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HISTORY AND NATURE

The *Game of Life* is a kind of allegory. One begins with a grid of square "cells," over half of which are filled o , as they say, "alive." A cell remains alive if it touches a certain number of other "living" cells; otherwise it goes blank and "dies." The allegory here is no secondary appendage, but carries through to the game's inner structure, most evidently perhaps in the contrast between two types of permutation into which every game can be classed. In one, the process reaches an end-state, where continued application of the rules yields no further changes to any of the cells in play. In the other, changes continue indefinitel , whether the game settles into a fixed cycle of epetition or meanders into ever-new configurations, like the transcription of an irrational number. In allegorical terms, the aleatory fate of the latter serves as a figu e of protean immortality; the arbitrary finitude of the former as emblem of the human cell's programmed senescence.

Franz's transposition of the *Game of Life* into a grid of vibrating motors in *Untitled (Sonic Cellular Automata),* 2009 (see pp. 16–23) produced a number of unexpected effects. iewers sometimes mistook it for an interactive piece, as if the whole apparatus were somehow sensing and reacting to their presence before it. Whether and to what extent this intuition owed to the hum of the vibrations, the patterned shaking of the cables, or the exposed bundles of nerve-like wires is difficult to judge. Nevertheless, egardless of its cause, the semblance of meaningful interaction harkens back to a type of experience that, though perhaps scarcely discernable in art to most of us today, once stood at the foundation of European aesthetics: the experience of an object so infused with its maker's intentions that it seems to literally bear them itself, to display the "purposiveness" of an organism even though we know it to exist inanimately, "without purpose." [1] How curious, though, that this renewed sense of intentionality should issue from predetermined, algorithmic patterns that, at least on the face of it, seem utterly devoid of authorial intention.

6.46 kg Oxygen, 13.09 kg Carbon, 7.20 kg Hydrogen, 2.28 kg Nitrogen, 1.44 kg Calcium, 0.72 kg Phosphorus, 0.24 kg Potassium, 27 Hours, 43 Minutes, 16,486 Beats, 2010 (see pp.40–45) pushes this dynamic further. Here Franz literally pounded out a *Game of Life* with a hammer on a sheet of aluminum. After marking a grid on its surface with masking tape, Franz struck each square according to the number of times each cell came to life in a simulation run on a computer beforehand. The compression of the metal slowly accumulated into a bend across the whole surface. Sometimes the repeated strikes punctured through the center of a square, leaving an open tear. Having been affixed to the wall at the outset, the sheet bega to buldge until ultimately bursting off onto the ground. When the pattern was complete the bend had become so pronounced that the object easily stood erect upon the edge of its formerly two-dimensional surface. Thus, what began as a kind of paintless painting completed itself, so to speak, as freestanding sculpture. It is of course a coincidence that its sagging upper edges could suggest shoulders, that the withered curl of the whole could, if one were so inclined, be seen to mimic the inward bearing of some abject figu e: ultimately, *6.46 kg Oxygen, 13.09 kg Carbon, 7.20 kg*

[1] I refer to Immanuel Kant's famous *Zweckmäßigkeit ohne Zweck: Kritik der Urteilskraft*, Frankfurt: Suhrkamp 1996, 136. On the intertwined emergence of the "organic" as a concept in 18th century aesthetics and biology, see M.H. Abrams' classic *The Mirror and the Lamp: Romantic Theory and the Critical Tradition*, Oxford 1953.

Hydrogen, 2.28 kg Nitrogen, 1.44 kg Calcium, 0.72 kg Phosphorus, 0.24 kg Potassium, 27 Hours, 43 Minutes, 16,486 Beats presents nothing more than the snapshot of an arbitrary stage in the course of an object's physical dissolution, preserved as such because this particular *Game of Life* happened to end before the sheet could be pounded into total oblivion. But does such a distinction between chance form and human expression really stand up to our experience, to the experience furnished by *Untitled (Sonic Cellular Automata)*?

