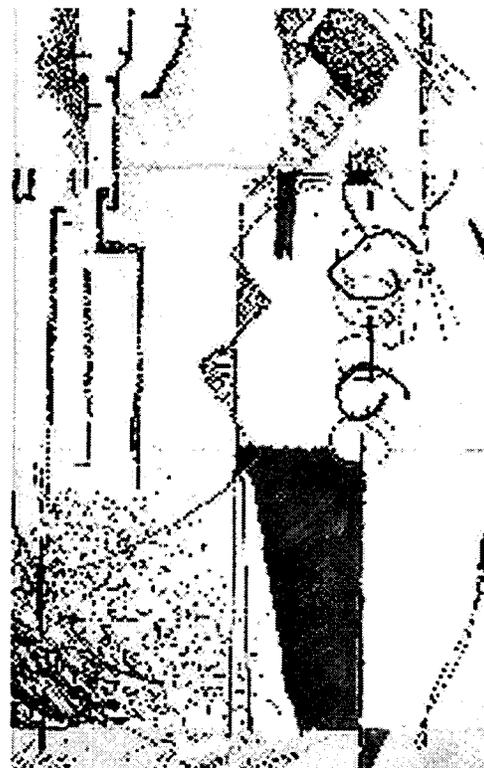
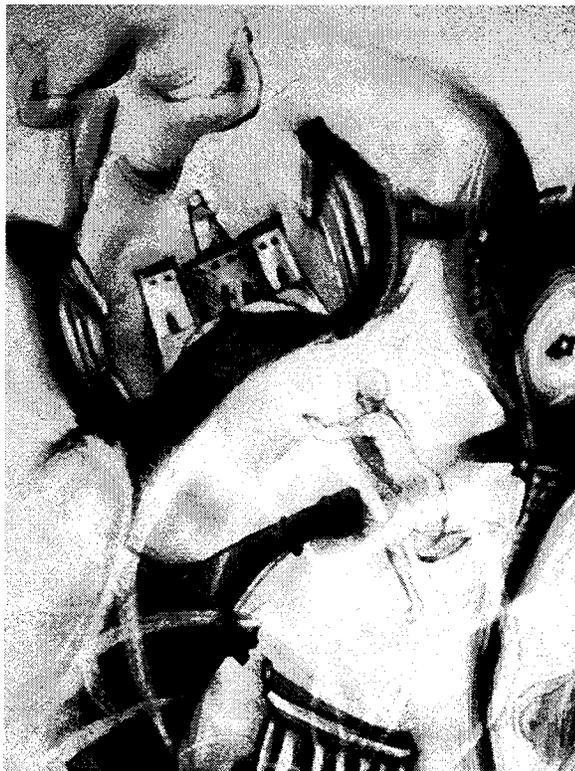


# Hybrid Sketching

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These architectural images portray the quick, loose, hand drawings that resemble a built structure. They epitomized the past conventional image of a sketch, however what was once considered a sketch may be changing. In a vastly evolving technological world, sketches and new media for representation, must be reconsidered. The meanings of sketches may be unchanged and traditional but they might look very different. Many architecture students think only of using pencils and paper to sketch but other methods exist. This paper deals with how and why architects can sketch with various media – hand sketches, models, computers and movement through space. More specifically, this paper will discuss teaching design students about the concept of sketching with diverse media, and particularly the importance of play and serendipity. The paper will then, briefly discuss experiments with media in the design studio. It will also describe how different forms of sketch media serve architects in the design process and how sketches themselves serve as a hybrid form of media.



Figures 1, 2 & 3: Three examples of hybrid sketches.

## SKETCHES

Historically and through definition, sketches have been seen as a mark made on a surface with a pointed tool. Today in a world of new hybrid media, this definition may no longer be valid. Instead, a contemporary definition of “sketch,” may include any media that assists in a process of design. In general terms, sketches are an effective medium for invention and inspiration. Architects use sketches to record concepts, discover new ideas, communicate to themselves and others in the process and to evaluate their designs.

