On Form, Function and Ambiguity

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One of the most trite and often recited relationships in architectural design is "form follows function." While this notion seems superficial, and even anachronistic, in contemporary discourse, this tenet may be more productive if one considers both of these architectural staples as more malleable equivalents. The equation can then be an exercise in formal experimentation and experiential discovery where form is a vocabulary and function is a spectrum.

An attitude of ambiguity as it relates to function yields architectural conditions more about possibility than about specificity. From this perspective, architecture's strength may come from how formal language can induce and provoke rather than prescribe and specify how to inhabit a space or an object. This recalibration brings the body back into formalism, away from autonomous, isolated exercises.

Two recent projects by SPORTS rely on this productive ambiguity of form to generate space and a range of experiences. This paper will discuss how the projects use a specific formal language and variation in this language to set up a multitude of architectural conditions and ways to engage users. Privileging discovery and wonder, visitors are provoked to interpret the relationship between object, body and context in new ways. In both projects, the manipulation of the geometry and features within the overall form act as catalysts for playful and novel uses by both the individual body and the larger crowds. Overall, this paper will highlight how a precise, but functionally vague, formal vocabulary may generate a certain elasticity in how we encounter, appropriate, and utilize the built environment.

The age-old architectural tenet of "form follows function" - the confidence in which disintegrated long ago - may yet be productive if one considers both of these architectural staples as more malleable equivalents. The equation can then be an exercise in formal experimentation and experiential discovery where form is a vocabulary and function is a spectrum. This line of thinking begs the question: what does it even mean for architecture to be "functional"? What does it mean to function well, or for something to work? And "work" or function for whom? As James Wines notes, buildings can be "fragmentary and ambiguous, as opposed to conventionally functional and determinate."[1] This attitude and conceit

yields architectural conditions more about possibility than about specificity (or as Wines says, "about questions rather than answers"[1]). In other words, architecture's strength may come from how formal language can induce and provoke rather than prescribe and specify how to inhabit a space or an object. This recalibration allows for a number of potentials: 1) it brings the body back into formalism, away from autonomous, isolated exercises, and 2) it advocates for architecture to be infrastructural and negotiative to a more inclusive public.

To speculate on these ideas, it may be useful to first consider human behavior. The term 'behavior' suggests a repetition of minute, daily activities of the human body that obviously can differ substantially from person to person, group to group, culture to culture. In its basic form, 'behavior' leads to the formation of collective habits of daily life. From one vantage point, the design for behavior might suggest a super functionalist or ergonomic approach, one exemplified by modernist studies of efficiency in the workplace and home. In such studies, which were used to "scientifically" test and prove efficiency of spaces, there is absolute reciprocity between the function and the organization of the space. In his 2012 book, *Architecture Concepts: Red is Not a Color*, Bernard Tschumi discusses reciprocity as one of three main relationships between space and activities[2]. Reciprocity is when the organization and scale of a space is perfectly matched to the activity being done in it. The other relationships he includes are indifference and conflict. Indifference is characterized by a space that was not designed to support a particular program, but it works fine anyway. Instances of cross-programming, like Tschumi's examples of a church that has been turned into a gymnasium and is temporarily hosting a polling location, would fall into this category. Conflict, on the other end of the spectrum, proposes the performance of an architectural transgression. Tschumi uses the example of kids playing hockey in the living room, or cooking in the bathroom. Thus, he says: "The assumption that 'good architecture is architecture that exactly fits functional needs' does not necessarily lead to interesting buildings."[2]

So if architecture can reinforce common behavior and be made increasingly efficient to host that behavior, and in turn, that alternate behavior can transgress architectural function,

Figure 1: Rounds by SPORTS, photo by Nick Zukauskas

the varied relationships between form and function, between space and activity, has the power to challenge our understanding of what is 'normal' use of a space or object. And if perhaps our "normal" understanding of the "functional" is the efficient or ergonomic approach, then an abnormal understanding would be a blurrier notion of the functional constructed through deliberate estrangement. A change in orientation, formal defamiliarization and context misfit are a few ways in which this estrangement can occur.

Bruno Munari, in his 1944 photo essay for Domus "One comes home tired from working all day and finds an uncomfortable chair", advocates a functionalist position, but viewed through another lens, the images of someone seeking comfort by misusing or hacking the functionality of the common armchair by shifting its orientation and body position also productively question the relationship between behavior and misbehavior as it relates to a particular function and orientation. "To behave" could be understood as someone using the furniture how it was meant to be used (in its "intended orientation"), and we might understand misbehavior as something that celebrates creativity/play of the user as it relates to use and orientation – translating functionalist into something much blurrier. More recent examples like First Office's *Possible Table* suggest that while table on its side, for instance, might lose the use it had when it was oriented to have a horizontally planar surface, perhaps it has developed new, unfamiliar uses and effects.

