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ART REVIEW

Excursions in a Digitally Fabricated Landscape

‘Out of Hand,’ a Survey of Computer-Assisted Art

Philip Greenberg for The New York Times

Polyethylene sculptures by Roxy Paine are included in "Out of Hand," at the Museum of Arts and Design.

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If you haven’t quite wrapped your head around the concept of 3-D printing, or haven’t yet had a digital scanner wrap itself around you, now you can do both in “Out of Hand: Materializing the Postdigital,” at the Museum of Arts and Design. The technologies in this survey of computer-assisted art, architecture and design may not be entirely new; the Museum of Modern Art’s 2008 exhibition “Design and the Elastic Mind” covered much the same territory and included some of the same artists and projects. But these tools are becoming more pervasive in both art and life, making this a good time for the uninitiated to get up to speed.

"Out of Hand," organized by Ronald T. Labaco, a curator at the museum, is, in any case, an ambitious undertaking for this institution, long associated with analog craftwork. The show looks at art made since 2005 and fills nearly three floors, including many irresistible interactive projects. And while visionary design shows like that of MoMA are entrancing, there's something to be said for a more down-to-earth, production-focused exhibition.

"The digital revolution that spawned the computer age is over," the introductory text proclaims. "Forms that were once extremely difficult or even impossible to make are now easily realized."

Reinforcing that point is a nude male figure with melty, distorted contours, a sculpture that looks more like a mirage. It's a self-portrait by the artist Richard Dupont, who had his entire body scanned and ran the data through digital modeling programs.

That piece is typical of the works here in that it's made with computer assistance at almost every stage, from design right through fabrication processes, like digital milling and rapid prototyping. (For a full explanation of these highly technical terms, it's best to consult the glossary in the catalog.) The goal is a kind of seamless, accelerated transition from idea to material form; a pendant lamp by Front Design, for instance, looks sketched in space, as if it had been made by Harold and his purple crayon.

The appeal of these tools is such that even contemporary artists long associated with more traditional mediums have been playing around with the computer. One of the show's surprises is a pair of sculptures by Frank Stella, spiky clusters of lacquered resin and stainless steel that look a bit like John Chamberlain's crushed-metal sculptures without the car connection. Elsewhere, Roxy Paine's programmed "sculpture-making machine" produces globs of maroon polyethylene; they bear an almost sacrilegious likeness to the exquisitely hand-formed and hand-painted ceramics of Ken Price.

But "Out of Hand" is mainly a design show, and one with an aesthetic point to make. Instead of merely showcasing recent technology, it defines a distinct "postdigital" style: a sort of algorithmic baroque, with dizzying folds further complicated by perforated surfaces. You can see it in a racing shoe by Ben Shaffer, for Nike; a 3-D printed dress by Michael Schmidt; and the fabulous undulating canopy, Metropol Parasol, designed by J. Mayer H. Architects for the Plaza de la Encarnación in Seville, Spain. Other popular patterns include fractals (patterns that look the same when scaled up or down), as in

Wertel Oberfell and Matthias Bärr's branched table, and crystals , as in Aranda/Lasch's ingenious proposal "20 Bridges for Central Park."

It's important to realize that not all of these forms are pure hallmarks of the digital age. Anyone who has studied Islamic architecture and design, for instance, knows that patterns derived from advanced mathematics have been with us for centuries. Ideally, the show would have provided some more historical context.

For that matter, some projects on view could, technically, be manufactured with older methods. In most cases, though, that would be highly impractical. Consider, for instance, Michael Hansmeyer's dazzling "Subdivided Column": It looks like a monolith, but is actually a stack of 2,700 sheets of laser-cut one-millimeter board, based on a 3-D model with six million faces.

One of the hardest-to-grasp aspects of 3-D printing (and the other technologies assessed in the exhibition) is that it's not just about developing new forms; it's about tweaking, refining and hybridizing existing ones. "Out of Hand" stresses this with projects like Greg Lynn's evolving flatware, with its multiplying fork tines, and Barry X Ball's slightly off version of Umberto Boccioni's 1913 Futurist sculpture "Unique Forms of Continuity in Space." As Mr. Lynn writes in the catalog, "design objects now address their users with bespoke form and contour."

"Out of Hand," for the most part, limits itself to artistic applications of the postdigital, which are sometimes quite silly (a plasticky 3-D printed bikini, a sapphire-and-diamond "fractal" necklace). It's generally not the place to find life-saving medical devices, or to explore controversial issues like the printing of guns.

However, a few projects stand out for their broader social aspirations. One is "Contour Crafting," an automated-construction technology developed by Behrokh Khoshnevis of the University of Southern California, which promises to build homes more cheaply and quickly than conventional methods. Another is the two-person team caraballo-farman's "Object Breast Cancer," which has inspired a research project at Weill Cornell Medical College; it uses 3-D software to transform M.R.I.'s of tumors into small sculptures and pieces of jewelry, which hint at the profound and often unnerving new ways that 3-D technologies can explore the body.

You can, for instance, have yourself scanned in the interactive workshop on the second floor, and the scan 3-D printed in liquid resin.. This feature of the show is a great idea in

theory, but in practice it becomes an infomercial for the 3-D printing company Shapeways, a major sponsor of the exhibition. (The promotional video doesn't help).

The day I visited, the digital scanner wasn't working properly. "It's giving people two heads right now," a designer from the Shapeways educational department told me. But I could look at the 3-D prints of earlier scans, a row of tiny gray figures representing a broad array of ages, styles and body types, and explore the printers themselves: strange, boxy incubators in which, it seemed, any imaginable form could materialize.

The technology has a long way to go before it becomes widely available, affordable and user-friendly. But in a way, that's the appeal of this exhibition: Artists and designers are still tinkering, figuring out what works and what doesn't and what it all means.

"Out of Hand: Materializing the Postdigital" runs through July 6 at the Museum of Arts and Design, 2 Columbus Circle; (212) 299-7777, madmuseum.org.