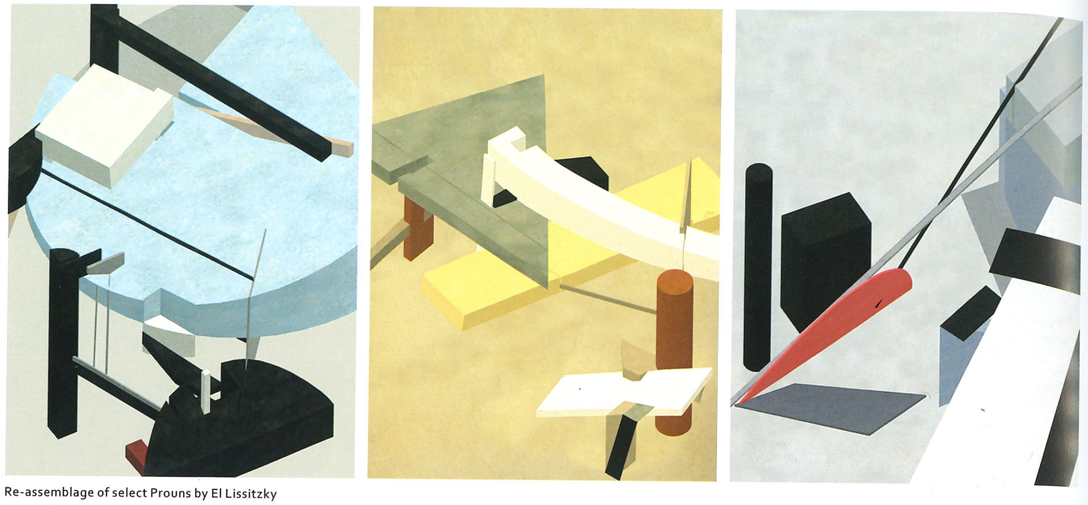
ZERO PIRANESI

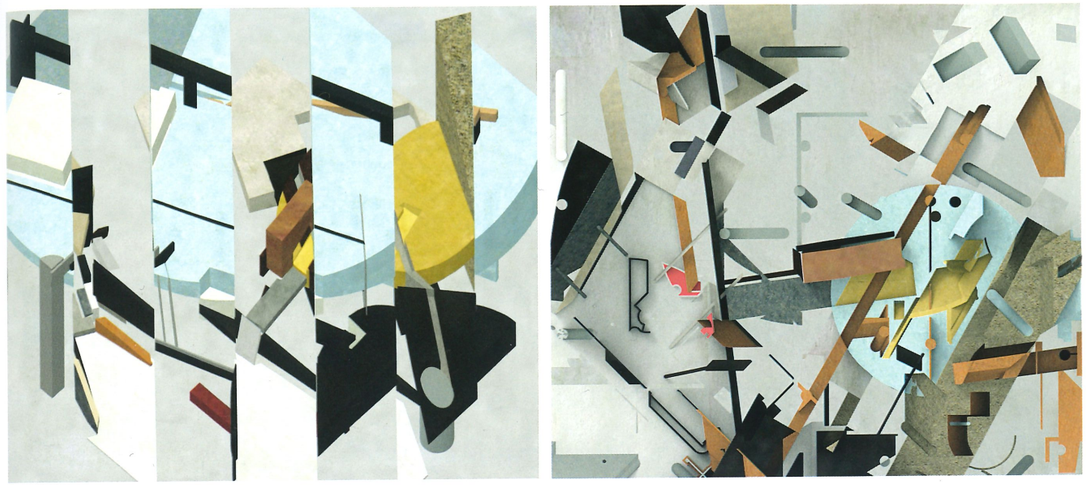
SAC JOURNAL 5

SCIENCE CITY

LIDA BADAFAREH
AIV MASTER THESIS PRIZE 2017
Architecture and Urban Design: Peter Trummer



Re-assemblage of select Prouns by El Lissitzky



Parallel projection of El Lissitzky's paintings hybridised with qualities from Le Corbusier's collages and Libeskind's Micromegas

Lida Badafareh's *Science City* is an enormous science centre situated on the outskirts of Cairo next to the Giza Pyramids. The design was developed in response to the 2016 competition brief for a new science centre that were to include a museum as well as learning and research facilities. The brief asked for the complex to be an architectural monument for the 21st century.

