

LIGHT VISION

RODERICK QUIN TRANSFORMS SURFACES INTO 3-D MARVELS

BY BRIAN LYNCH

PHOTOS FIONA GARDEN



It's interesting how, as we make the future, we remake the past," says Vancouver artist and designer Roderick Quin during a recent tour of his East Van studio. Given that Quin has spent 20 years in the local film industry, as a sculptor on major productions such as *The Crow*, *Mission to Mars*, *The Chronicles of Riddick*, and *X-Men II*, he might easily be talking about the nature of filmmaking. After all, movies provide a modern, highly technical medium for the timeless art of storytelling.

In fact, Quin is referring to the Ombrae System, a hugely versatile method he's developed for treating the surface of virtually any material—concrete, stone, plastic, metal, glass, even textile—so that it reflects startlingly sharp, three-dimensional images and patterns, with results that could transform the built environment at all levels, from interior walls to the façades of skyscrapers. Ombrae, Quin says, is a cutting-edge counterpart to the ancient practice of carving bas-reliefs and hieroglyphs. And although the technology used to form the visuals is rooted in the 21st century, the principles on which the final products work are as fundamental as light itself.

Ombrae images are made up of what Quin calls "optical tiles": bevelled, cylindrical forms that are either moulded, machined, or simply embedded, peg-like, into the surface of a given material. All of these protrusions are identical in shape. What allows each of them to reflect a particular, precisely determined amount of light, and thus to act as a "pixel" in the overall image—whether that image depicts an abstract

motif or the Mona Lisa, as in the striking reproduction on the wall of Quin's studio—is the orientation of its angled surface toward a light source.

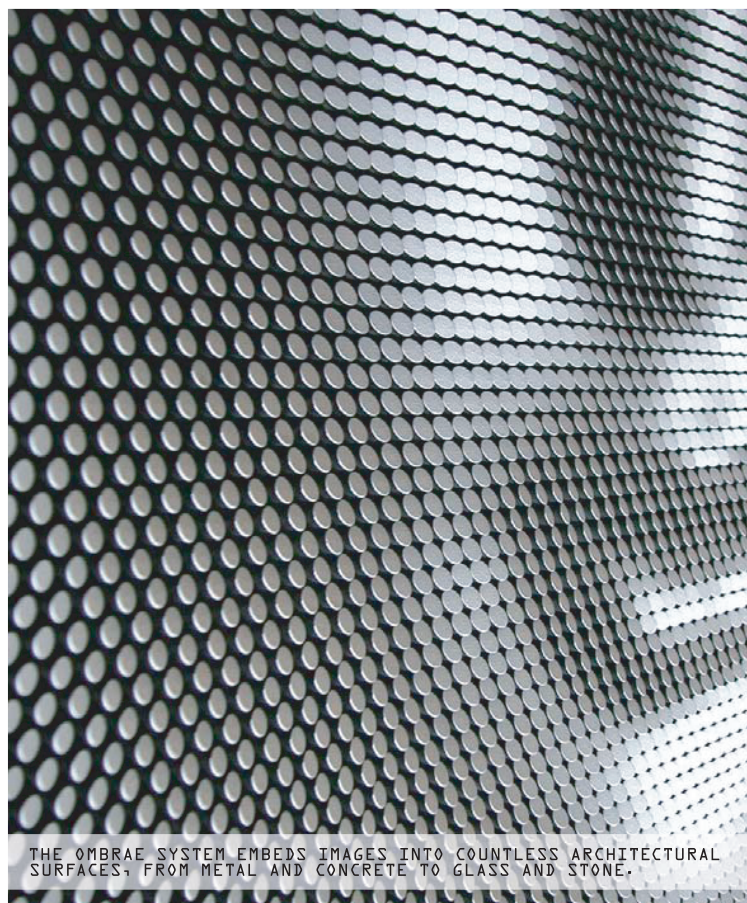
Quin began working on the concept as a student of sculpture at Emily Carr and UBC in the late '80s and early '90s, while exploring his fascination with ancient architecture, sacred sites, and old systems of measurement such as sundials and astrolabes. "I was interested in scientific instrumentation...in how it looked and worked, and what physics were going on behind it, and why scientists chose to make certain instruments the way they did," he explains. "I was also very interested in digital technology, which led me to the idea of making an image with pixels in a sculptural way. Being a sculptor, how would I make a digital image that's not being projected?"

The goal was an "active surface" with which he could create highly predictable interactions with light, "much like the ancients did with their sundials," he says. And, as Quin points out, that's essentially what an Ombrae image is: a gridded mosaic of small, precisely aligned sundials (in the case of the Mona Lisa sample, 8,400 of them), each reflecting its own finely calibrated mix of light and shadow. The complexity of the calculations involved is obviously staggering. And for this reason, Quin's initial idea had to wait several years for the availability of computerized 3-D modelling

programs that were both powerful and affordable enough to handle the job.

These developments, along with advancements in computer-driven machining and mould-making technology, have allowed Quin and his film-industry partners to build a suite of software that can convert virtually any image into a pattern of these three-dimensional pixel-tiles. The tiles themselves can be manufactured on a wide range of scales, from filaments to bricks, so that Ombrae images can be embedded in surfaces ranging from small household items to buildings. Quin has even come up with variants that can be moulded into glass or punched into metal sheets as a series of holes like half-opened tin-can lids, creating an array of architectural possibilities for patterning light or controlling airflow. (For a clearer idea of the full range of possibilities, check out www.qmaas.com.)

Because the working principles are elemental, the flexibility of the Ombrae concept is enormous. That's why it's currently attracting the attention not only of architects and designers but also of automobile, luggage, and shoe manufacturers. "People get intrigued when you describe it to them in words, because it has all these poetic and ironic qualities," Quin said. "And then, when they see it, everything becomes clear in a nano-second. Not the technology behind it, maybe, but the visual experience....It's something your eyes can touch." ♦



THE OMBRAE SYSTEM EMBEDS IMAGES INTO COUNTLESS ARCHITECTURAL SURFACES, FROM METAL AND CONCRETE TO GLASS AND STONE.