in the top floor's wild gables, an exaggerated twist on the traditional holiday homes nearby"[7] while public space on the first floor was kept open as possible.

CONCLUSION

These houses demonstrate how architects can use tools of geometry, massing, structure, material selection and detailing to create designs that relates to

Figure 4: Twisted Tradition Examples by David Salmela and Domestic Architecture.

5

their context with a traditional roof form while still identifying it with our current time. While I have concentrated on single-family residential because of the strong connection of the gable roof to the image of *house*, this theory can also apply to large-scale buildings such as civic structures where it may be used as a means to connect to a historic context. One example is the new City Hall in Ghent, Belgium, by Robbrecht en Daem Architecten, which uses characteristics of all 3 typologies for a double gabled design that makes a strong connection to the historic fabric of the city center while remaining clearly identifiable as a modern building. The steep double peaks of the upper walls are clad in blank planes of wood and metal siding devoid of punched windows openings as in the surrounding historic buildings. On the lower half the traditional walls are completely removed, save for massive corner columns, to open the structure to the public realm. In this way the building recalls the proportions, scale and geometry of its neighbors while remaining clearly identifiable as a contemporary design.

Regardless of scale or function, the idea that such a long-proven and effective form of roof construction as the gable would oblige architects to qualify and adapt their designs, is revealing of the power of Modern architectural theory and criticism. Whether or not designers need to feel a sense of guilt about the use of gable roofs forms may always be a personal decision. But these examples demonstrate creative techniques employed by architects to negotiate the touchy symbolism of the gable roof and to take advantage of its inherent practical and symbolic qualities. Through clever means of manipulating gable forms, these architects avoid the accusation of copying images from the past while, in effect, 'stealing back' our own construction vocabulary that has long been part of architectural history.

Figure 5: Dune House and Ghent City Hall.

ENDNOTES

1. Architectural Record, Record Houses 2013, McGraw Hill, April 2013.
2. Lane, Barbara Miller; *Architecture and Politics in Germany, 1918-1945*; Harvard University Press, Cambridge Mass. 1985.
3. Le Corbusier, *Towards a New Architecture*; Dover Publications, 1986.
4. Curtis, William JR; *Modern Architecture Since 1900*; Phaidon Press Limited, Oxford; 1982.
5. Curtis.
6. Rybczynski, Witold; *The Look of Architecture*; Oxford University Press; 2001.
7. Architectural Record; House of the Month, McGraw Hill, June 2012.