Badafareh's proposal sees the science centre submerged in the sand next to the pyramids. Embedded thus in the desert landscape, *Science City* forms an approximate rectangular field of half-sunken platforms and 'follies' (Badafareh's term) floating in the soft ground. The irregular, sand-coloured and planar platforms suggest a zoning of the area. The zoning was implemented as the competition brief called for eight different programmatic zones. The implementation of this was carried through in the design by bringing together eight different picture planes that multiplied views and introduced a sense of disorientation and dynamism in the project. The strategy reflected Badafareh's concern with architectural representation and specific modes of projection. It also emphasised a negotiation between ground and follies.

In the proposed project, however, the landscape eats into these irregular platforms and makes them appear as eroded remnants of a former whole, as if the complex has a history to match the Giza Pyramids. The follies float freely across this field, sometimes contained by the platforms, sometimes not. Here and there a folly cuts open an edge or a corner of a platform, unfastening the space and yielding it to the desert beyond. Elsewhere follies float in the sand like free radicals between platforms, connected thus equally much to the fine, granular expanse of the landscape as to to the quasi-rational, constructed extrusions from the ground.

In this manner, *Science City* makes up an oceanic field in the dry landscape. Its intricate play on submerged mass and emerging cuts and voids is intermittently punctuated by stairs, walls, and columns. In Badafareh's underground plan, the compressed composition of mass and void that floats above resolves itself in a looser field of architectural forms. The zoning visible above is gone. Thus, the project resists any attempt at a programmatic reading and appears more as the sunken trace of the desert marked with platforms and follies.

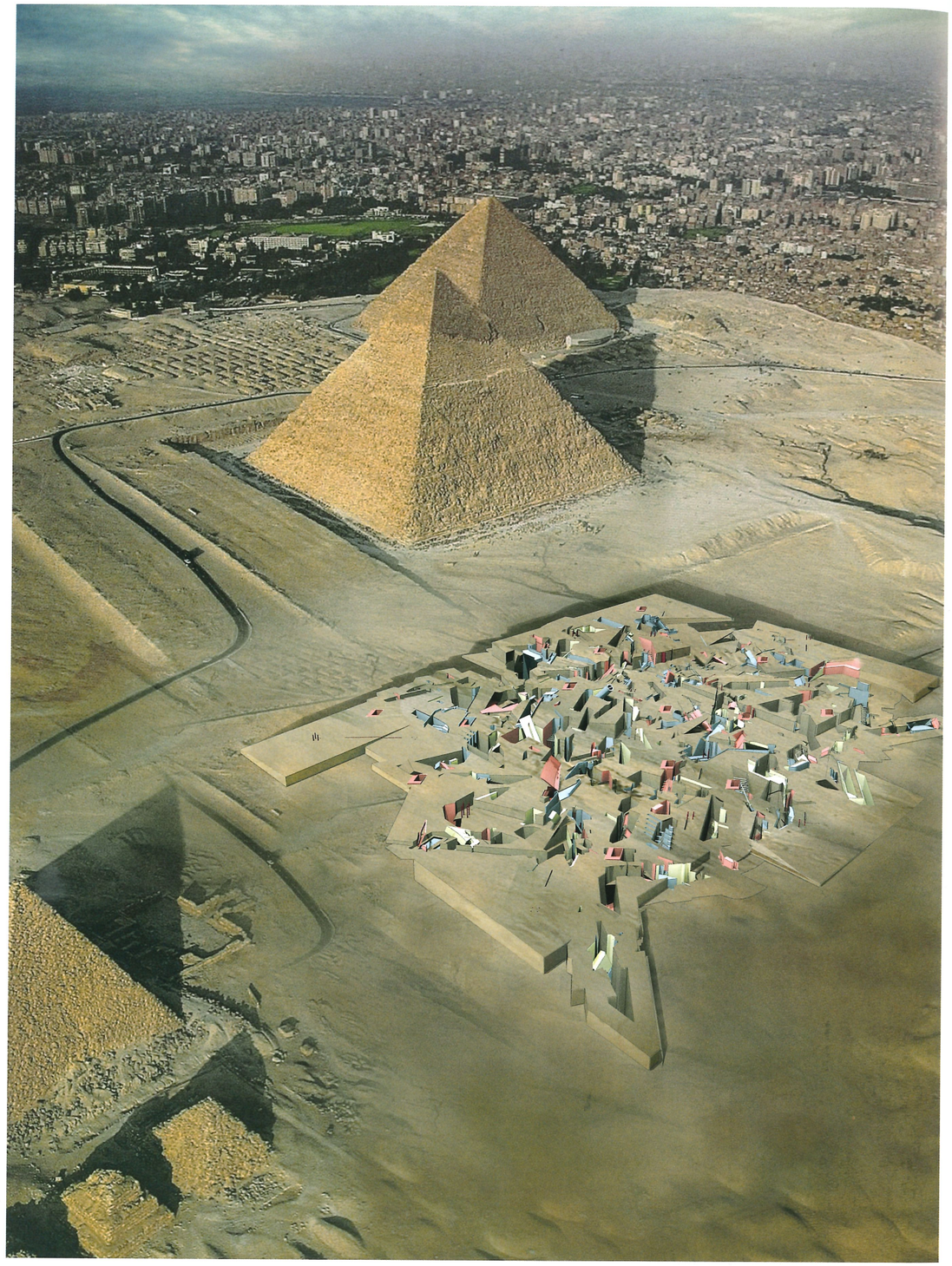
This drama of built forms was presented in coherent and impressive drawings with a shared visual expression and style as well as in a large physical model. The project's geometric abstraction was linked to Badafareh's in-depth investigation in forms of representation in architectural design. The work concerned itself with parallel projection, and especially axonometric drawing. Using Daniel Libeskind's series of ten drawings, *Micromegas* (1979), as the starting point, Badafareh conducted a free reading of Libeskind's drawings by borrowing from how other architects and architectural theorists have analysed and interpreted the work. The reading was executed in response to a studio brief that postulated that architecture can be seen to develop in an author-less fashion from within its specific disciplinary history.

