

# EFFICIENCY vs EFFECTIVENESS

BY TOM BENDER

*The following timeless thoughts were excerpted from a lecture given by Tom Bender at Fairview Conference 1979, which focused on energy-efficient housing.*

Sitting here for two days, I've gotten a sense of perfect energy-conserving architecture. First of all, it's spherical to have a minimum surface for heat loss. It's underground to keep it from the extremes of the climate. It's good, solid construction, with no windows to lose heat. It's small and cozy, with little wasted space. It sounds remarkably like a coffin.

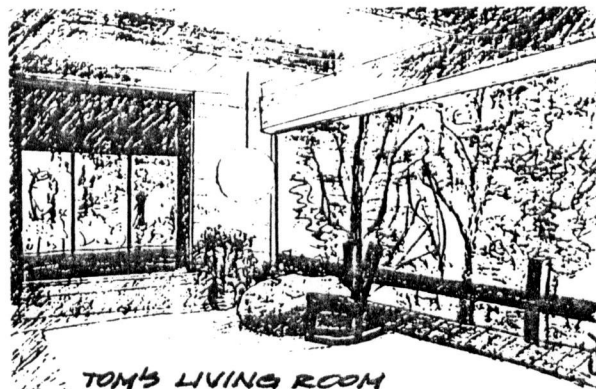
In focusing strongly on trying to get new things going—whether it's energy conservation or solar architecture (or something else)—we need to keep in perspective that there is a whole realm of other things we need to make a humane and harmonious world.

My family just finished building our own house after many, many years of dreaming. It's not outstanding as a solar house, and I'd like to talk about why it is not. Our society's first reaction to discovering that we were, in effect, heating our houses with the windows open, was to close the windows—to insulate like crazy and try to keep the heat in. Energy conservation was the key word. Our second response was to look for a better furnace, so we turned to the sun. A third response—which our house represents—is to turn off the furnace, open the windows, and as much as possible, quit living cut off from the rest of the world. We tried to minimize the amount of shelter—to provide only what we needed. The house is located on the Oregon coast. It's a seemingly benign environment, but we have about 80 inches of rain a year, a lot of fog, and 100-mile-per-hour winds in the winter.

Having spent a fair amount of time in Japan, Persia, and other parts of the world which have various living and building traditions, I have felt the same frustration that earlier Western travelers often mentioned when coming back from these areas. After experiencing other living patterns, going into a conventional European or American house leaves you incredibly stifled, cut off from the movement of air, from the seasons, from the natural rhythms of the sun and moon, day and night, storm and calm—everything that goes on in the world about us and which is a part of life.

For instance, it's not an uncommon sight in Japan in the winter to see people wrapped up in a padded kimono, sitting on the veranda of their houses in the sunshine, watching the snow fall around them. The people keep

themselves warm, not the buildings. They saved energy and saved a vital linkage between themselves and the rest of the natural world. I have found the same thing camping, traveling in various wilderness regions. It is really powerful and wonderful to be part of the "outside world," an experience that I hate to be cut off from.



My family is trying to evolve a home that can maintain these linkages as much as weather conditions at various times permit. The south wall opens up almost entirely, turning the inside of the house into a porch open to the outside. The overhangs and sun penetration are designed so that you are drawn to the edges between the inside and the outside—close to and not something very distinct from the outside.

We're trying to maintain contact with the rhythms of the day, orienting different parts of the house to the sun during the time they are used, not just designing for the technical efficiency of plumbing and mechanical systems. The sleeping space, which is basically just a soft room at the edge of the living area, is oriented to the east for moonrise and sunrise; the living space is oriented to the south for the mid-day sun; the eating space is oriented to the west for sunset and sitting around in the evening. Try to think of other things that need to be brought together in a house beyond the technical considerations of closing sewage loops and getting away from use of non-renewable energies.

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