Theoretically Challenged
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Where design theory is concerned, I have a theoretical deficiency. I know people who think design needs theories to give it credibility. In other fields, the order is reversed. Credibility—that is, the meriting of confidence—comes from the payoff. Einstein won our respect for the alleged brilliance of two theories—a general one and a special one—that somehow led to the equation E=MC2, although few of us understand either the theories or the equation. He won our affection through the power of his personality and personal history. But what gave him credibility was that the Bomb went off. And what gave physics its subsequent credibility was not theories but the fact that physicists could make things that work.

Designers also make things that work. But in design, the working and the theorizing are not related as they are in science. If a scientific theory works, it is considered sound—at least sound enough. For scientists, theories are tools. Like other tools, they do not have to be perfect for all occasions: there are no scientific Renaissance tools; there is no mathematical counterpart of the Swiss Army knife. It is enough if a theoretical tool is effective for a particular job. And although Newtonian physics has been supplanted by more sophisticated theories, the earlier physics can still be used to explain some phenomena accurately and is therefore valid for that purpose. If theories do not work, they are regarded as unsound or at least inadequately tested. In this respect, they differ vastly from theories that carry no operational burdens and therefore cannot be checked out.

If we have to talk about theories, then we have to make distinctions. There are comprehensive theories and conjectural theories. A comprehensive theory consists of a system of propositions that coherently account for a complex phenomenon like those observed in economics or medicine or even law.

Such theories explain and simplify phenomena. But simplify does not simply mean to make simple; it means to make simpler. Electromagnetics isn't simple, it's complex. The second law of thermodynamics is not simple. Marxism is relatively simple, but so what? The goal of a comprehensive theory is to make something as simple as is consistent with fully accounting for it.

Unfortunately, in design, as in many other fields today, there is a strong drive to do just the opposite: to complicate description in the belief that complication in itself represents substance and depth. So we borrow arcane language from disciplines historically associated with substance and depth. In design the mathematical term parameter is used to mean nothing more than constraint; the engineering term feedback is used to mean nothing more than response; the logics term paradigm is used to mean nothing more than model; viable (a biological term) is used to mean feasible. Or, often as not, to mean nothing at all.

Comprehensive theories are required to handle complexity. But I am not sure design entails the appropriate complexity very often. It seems not to be in the blood and bones of the profession and may therefore be absent from the heart as well. In *Theory and Design in the First Machine Age*, Reyner Banham writes:

"The devices that characterized the Machine Age were the products of intuition, experiment or pragmatic knowledge—no one could now design a self-starter without knowledge of the mathematics of electricity, but it was Charles F. Kettering, not mathematics, that invented the first electrostarter on the basis of a sound grasp of mechanical methods."

As for conjectural theory, that is simply a reasoned hypothesis. The detective says, "We don't have a motive but we have a theory." That's more my style, and I suspect it is more in line with the sort of theory useful in design practice. I believe that the designer's theory ought to be directed toward the use and the user, rather than toward design itself. I don't care whether an interior designer has a theory of design, but I do hope—if she's doing offices—that she has a theory of work, illuminating how it gets done and by whom. I don't care about an industrial designer's theory of form nearly as much as I do—if she is designing stereo components—about her theory of sound, her theory of indoor recreation. That's what I wish she knew about. That's the kind of theory I hope will inform her vision.

If we needed an example of what happens when designers let their attention shift from field to force, we need look no further than the observations of the most famous semioticist of our time, Umberto Eco. Writing about the communicative aspect of objects, Eco discusses the "statements" that objects make. Remember when product designers used to talk about chairs that made statements? They learned that in design schools and from design critics. Chairs do make statements, and should, but surely the most important statements they make ought to have something to do with sitting. This, however, is usually not what our most conspicuously designed chairs are talking about. And that is Eco's point.

During the fifties, Eco argues, "paradoxically, in aiming to make functional objects, designers tried to accentuate the communicative functions of those objects; and instead of producing objects that communicated the way they could be used, they produced objects that communicated the design philosophy. That is, the object did not say 'This is how you use me,' but rather said 'I am a perfect design object.'" Eco takes an example from Italian cutlery. Inspired by the Scandinavians, Italian designers began producing more beautiful forks with short prongs that made the statement "I am a modern fork." They were modern indeed, and we all admired them and showed them in our magazines and museums and gave them awards. But they were not much use for eating pasta, which has a certain vogue in Italy. For pasta you needed the anonymously designed long pronged fork, which made the statement: "If you plunge me into a mass of fettucine, I will accept the cargo."

It is important to notice that these badly functioning designs were praised for "elegance." But elegance as theoretical scientists apply it is quite different. The elegance of a mathematical formula is that it explains a phenomenon beautifully, with no parts left over. In design, elegance is more readily perceived as a property of product than of process. If we had more elegant theories, we might look to design for more than elegance.

In the serious comic movie "Gone Are The Days," Ossie Davis plays a black preacher in the rural south, crusading for civil rights. Ruby Dee plays a scullery maid. The preacher is exasperated by his inability to arouse the scullery maid to an interest in civil rights legislation.

"You are a disgrace to the Negro profession," he complains. "Don't you have any race pride?"

"I got plenty of race pride," she replies. "But there ain't much call for it in my line of work."

That's where design theory is today: there ain't much call for it in our line of work.