Badafareh supplemented the architectural readings by also looking to the arts. Thus, the project developed by liberally referencing select periods and works in the arts and architecture, including Juan Gris and cubism; the collages of the Czech artist Jiří Kolář; Le Corbusier's collages and the *Carpenter Center for the Visual Arts* in Cambridge; Paul Klee, expressionism and transparency; and the Russian artist and architect El Lissitzky and his *Proun* series - his personal suprematist style which comprised of a series of abstract, geometric paintings, lithographs and fully three-dimensional installations. The work process included analyses and, most importantly, combining techniques from these various architects and artists to produce new, hybrid compositions.

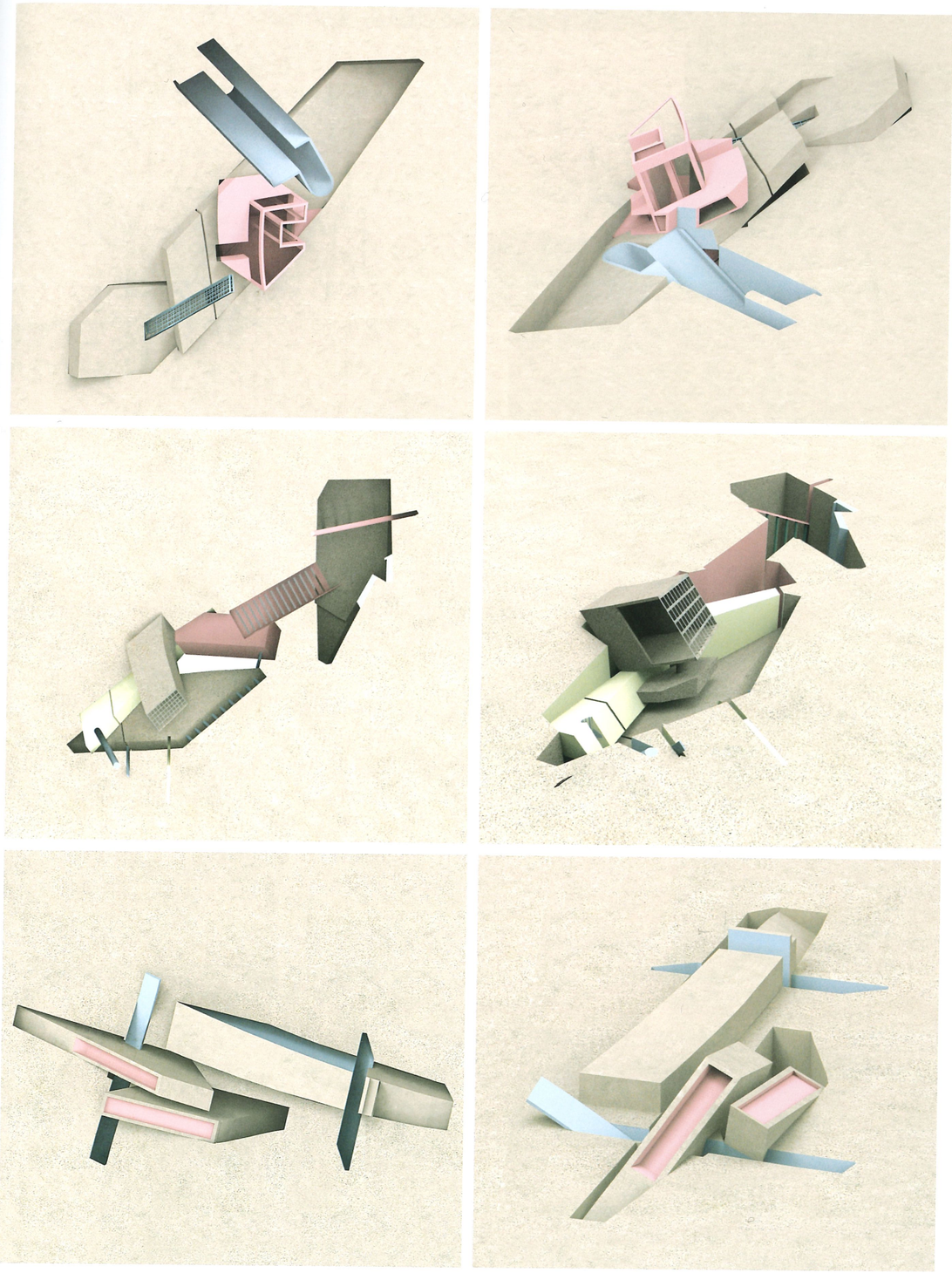
The result of these experiments aimed in part to retain qualities that Badafareh, with the aid of other readers, identified in *Micromegas*. For instance, she wanted to render a shallow pictorial space, as also implied by Cubism, by fracturing and displacing forms. In *Science City*, this dis- and re-assembly of parts produced a tangible tension between fragments and a coherent whole. Likewise, the space of the project was to have no fixed direction and present an interchangeability between solid and open areas. The former became manifest through parallel projection with the multitude of follies and their details, all of which lay strewn across the field as shards of glass. The latter staged the delicate play on mass and void.

By applying Kolář's 'rollage' technique to Lissitzky's *Prouns*, Badafareh re-assembled the paintings in bands of extruded, three-dimensional formal compositions. Thereby she extended the multiple, adjacent viewpoints in *Micromegas* to fully articulated three-dimensional form and allowed the viewer to hover above the object while retaining a freedom of vision. This experiment was conducted in an attempt to "inhabit" the *Prouns* and thereby tap into Lissitzky's exploration of suprematism's visual language with spatial elements. The experiments exploited the use of shifting axes and multiple perspectives and delivered a series of animations showing rotational figures emerging from the two-dimensional datum of the *Prouns* - thus serving as the basis for the three-dimensional, axonometric exploration of form and space. Likewise, the experiments facilitated the engagement with the figure-ground condition whereby the follies appeared as discrete compositional figures while being part of the continuation of the ground.