Further, many furniture designers throughout the last century have playfully explored the idea of formal estrangement as it relates to these ideas – The Living Tower by Verner Panton (1969), for instance, pushes beyond any familiar quality of the "chair" or "sofa" into something much more ambiguous. What are described by the Vitra catalogue as "cleverly arranged interior niches" are able to be interpreted by users and engaged with in a number of body positions, thereby "encouraging both communication and relaxation", presumably in a way more conventional furniture does not.[3]

Context is also critical. Stairs and railing in the urban environment, for instance, are constantly "misused" by skateboarders, so much so that this architectural or urban element has become a normalized element in designed skate parks, despite the fact that these new environments have no use for the original function of the element. This is no longer a stair as we understand it, it's something else. The urban artifact that had a specific purpose is appropriated into a new setting for a completely different use, which sets up a new normalized condition of misbehavior, or counter-behavior.

ROUNDS

In consideration of these ideas about a more malleable relationship between form and function, SPORTS designed and built a project for the Ragdale Foundation in Lake Forest, Illinois in 2016. The project, called *Rounds*, has specific formal language, yet no "right" way to use it. Like Panton's Living Tower, there is a kind of hyper functionalism in the project that emerges out of its unspecified function – a kind of precise ambiguity, or specific vagueness. The features within the overall form were specifically designed to the scale of human body and the variety of ways in which the body can engage with the surface. The project, which is an outdoor performance pavilion, is round in plan, and therefore has no front, back, side, nor specific directionality. The project uses a specific formal language (curved undulations) and variation in this language (scale, radii, proportions, degree) to set up a multitude of architectural conditions and ways to engage users. The manipulation of the geometry and features within the overall object act as catalysts for playful and novel uses by both the individual body and the larger crowds.

The project learns from the history of theaters in the round, which historically bring the performers into the same space as the audience, allowing for a more dynamic – and blurrier - relationship between stage and seating, between performer and viewer. Roundness undermines of the hierarchy of the typical bandshell structure deployed in this kind of setting, allowing for the forms to be interpreted by audience members and performers alike. Depending on how the performance is staged and organized, the formal articulations take on a different implied use. For instance, when a performance is sited on the main stage, the low parts of the ring are implied seating, while the mid-scale undulations are implied

Figure 2: Rounds by SPORTS, Ruth Page School of Dance performance July 14, 2016, photo by Nick Zukauskas

entrances. When another type of performance takes place, these identities shift, destabilizing the "function". The finish material of the project – a mint green elastomeric stucco – is a somewhat soft and flexible material due to the polymer base. This seamless soft and grippy surface helps to reinforce the overall programmatic goals of function (nearly) everywhere – you can walk (almost) everywhere, lay (almost) everywhere, etc. Though sitting, laying and napping were some of the ways in audience members and resident artists were anticipated to engage with the ring, it was interested to see how artists and performers over the course of the summer would further activate the surface, establishing a broader understanding of use.

Due to the conical nature of the surface (curving in both plan and section), the project demonstrates how simple digital fabrication techniques may generate both complexity of form and ease of construction. The overall form was developed from 48 conical structural wedges. There were 29 types, with many repetitions, so that there was ultimate flexibility in not only in construction, but also in design within the context – (we swapped a few wedges on site the first day of construction to make proper alignments with paths of travel, for instance). Each structural wedge is made of 3/4" CNC-milled plywood profiles, egg-crated together, attached to the adjacent wedges, and then clad in 3/8" bendable plywood. Since the build team was primarily students who ranged broadly in age and experience-level, the representation and communication of how each individual piece would come together was critical in order to make the simple seamless form we intended. What results is a complex (yet systematic) form that looks easy. It's a singular object, autonomous to its context, that "plays" with the body.

CITY THREAD

While *Rounds* explores the relationship between form and body, another recent project by SPORTS, titled *City Thread*, negotiates the urban context, conceptually nesting within it and acting as a mediator between the city and the body (or bodies). The project, completed in November 2018, develops this idea further into being one of negotiation. There are a staggering number of contingencies in an urban public space, particularly in an alley, where the pipes, AC units, vents, grease traps, egress stairs, electrical cables, trash storage, vehicle access, fire hose hookups, etc are relegated.

