This essay was written following a series of conversations between Louis Mayes and Philip Christou, former co-director with Florian Beigel of the Architecture Research Unit (ARU). From 1974 until 2017, ARU was a laboratory for testing the relationship between design, research, and teaching. This text examines some connections between the design process and the pedagogical approach of ARU.

Introduction

The relationship between practice and theory is complex. Inherently, one depends on the other – design decisions are often based on some form of reference from the past. In this way, design and theory can have a cyclical relationship, an approach that the late Florian Beigel, director of ARU, consistently referred to from the late 1970s onwards as “design as research” – a proponent to a widespread approach that has become increasingly popular in both teaching and practice in recent years. Within ARU, this is a method of practice incorporating design, drawing, and writing that allows the project to develop in a thoughtful and critical manner. We would like to explore how one influences the other and reconsider how we define theory, as we interrogate alternative approaches to the use of references.

I

The hand-drawn sketch can often be identified as the starting point of a scheme. This form of drawing remains inherently a product of both the hand and the mind – an intuitive response of the designer that may encompass the key concepts, histories, and spatial qualities of the project. Often, it is also the
first time that the designer begins to transcend the schism between two- and three-dimensional spatiality of a project or, to use Peter Märkli’s term, the point at which composition becomes gestalt. Whether it represents a reference image or a site plan, the sketch can be read as a tangible summary of the primary thoughts of the designer.

By taking a close look at a hand-drawn sketch by Beigel of a Korean *pojagi* (fig. 10.1), a textile made from patches of fabric traditionally used to wrap and transport food – we can explore the idea of design as research. The ambiguity of Beigel’s pencil drawing can be described as “beautifully unsure,” relaying essential characteristics of the irregular and seemingly unconcerned way in which the original textile is sewn together.

![Fig. 10.1](image)

**Fig. 10.1** Florian Beigel, two pencil sketches of a *pojagi*, 11 October 2013.

This particular drawing was produced after the completion of the building but can still be used to explore the manner in which Beigel has used the sketch to summarise the reference. Over two facing pages of a sketchbook (slightly narrower than A4 size), there are two interpretations of the same piece of cloth – gentle and uniform pencil lines delineate a series of shapes that seem to correspond to each other but differ in scale and to some extent proportion. Both are dated on the same day.
The sketch on the right has one extra line. The fact that Beigel drew the same subject in two similar ways suggests that he was aiming to portray a quality beyond simply representing the subject. He often said that he tried to draw “without preconceptions,” and the sketch of the *pojagi* is a highly selective and reduced representation of the fabric; Beigel has drawn out the essential characteristic qualities as he sees them.

Despite being created subsequently, Beigel’s drawing of the *pojagi* is significant in explaining ARU’s approach during the design of the Pojagi Building (2004, fig. 10.2 -10.3), a scheme built by ARU in Korea housing a jazz café, a gallery for fabrics, and a house. A central element of this scheme are the light-weight polycarbonate pavilions that sit gently above the solid plinth of the café.
supported by a visible steel structure and a slightly skewed timber subframe. It is the relationship between the skewed timber members and the original fabric of the *pojagi* that lends the building its name. A series of developmental drawings from different stages of the design (fig. 10.4) consistently show the character of this frame as it evolves from concept to construction – all of which are related to the original sketch. Through this process, the open-ended qualities of the sketch can be translated into a project – the built work has become less “finite.”

*Fig. 10.4* Florian Beigel and ARU, Developmental sketch of Pojagi Building.
The design sketch translates the original reference of the *pojagi*, aligning it with the final timber structure. It adopts the inherent ambiguity of its reference, allowing a non-finite quality and a variety of interpretations. Adopting the characteristics of the cloth observed through Beigel’s first sketch, the uncertainty of the pencil lines relates to the original reference while also allowing a certain amount of interpretation. As such, the idea of the “beautifully unsure,” inherent to Beigel’s indistinct pencil lines, conveys the way in which the building is constructed. In this way, a sketch of a reference can become part of the design – a process that Beigel describes as “an intelligent understanding of the past.” This allows the designer to reinterpret history within the design process through a reappropriation of the original object.

II

To understand the importance of the sketch in relation to ARU’s work, we must first contemplate what the aim of the sketch was – and what we can learn from it. This begins with a comparison of the conceptual and the theoretical.

The etymology of the word “concept” consists of “take” (*capere*) and ‘with’ (*con*). This suggests a conjunction of ideas, in the same way that thoughts are gathered together at the *inception* of a project, or how a *receptacle* unifies different elements into a single place. A “theory,” however, has a far more removed relationship with the design process and comes from the idea to consider or to look at (“spectator” – *theōros*) – sitting in line with a set of ideas perceived retrospectively.

We could therefore align the idea of the concept with a certain amount of temporality and flux, whereas theory has a more static dimension. The distinction between the two is made clearer in the context of their definitions when we suggest that the concept isn’t easily made tangible, whereas a theory can often be associated with something that can be seen and described, for instance through realised buildings.