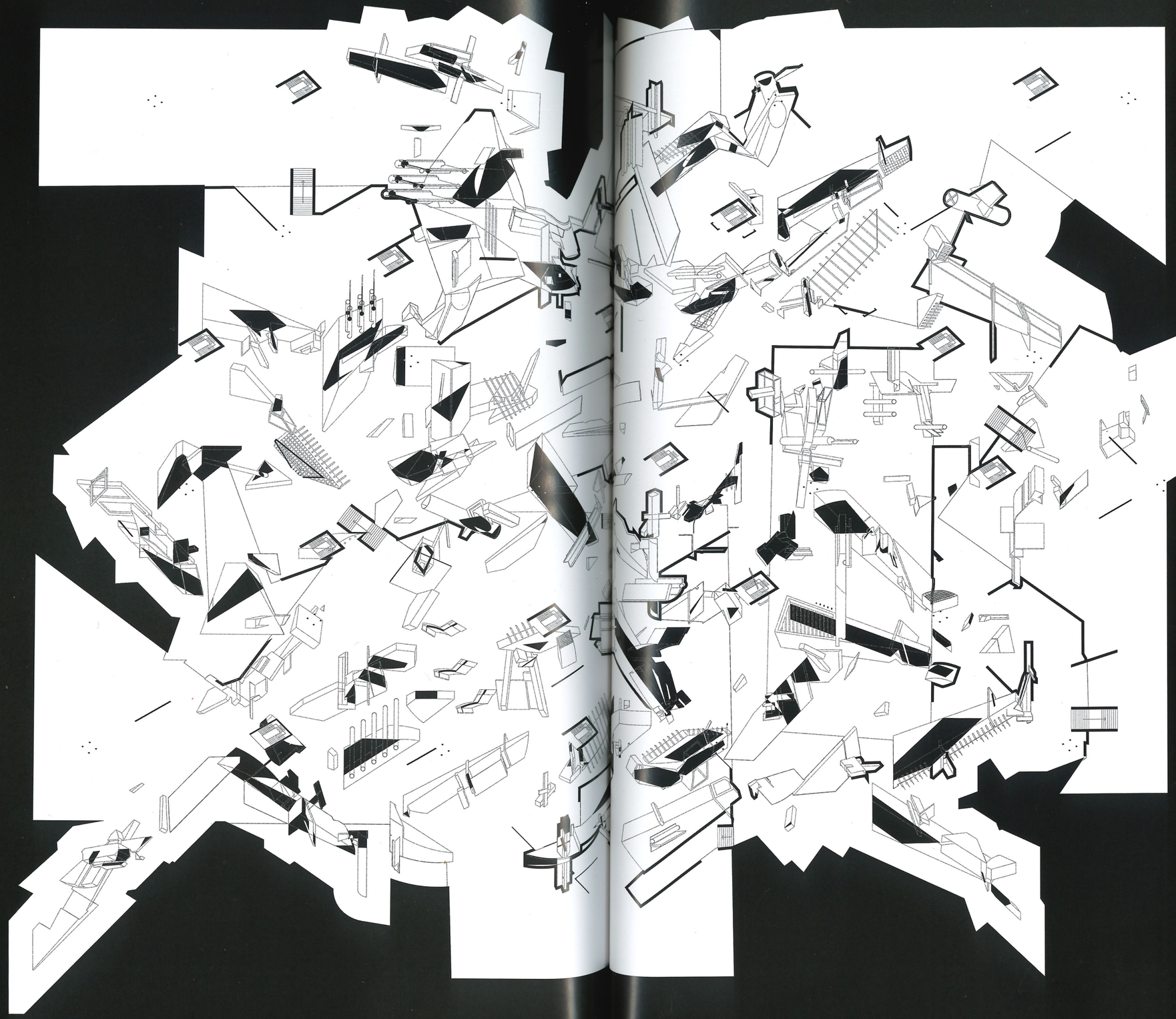
Science City is ultimately a rigorous yet playful exploration of formal design procedures. These are driven principally by axonometric extrusion of variously sourced material which - to begin with - loosely relates to Libeskind's *Micromegas* by way of reference or association. The resulting, spatial composition is saturated with geometric abstraction. The collection of follies, buoyant at the edge of the desert, stages a frivolous play with changing spatial characteristics as one's viewpoint onto the architectural complex shifts.



