



# Expressive Roofs

by Gordon Tully

The eaves and rakes (gable-end roof overhangs) of a house can be intensely expressive design features. But expressive of what? Answering such questions is the task of a lifetime. Two difficulties thwart easy answers.

First, it is not possible to associate a particular feature with a particular expression. If you could, there would be plenty of “cookbooks” telling you, for example, the exact effect of various overhang designs. The meaning of a detail depends on its context. Look for example at Figure 1 (next page), a bungalow-style home near my house. It has a roof which is basically a folded plate set on top of the walls. The effect is clearly sober and earthbound, pressing the house down with evidence of its weight.

This might lead you to predict that flat plate roofs with overhangs always express weightiness. But thin the plate down to its minimum possible thickness, and the roof looks as if it will blow off in the next wind, like a hat, or a head of hair, a tent or a temporary thatch of branches — anything but sober and weighty. And set the roof on a three-story building: It will no longer look so sober (Figure 2, next page).

The second reason we can't work up simple formulas is that the “expression” we are seeking is not a bunch of words, like “grave” or “light” or “sober” or “delicate,” but something visual and tactile that defies expression in words. That is why artists (architects are artists, too) often resort to poetic language to explain the intent of their work.

Cookbooks may be impossible, but we can make some progress toward understanding how to make building features expressive, through examples.

## Manipulating a Simple Idea

Walls and roofs are doing different visual things, because they have different relationships to gravity: Walls push up against the force of gravity while roofs press down on the walls.

If you visually express this simple idea, you are in sync with what is going on physically, and this gives you a leg up in your detailing. So it is with our bungalow, which expresses a realistic idea: The roof is so heavy that it is all the walls can do to hold it up. The low eaves express that the roof is almost too heavy to lift, and the long overhangs dramatize the effect, maybe to the point of melodrama, by making the roof appear even bigger than it is.

Now simple is not always better. We have remarkable abilities to hold subtle contrasts in mind, and we enjoy the mental games required to balance conflicting images. So you can start playing around with this simple idea, seeing how far you can push it before you lose the basic point.

First, thin up the big roof plate by exposing the rafters. Now you begin to wonder not only whether the roof is really as heavy as it looks, but whether there is enough stuff there to hold up those overhangs (the roof may well be too weak physically without brackets).

Visually, brackets and exposed rafters say a bunch of contradictory things. They are needed because there is a lot of weight to hold up. However, the roof is lighter because he have eliminated its mass and replaced it with a skeleton. The skeletal, bracketed roof is more like the way animals and plants are made and less like a rock, so we can say with justification that it is more “organic.”

## A Drama of Contrasts

What if we steepen the pitch? Much of the gravity of the bungalow design depends on the low pitch: The roof seems so hard to lift that we could only get it up a little. The gable under a steep roof has a lot more energy, “achieving” more by elevating the ridge much higher.

The house in Figure 3 was designed by Prairie school architect George Elmslee in imitation of a Cape Cod cot-



**Figure 1.** In a classic "bungalow" style house, the low-pitched roof presses down on the walls, its weight exaggerated by the brackets, which are like branches holding up the canopy.



**Figure 2.** The same roof as the bungalow's, only lightly detailed, creates a tentlike effect: It seems to be about to blow away (top). Raise the same roof to the top of a three-story building and the upward thrust of the walls makes the roof seem even lighter (bottom).



**Figure 3.** In this seaside "Cape" by George Elmslee, the huge 12/12 roof seems to pull toward the ground, while the tall gable end thrusts powerfully upward. The drama created is very different from the neutral balance of a true Cape Cod house, with its delicate eaves.

simple mass (befitting the simple Cape Cod imagery). What is the effect?

To my eye, the steep, weighty roof seems to slide down to the ground rather than just press down, while the walls push strongly upward. The effect is rather like a tent, where the roof stretches toward the ground against the thrust of the support poles. Notice how the dormers reinforce this image, by appearing to erupt through the roof, echoing the primary expression by the upward thrust of the dormer walls and the stretching-down weight of the dormer roof.

What would happen if we added brackets? Aside from the practical effect (the roof as built really needs them, even though the house has survived a number of hurricanes), you would lose some of the drama, but gain some ambiguity and complexity. Nice as the existing house is, it is a little too simple, too much like a big architectural mode.

On the other hand, exposing the rafters would be a big mistake, because the thrust of this steep roof is diagonal, along its length. In the true bungalow, the weight of the low-pitched roof presses down on its skeletal rafters and brackets, which visually explains why they are there. Here exposed rafters would destroy the apparent strength of the roof.

## Houses Are People, Too

In these examples, the expressiveness of the design involves a contest between heavy roof and strong walls.

When we pay attention to this drama and to the personalities of the various elements in the design, we begin to get somewhere in our search for expression. When a house becomes simply a habitable box, it loses any personality and with it, any hint of expressiveness. ■

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tage, but what a difference! The gable is over 40 feet high, and the roof over-

hang measures 7 feet from the corner. There are no brackets, and the roof is a