Similar in formal strategy to *Rounds*, but different in relationship, SPORTS developed a systematic language that allowed for negotiation of the various contingencies while also allowing for use in a number of different ways. The space that the project inhabits – along the sides of the alley to maintain vehicle access – allows people to experience the edge of the

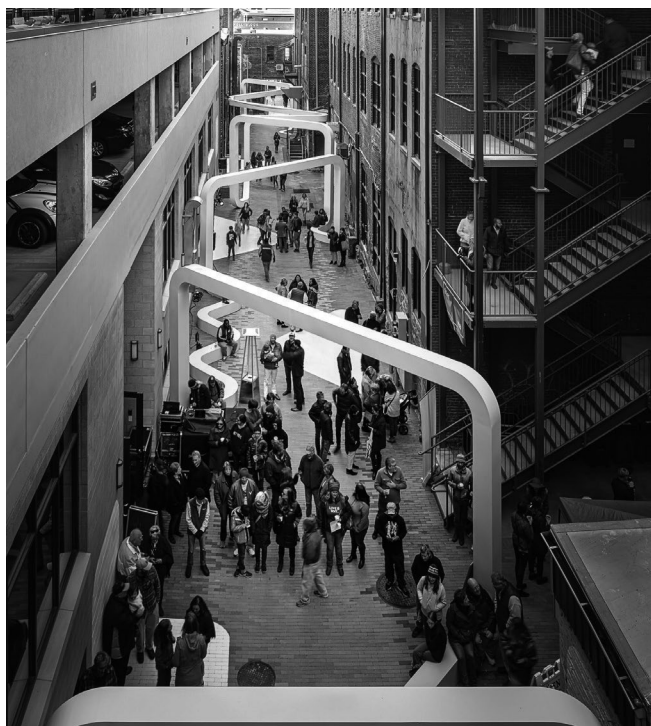Figure 4: City Thread by SPORTS, photo by Garey Gomez.

Figure 3: City Thread by SPORTS, photo by Garey Gomez.

built environment – and the urban sub-objects that are typical of an alley - differently than they might otherwise.

SPORTS was one of three finalist teams for the competition who were asked to develop a proposal for turning the 300' x 25' downtown alleyway into a vibrant – and permanent - public space, for a $80,000 budget total (in other words, less than $11 per square foot). It quickly became clear from the final competition proposals that the budgetary constraint mixed with the contextual contingencies and clearances became the primarily challenge of the competition – how can you do something impactful, for almost no money, in about 5-7' on either side of the alley? What is the most efficient way to make a big impact?

Given the nature of a simple formal vocabulary, the project is highly adaptable and was calibrated specifically to negotiate the varied contextual contingencies and clearances in the alley and add a new layer to the built environment. SPORTS understood the project as an infrastructural mediator between the existing built environment and the bodies that would activate the alley. The negotiation allows multiple conditions to exist simultaneously – the functions of the conventional alley are preserved (the grease traps have to be serviced every 3 months, for instance), while also layering in the new uses of alley as public space.

By virtue of its geometry, the continuous form possesses many potential programmatic conditions including informal lounging/sitting, mini-stages, framing community murals or art, large gatherings, movie screenings, and so on. Further, the zigzagging linear structure implies a variety of smaller spaces within the alley, breaking down the overall space into a series of "urban rooms", mediating between the body and the tall urban context surrounding. The construction is again – like Rounds - a kit of parts. In *City Thread* there are only six formal elements – straight pieces of varying length and five different radius corners. In combination with one another, these six elements get arranged and sequenced through the alley to produce the final squiggle. The kit of parts system allowed for formal and spatial variation, while keeping fabrication costs at a minimum, and timeline quick. In fact, the project was installed on site in a total of four days.

Ultimately, due largely to an interest in inclusivity and broadening architecture's audience, SPORTS is interested in an attitude about the built environment that's more about provocation, rather than prescription. Whether the relationship is between body and object, or body and city, overall, *Rounds* and *City Thread* both illustrate how a precise, but functionally ambiguous (ambiguous both in the sense of having multiple interpretations, and in the sense of having capacity to simultaneously operate multiple ways), formal vocabulary may generate an elasticity in how we encounter, appropriate, and utilize the built environment.

By leveraging a breadth of both physical and cultural conditions these projects hope to discover discrete but other uses of form, space, material, visual effects and context. This is a rejection of the inertia of expectation, instead embracing possibility - in favor of a more malleable form of operating.

ENDNOTES

1.   Wines, James. Interview with James Wines: "The Point is to Attack Architecture" / Interviewer: Vladimir Belogolovsky. *Arch Daily News*, March 9. 2016. https://www.archdaily.com/783491/interview-with-james-wines-the-point-is-to-attack-architecture (accessed October 8, 2018)

2.   Tschumi, Bernard. "Program: Juxtaposition / Superimposition, Photoessay." In *Architecture Concepts: Red is Not a Color.* 182-191. New York: Rizzoli, 2012

3.   Vitra International AG. "Living Tower, Verner Panton, 1969" Vitra.com. https://www.vitra.com/en-us/living/product/details/living-tower (accessed October 5, 2018)