

## Mechanization Takes Command

Paul DeMarinis / [Laetitia Sonami](#)

Machines stand apart from us much as we imagine we stand apart from nature. They appear as the embodiment of our powers of abstraction, our understanding of ourselves and the structure of the world. As we gaze around us we see everywhere the transformation caused by machines. In our farms, cities, and industrial wastelands, in our thoughts, relationships, and dreams. The machine has become for us a sort of intermediary in a dialog with ourselves, a dialog that is at times profound, sometimes fatuous. The machine lends a material semblance of objectivity to our fleeting thoughts and our accommodating perceptions. Each machine in its age is a spinner of illusions and a standard of objective truth and reality. From the assumption that the machine is objective arises, too, the belief that the actions resulting from the machine are objective. The use of "smart bombs" that incorporate sensors and guidance systems to seek out targets now justify the killings of thousands of people as "collateral damages." How did we get here?

While war raged in Europe, Swiss architect and historian Sigfried Giedion roamed the remote backwaters of American patent archives, exploring and charting the anonymous history of the age of mechanical invention. In 1947 he published his landmark treatise *Mechanization Takes Command*. The title's active present tense conveys the once-fresh immediacy of the bygone mechanical age which spanned the 19th century, during which human invention overwhelmed and redefined human being. Contrasting the natural resources, availability of skilled labor, and historical proclivities of Europe and America, he examines, chapter by chapter, the intrusion of mechanization into diverse realms of human endeavor. The lock and key, bread baking, slaughterhouses, furniture and the very notion of comfort, kitchen appliances, and bathing are among the subjects of Giedion's scrutiny. Ever attentive to the impact of mechanization on the organic world, our lives and our bodies, Giedion's critical perspective surpasses mere historical documentation, teleological theory, or scientific adulation: he bares the roots of the many contradictions underlying our current global crises of life and humanity versus the corporate mechanism and the ruling taste. *Mechanization Takes Command* is a sourcebook of problems, solutions, and solutions that became problems.

**Beyond enumeration are the domains of mechanization and all the techniques that have gone to build up the life we know today. But the method that forms the basis of all mechanization is amazingly simple.**

**The human hand is a prehensile tool, a grasping instrument. It can seize, hold, press, pull, mold with ease. It can search and feel. Flexibility and articulation are its key words.**

**The triple-articulated fingers, the wrist, the elbow, the shoulders, and, on occasion, the trunk and legs heighten the flexibility and adaptability of the hand. Muscles and tendons determine how it will seize and hold the object. Its sensitive skin feels and recognizes materials. The eye steers its movement. But vital to all this integrated work is the mind that governs and the feelings that lend it life. The kneading of bread; the folding of a cloth; the moving of brush over canvas: each movement has its root in the mind. For all the complicated tasks to which this organic tool may rise, to one thing it is poorly suited: automatization. In its very way of performing movement, the hand is ill fitted to work with mathematical precision and without pause. Each movement depends on an order that the brain must constantly repeat. It wholly contradicts the organic based on growth and change, to suffer automatization.**

Our sciences rely upon technical intermediaries to detect and measure dimensions we cannot observe with our senses. While it is no longer possible to conceive of a science without machines, we encounter everyday machines without science – and this is the real science fiction. Daily we witness a panorama of seemingly autonomous machines which have colonized our planet, from the innocent improvisations of children and folk technology to the haphazard bricolage of our great industrial complexes. The blindness, power and the collective lack of any purposeful direction allow these great cumulative machineries to inexorably erode a world whose wholeness we cannot grasp and have only recently begun to appreciate.

**In La Villette – another point of criticism – each ox had a separate booth in which it was felled. This is a survival of handicraft practices, to which the routine of mass slaughtering is unknown. The long houses in which the cattle were slaughtered consisted of rows of single cabins set side by side. Long since, technical installations and slaughtering in large halls have superseded them. It may well be that this treatment in separate booths expresses the deeply rooted experience that the beasts can be raised only at the cost of constant care and attention to the individual animal.**

**The Great Plains beyond the Mississippi, where free tracts of grassland can be dominated from horseback and where the herds grow up almost without care, are implicitly related to the assembly line. In just the same way the peasant farm where each cow has its name and has to be attended when giving birth to its calf is linked to handicraft methods in slaughtering.**

We now linger at the end of the electronic information age. Perhaps it is our indecision which keeps us from choosing one of two equally threatening options: abandoning our tired paradigms to embrace a new wholer conception of ourselves and the environment, or sticking to our guns and annihilating it. It may now be elucidating to reconsider the path taken by our predecessors in the bygone age of machines. Giedion has considered the machine as dictator of social & ethical values, of aesthetics, as a mirror of nature and as model of mind. All these things were variously

attributed to or projected onto the machine during its heyday a century and a half ago. Within these patterns there may lie habits which our culture will repeat even as paradigms shift.

