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Symbol Making

Charles Baldwin, a retired environmental-health engineer, explains his role in developing the biohazard symbol, which is now showing up everywhere.

I was working with the Dow Chemical company at the time, in 1966, developing containment systems for the Cancer Institute at the National Institutes of Health. And it became obvious to us that there were a lot of different so-called warning symbols in the various laboratories that we visited, but there was no standardization. We saw a need for this kind of a symbol and proceeded to develop some symbols with the help of the Dow marketing people -- the package-design department, I think it was called. The only parameters that I set down for them to noodle through were, it had to be unique and something that would be striking enough that it would be remembered. We wanted something that was memorable but meaningless, so we could educate people as to what it means.

"We tested the sample symbols across the country -- the marketing department had survey groups to test different labels for Dow products. There were half a dozen of our original symbols in this survey of 24 different symbols. The rest were recognizable, like the peanut man for Planter's peanuts, the Texaco star, the Shell Oil symbol, the Red Cross and the swastika. They were asked to look at them and then asked to guess at what each one meant. The biohazard symbol got the fewest guesses. Then we went back one week later to the same set of people and the same set of symbols, plus 36 more common ones, and asked them which of these did they remember the best. And they picked out the biohazard symbol.

"The color was blaze orange, one of the colors chosen in Arctic exploration as being the most visible under the most conditions. It was three-sided because if it were on a box containing biohazardous material and the box was moved around, transported, it might wind up in different positions. Another thing -- we needed something that was easily stenciled.

"The next major step was presenting it to the scientific community. I did that by writing a paper in the journal Science. The next was to get the authorization from the various people that would be using it. As soon as it was adopted by the Centers for Disease Control, the Occupational Safety and Health Administration and the National Institutes of Health, that's pretty good acceptance. And that was it.

"Every time I go into the doctor's office or the dentist's office or a hospital anywhere, I've always got my eye out for it. Naturally, I'm proud of the fact that I was able to come up with something, or direct a program that evolved into this symbol that's so widely recognized, so helpful. But I ran into a peculiar situation one time a couple years ago when someone was putting on a seminar on biohazards. As gifts for the participants, he devised a beautiful tie with little biohazard symbols all over it. This got me upset, and I sent him kind of a nasty letter saying this symbol was not designed to be used sartorially."

- As told to John Cook

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