If on one hand *Untitled (Sonic Cellular Automata)* seems to have revived a historically obsolescent kernel of conventional aesthetic experience, *6.46 kg Oxygen, 13.09 kg Carbon, 7.20 kg Hydrogen, 2.28 kg Nitrogen, 1.44 kg Calcium, 0.72 kg Phosphorus, 0.24 kg Potassium, 27 Hours, 43 Minutes, 16,486 Beats* suggests that a fundamental premise of aesthetic interpretation must disintegrate in the other, for the work of art that appears to speak for itself no longer admits distinctions between arbitrary and intentional form. The horizon of interpretation proper to such work is perhaps best fleshed out by *Guggenheim New York Series*, 2012 (see pp. 50–59). Here a series of small white plaster models of the Guggenheim Museum in New York scaled at 1:200 have been repeatedly dipped into white paint. Once dried and set right-side-up, side by side, the sequence recalls rising flames: forms drawn out by gravity resemble ones that flow indiff ently against it.

This trope of illusory upward motion resonates with the core feature of the actual Guggenheim Museum: the continuous white wall steadily ascending and expanding in spirals toward a tempered stream of natural light above. No museum has ever narrated the progress and apotheosis of modernism so well. But if the Guggenheim stages one very specific type of historical sequence, *Guggenheim New York Series* seems to propose another, one whose terms are quite diffe ent. Though each individual drip announces itself as a response to gravity, we cannot follow its progression from unit to unit across the sequence as with film stills or flip books o , in another sense, Matisse drawings: each is wholly singular, having been immersed under conditions whose diffe ences, though imperceptible, set off an absolutely unique process of physical accretion. This lack of continuity does not inhibit our sense of sequence, but rather reinforces it: sequence appears precisely *because* we know its units lack internal order, much as we would intuit the growth of a fi e from a sequence of film stills even if we cannot follow the course of any individual flame. Individual forms contribute to a sense of aggregate purpose in spite of their patent self-determination.

This is the language the *Plopps* speak, one in which distinctions between accident and intention, chance and determination, become even more difficult to sustain. For these works Franz modified a large format printer into what he calls the *Dual-Axis Precision Deposition System (Plopper)* (see Section #2, p. 112ff). The new machine deposits various powder and liquid materials (sand, plaster, polyurethane and paint) along a path determined by the lines of a CAD-drawing. Until the paint falls from the print-head, the whole process remains rooted in the traditional practice of drawing: the printer follows the line on the screen, the line on the screen follows the motion of the artists' hand, the hand follows the mind. But from the moment the paint strikes sand it begins to burrow out a space for itself: up to a certain point it pools; eventually it must spill over, but no one could predict exactly when and why. In the first half of this p ocess human expression seems to hold sway, transmitted though it is through multiple levels of manual and digital mediation. In the second it is given over so fully to physical contingency that the product might appear more at home in nature than in history.

In truth, though, the *Plopps* signal such an opposition only to confound it. In *Grid with Fifteen Colors* (see pp. 166–167), for example, the print-head only laid down verticle lines; overflown pools formed the horizontals, completing the grid. *Path Callibration A* (see pp. 156–157) juxtaposes continuous horizontal lines with dotted vertical ones, reflecting the design of the machine, whose print-head runs on a single track. The diffe ence is nearly eclipsed, however, as the pooling effect bridges them. In these and other *Plopps*, then, chance seems somehow to have been intended, or intention to have been consummated by chance; history in turn comes to seem natural and nature historical if only because the contents of both appear so singular. The *Plopps* belong to both, beholden to neither, and in this speak just the sort of language that recent history demands we learn.

46.46 kg Oxygen, 13.09 kg Carbon, 7.20 kg Hydrogen, 2.28 kg Nitrogen, 1.44 kg Calcium, 0.72 kg Phosphorus, 0.24 kg Potassium, 27 Hours, 43 Minutes, 16,486 Beats, 2010 (detail)