Science City on site next to the Giza Pyramids

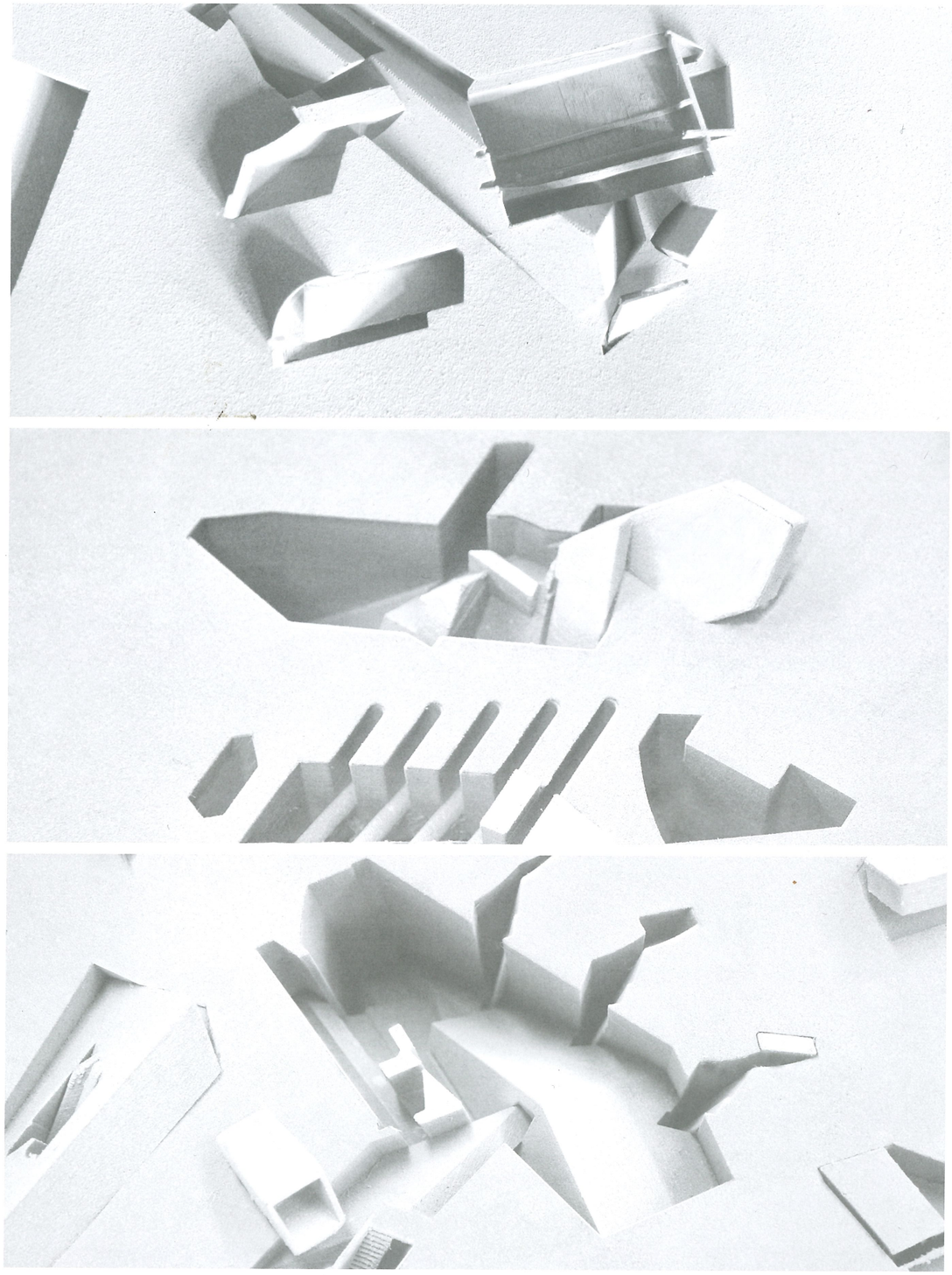


Different views onto follies



Underground plan

Science City, detail of digital model



Science City, detail of physical model