**The brilliant Minoan age, the last matriarchy, possessed not only bathtubs, but sewer systems and water closets. Sir Arthur Evans' tireless excavating has given us better insight into this early period than we have, for instance, into the Greek gymnasium. The painted terra-cotta tub that Evans pieced together from the queen's apartment in the Palace of Knossos in Crete informs us that this type of bath, like many other Minoan habits, was taken over by the Greeks of the Mycenaean period, around 1250 B.C. The Cretan tub, modest in dimensions, fits the description of the Mycenaean bath in which the Homeric heroes bathed. When Homer, looking back from around 800 B.C., tells of the bath ceremony, he refers to it as the restorative following 'soul exhausting toil.' The stress here falls not upon cleanliness but upon relaxation.**

**The present-day type of bath, the tub, is actually a mechanization of the most primitive type. It belongs in the category of external ablution. The tub is understood as an enlarged washbowl. No period before ours has so unquestioningly accepted the bath as an adjunct to the bedroom. Each of its components was the outcome of a slow, tedious mechanization; hence the bathroom with running water emerged only toward the end of the last century, while not until the time of full mechanization between the two World Wars was it taken for granted.**

It seems that in our modern western culture, technology assumes the position of the "intermediary," the mythical, magical or oracular fetish onto which we project an inner dimension which we cannot express directly and from which, in turn, we seek answers about the world and our place in it. Machines afford us a sort of trinity of dialog among self-as-subject/machine/self-as-object. The barber's chair, the Barbie doll, the desktop computer, the smart bomb – each mute object is a participant in a discussion of which it understands nothing. Our obsession with keys, codes, special control buttons, may be a contemporary manifestation of special formulae, incantations which we once used to communicate with the unknown, the "disembodied powers." Could it be that the "genii loci," woodland spirits and others we once revered to increase our understanding and participation in our environment are now embedded in technology? Does this ever-present need to validate oneself through reiteration of technology come out of desperation or fear of "emptiness"? (In a recent news account, a hostage in Iranian prisons described recreating the mathematical formulae and theorems he knew using only breadcrumbs and dust. Never did he consider exploring his loneliness, helplessness and the lack of any possibility of expressing himself.)

For the present performance we have chosen a few of the more quirky or romantic passages from Giedion's text to set to music: the chapters covering slaughter, the mechanics of the hand, and bathing form the nucleus of our text. By a process of computer analysis, we convert the naturally occurring melodies and rhythms of the speaking voice into musical material. Applying the results to digital speech and music synthesizers and samplers, we have created a series of "songs" or settings which both derive from and portray the subject matter of Giedion's writings. The sounds of animals, machines and the echoes of now distant memories are blended and fused intimately with the sounds of words.

The use of computers and synthesizers in the present performance serve to exaggerate the dissociation between the minimalism of gestural and performative actions and the massive control of the experience suggested by the sound and imagery. The material, not the performer, now carries the richness of experience toward its target. Like modern architecture, audio technology gives us a means to create elaborate set of transparencies which coexist in time and space. Like architecture, audio always retains a sense of the illusory, creating spaces which, without our awareness, modifies our sense of self. The controls at hand, however, allow "painless" instantaneous disintegration without smart bombs. Again, divorcing of action from result squelches opposition.

There is an irony in the contrast between natural live voice and synthesized voice. The voice, once taken away from the body and reconstituted as a being without corporeal substance, without status or place, without viewpoint, without the fleshy vulnerability a bared throat offers, is reincarnated as a new being. Perhaps a voice of authority, or an oracle which can speak from beyond the grave. It gives us a deliriously false confidence, this chest resonance without chest, these nasals without nose, plosives without lips or tongue, this singer of songs-without-throats. The voice, encountering the machine, suffers the same series of dislocations which are perpetrated upon the animal bodies in the slaughterhouse. Unlike the random destruction of a road-kill, they are distilled, transformed – made into something else. Here we have excised melodies like bodily organs, trimmed away fat and gristle of meaning to reveal underlying harmonic and rhythmic skeletons. We have filleted and sliced the synthetic voice away from its bones only to reconstitute it again in a new guise, to resurrect it as a god, daemon, or spirit. Who is saying these things? Am I the only one who hears these voices?

**We entered an immense low-ceiled room and followed a vista of dead swine upon their backs, their paws stretching mutely towards heaven. Walking down to the vanishing point we found there a sort of human chopping machine where the hogs were converted into commercial pork. A plank table, two men to lift and turn, two to wield the cleavers, were its component parts. No iron cog-wheels could work with more regular motion. Plump falls the hog upon the table, chop, chop; chop, chop; chop, chop, fall the cleavers. All is over. But before you can say so, plump, chop, chop; chop, chop; chop, chop, sound again. There is no pause for admiration. By a skilled sleight-of-hand, hams, shoulders, clear, mess, and prime fly off, each squarely cut to its own place, where attendants aided by trucks and dumb-waiters, dispatch each to its separate destiny – the ham for Mexico, its loin for Bordeaux. Amazed beyond all expectation at the celerity, we took out our watches and counted thirty-five seconds, from the moment when one hog touched the table until the next occupied its place. The numbers of blows required I regret we did not count.**

Giedion has created a panorama of found images, creating a fertile visual dialectic – images by Marey, the Gilbreths and Muybridge appear opposite Duchamp, Ernst and Klee, all illustrating the encoding of human motion in shape and form. Nineteenth century engravings of McCormick's reaper, patent drawings of animal skinning devices which were never practicable, accompany us on our walk through Giedion's anonymous history. The more than five hundred illustrations which accompany the text of *Mechanization Takes Command* constitute a brilliant kaleidoscope of visual anthropology, revealing paradoxes, hidden agendas and sheer blind optimism as they appear in successive turns along our path. We have incorporated these etchings and line drawings into the projections for our performance along with photographed images in color, again pointing out the parallels and contradictions between the mechanical and the actual, that which is meant to be seen and what cannot be hidden.