

Constructed Improvisations

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The work presented is a series of architectonic experiments that transpose, manipulate and articulate the links, connections, joints and transitions present in jazz improvisation. The process of construction and variation on a theme involves an expanding series of analog and digital design techniques developed over many years. The latest experiments focus on the translation from drawing and chromatic improvisations to three-dimensional modeling and laser-controlled fabrication. It is a poetic design process driven by actions instead of words. The context is itself. It grows, refers and communicates within. The material is form regulated by light. The function is the psychological demand of space. The budget is time, passion and commitment to the study of a pure architecture. The production is for the effect of production.

This project requires a call and response form of self imposed design communication. A period of practice precedes an established direction, building on the knowledge gained from previous intuitive takes. After working on several improvisations in a row, key ideas repeat themselves instinctively as variations within the structure. They are performed in as many takes as necessary until a high level of dexterity is established. To the designer, these actions are liberating and exhilarating, as the pressure to make quick, on the spot decisions is accomplished. There is a negotiation between individual moves in a construction, and the reconciliation of elements relative to an intrinsic network. Ultimately, it is a search for the logical arrangement and articulation of objects that define spatial structures within a structure.

A tracing procedure translates the bit-mapped information of an underlying source image into vectors. A subsequent series of tracings requires a rigorous process of realignment and editing. Joints separate discrete shapes. An incessant articulation of extension lines emphasizes an evolving internal reference system. This complex network is the regulatory guide for discovering cross-precinct alignments. Numerous variations of the extension-line drawings are generated before arriving at a refined structure.

Selected elements and regions of the extension-line drawings are filled with different colors each representing both metaphoric and organizational systems. The drawings are articulated as solid and void; figure and field; thick and thin; and open and closed. These chromatic improvisations suggest an equivocal depth as a gateway to three-dimensionality because of the strength of line weights and different densities of added or subtracted color. Complex relationships are read among individual elements as reciprocal notions of plan and section. These rhythmic improvisations entice the eye to search for multiple trajectories.

An improvised physical relief study is projected from the chromatic improvisations. It is a transitional study between two-dimensional and three-dimensional worlds. The designer tests and views the physical model with the hands and eyes, looking at and in between to make instantaneous decisions necessary for fluid improvisation of depths and thicknesses. There is an enticing ambiguity between the resultant models and the generating drawings.

A laser-constructed improvisation is built in collaboration with a human assistant and a laser cutter. The work involves careful observation, measurement, alignment, calibration, negotiation, adjustment, refinement and redefinition. The designer must coordinate an analog-digital process that interprets the major moves of the physically constructed relief study, the vector tracings, the extension-line network and the chromatic improvisations.

The laser-constructed improvisation is a three-dimensional multi-tracked drawing. Each track must interact with layers below and above. The extension-line network drawing is printed several times serving as design configuration worksheets for each laser cut. The sheets are spread out on tables so that the designer can work on all of the layouts simultaneously. The designer uses colored pens to fill in solids, studying the potential relationships between layers.

The layouts are reconstructed in a digital vector file. The information in these digital drawings produces the laser cuts and a working three-dimensional virtual model of the design. Hand and eye coordination drives decisions, but in the ultra-precise sphere of digitally controlled production. The constructed physical result tests the virtual model. The designer has a direct feel and control of the design through the fluidity of digital making.

The designer cannot escape the architectural implications and possibilities. The designer reads multi-directional interpretations that engage an analog-digital call and response as an experiential design communication device.