In his writing on suprematism, Kasimir Malevich proclaims that “essence has always been destroyed by the subject.” In many ways ARU’s design approach follows this idea, where the open-ended and interpretive concept is used to guide the choice of form, material, or colour. As with Beigel’s sketch, an early drawing often succinctly defines the key concept or architectural articulations relevant to a project, and in the case of Beigel’s *pojagi* sketch, the subject is less important than the ability of the sketch to convey a concept. Perhaps the design process used by ARU could be called *operative theory*; the sketch is a vehicle for understanding the design, and, at the same time, it defines the premise of ARU’s theoretical approach in a more general sense.

In addition to this, it is evident that the drawing of the *pojagi* allows other concepts to be applied – for example, the idea of the tension between the solid
and the void of the original cloth. It is the void and its element of uncertainty and ambiguity that lends this sketch its poignancy. Whether it is made before or after, the sketch is a developmental tool whose open-endedness allows the project to be understood. The lines define a concept; the voids in between represent the potential for changefulness; the solid and void are in tension. In this manner, the sketch acts as a medium that can be interpreted in various ways. It becomes not only a carrier for a concept relevant to a particular project, but equally formulates spatial ideas that resonate through ARU’s work.

III

How has this working approach informed the way that students are guided in their design projects? The point is to come to an understanding of the principal spatial and tectonic relationships of a given reference and to use this understanding as a guide when searching for a spatial concept in a project without imitating an image or a style. In the following students’ work, characteristics true to ARU’s pedagogical approach are conveyed without relaying a specific stylistic norm. Design is a synthesis process that requires a certain sense of risk and a few stabs in the dark before it begins to come to life and begins to have its own internal logic. One can use an existing architectural example as a reference or inspiration during the design process. It is there to strengthen and focus the spatial ideas as they are developing in the design. In the end, it is a matter of having a good eye.


Initially, Bank made a careful study of the “hôtel particulier” building type that were built during the seventeenth and eighteenth centuries in France. He studied the Hôtel de Beauvais (1660) and the Hôtel Carnavalet (1548), both in the Marais district of Paris (fig. 10.5–10.8).

The Hotel de Beauvais, built within a dense and awkwardly shaped site in the city, has a beautiful regular void figure as a courtyard, a powerfully theatrical space embedded within the city block. At the first-floor level, there is a garden courtyard asymmetrically positioned to the main courtyard. Alex studied and drew this obsessively (fig. 10.9). He selected a similarly dense site in central London, where he made intelligent translations and interpretations of the hôtel particulier typology (fig. 10.10).

He designed a series of public courtyards – urban figures as voids. Similar to Hôtel de Beauvais, the entrance to the main courtyard is through a passage, and the garden courtyard is located on the first level.
Fig. 10.5  Urban Figures, model studies of the design proposal (left), the Hôtel de Beauvais (middle), and the Hôtel Carnavalet (right) all at the same scale, Alex Bank.

Fig. 10.6  Hôtel de Beauvais, Paris, (1660), first-floor plan and section studies, Alex Bank.
Fig. 10.7  Courtyard of the Hôtel de Beauvais. Photograph: Alex Bank.

Fig. 10.8  Hôtel de Beauvais, Paris, pencil sketch studies, Alex Bank.
Fig. 10.9  Sketch study of the design proposal with courtyard voids as figure.

Fig. 10.10  First-floor plan in the context of the existing city block.
In this next example, one corner of a field of patio houses within Álvaro Siza’s design of the Quinta da Malagueira urban landscape project in Évora, Portugal has been reconfigured with several public void spaces. Public and domestic activities are in close proximity. A public hall, like a small tower house, builds an active relationship with Siza’s overhead infrastructural ducts and the horizon. The concept plan drawing is filled with spatial tension and potential (fig. 10.11–10.12).

What we can see from the two students’ work is that they have developed different schemes through a range of different mediums. Yet there is a thread that draws the two together – an underlying set of concepts that can be explained through the project – the relationship between the solid and the void, or the ability to make drawings that are open to interpretation and reflect the essential characteristics of the design proposal. This is the manner in which ARU has worked with students – a propositional approach based on spatial concepts. In this way, ARU’s approach to design as research, or operative theory, can be seen in the way they work as architects and how they convey ideas to their students.
Conclusion

Throughout ARU’s work there is an element of duality, a dialectical relationship that exists: solid and void, infrastructure and inhabitation, hand and mind. Once viewed outside of the design process, these can be seen as theories associated with the works of ARU. In this way, concepts are drawn out as theories providing a framework to understand ideas. Theory and practice in this case are intrinsically related and self-defining at the same time – the two are distinct, yet intimately reliant on each other. In the words of Beigel, “The world has become quite complex. Things are no longer one thing or another, they are both.”

Fig. 10.12  Design plan, Jasmine Low.
Notes


Bibliography