Sketches can be facilitators of imaginative functions. Although humans all use imagination, it is often elusive in its origin. Mary Warnock defines this concept: imagination is frequently used to envisage objects which are absent from view, to change or interpret that which can be observed, or to recognize and re-use items which are known.<sup>1</sup> Sketches help architecture students comprehend the quick thoughts that form in the mind. They are easily manipulated to change ideas, and in the case of hand sketches, drawn over and simply erased. Although it is possible to understand the qualities of imagination, it is compelling to believe that the creative imagination is something more. The creative imagination may be the phenomenon of divine inspiration or the ability to conjure up spontaneous creations.<sup>2</sup> Artists and architects have long been viewed, by layman, as possessing these unexplainable creative talents.<sup>3</sup>

### A NEW VIEW OF SKETCHING; THE HYBRID SKETCH

Because of the new tools available to students of architecture, the new, hybrid sketch, may be comprised of various media that encourage the incomplete, ephemeral/temporal, manipulative qualities of media in design process that help architects evaluate and make decisions about design. This media may encourage creativity in ways never expected, and may affect the way students and practitioners think about architecture. Wolfgang Meisenheimer expresses this proposition well: “And the question arises of whether a new, different understanding of architectural drawing [media] alludes to a new and different understanding of architecture!”<sup>4</sup> In addition, new media may recombine elements and focus attention on the seductive qualities of the images. With these and many other concerns about architect’s process media, it is necessary to deal with the uncertain and serendipitous qualities that may be opportunities rather than detriments. For example, students and architects must consider the most appropriate task for each medium. Why not use CAD for drafting if it allows for changes and is more precise than traditional drafting?<sup>5</sup> Or why think about the computer as just replacing a pencil, when it’s more fascinating qualities concern abstraction? In the past, architects have combined the term sketch with other media such as “sketch models,” identifying those models as three-dimensional but early in the process; incomplete and abstract, that speak more about concept than they convey a final product. They then become passive and active thinking mechanisms, places where the designer can speculate, alter and consider. These new forms of process media, composed of various media, may need a new name. No longer tied to the terminology of “sketch” this new approach may need to express all of the temporary-ness of media in the design process. A new way to identify the media used specifically for the act of designing may be to name these new combinations of thinking tools — “hybrid thinking mechanisms” — which for simplicity we will call *hybrid sketches*.

The functions of *hybrid sketches* are immersed in the process of design. It may be possible to dismiss this term “design process” as one in which every architect/designer is familiar with and each invests in its properties. This may be understood as the conceptual stages of first exploration, the client/architect pre-discussions, the early exploration of ideas, the development of those ideas into a design, the development of the design into physical form or the selection and detailing of materials. The word process implies succession, and effort over a period of time

to reach a goal. But most importantly, a design process requires a period of making/creating and then a system of testing/evaluation. These two important aspects depend on the ability to understand the potential solution. Media itself is the medium (both physical and magical in meaning), that encourages thinking. The process, then, is the “working through” of the design, depending on the ability to manipulate, visualize and consider. The medium of the *hybrid sketch* must be chosen carefully, and the limits and potentials of the medium are vital to how the architect utilizes them. The architect must understand, manipulate and learn from the specific thinking media.

Sketches then, epitomize a design process since they are interpretable, manipulative, incomplete, effortless, and assist thinking. Sketches are outlines or abstractions, “to give the essential facts or points of, without going into details”<sup>6</sup> They also can be a two dimensional or three dimensional action documenting primary features of something or “as preliminary or preparatory to further development.”<sup>7</sup> The act of drawing/sketching facilitates interpretation; this understanding is expressed by Richard Wollheim when he writes, “[T]o see a drawing as a representation of something is no longer to take it, or to be disposed to take it, for that thing; it is rather to understand that thing by it.”<sup>8</sup> They anticipate a future building, help conceptualization, allow architects to comprehend, are the physical element to evaluate and spark the architect’s creative imagination. The media choices then, affect and effect the way the process progresses and additionally the outcome, the finished building.

At this point, it is necessary to introduce the concept of play as analogous, and explanatory, to the process of design (and having representation qualities) to help explain the intelligibility of these events.<sup>9</sup> Play is the structure within which architects manipulate concepts through the constructs of media. The boundaries of play allow architects to work within a set scheme, but also to stretch the limitations of those boundaries to discover the new. “[N]o play is perfectly free play ... to play is to sacrifice freedom and accept limits ... being limited, being played, is a condition of playing at all.”<sup>10</sup> The play of “give and take” brings out a truth, and forces architects to view a new approach. James S. Hans feels that play requires both novelty and repetition and that the course of the play is the relationship between these two. “[P]lay shares one thing with games; a familiar structure that allows one to play with the unfamiliar.”<sup>11</sup> The play is never an end in itself; the life is in the activity. Hans-Georg Gadamer writes, “Play fulfills its purpose only if the player loses himself in play.”<sup>12</sup> In this way, it is the action of the play that helps architects discover and make decisions. The player has the experience of being outside oneself as the play is all-absorbing, and the play activity is often seen as being un-self conscious.<sup>13</sup> Architects use their media for this play since they have found it helps them understand the images that come from their manipulations. It is a learning experience and the structuring role of play increases architects’ knowledge and influences comprehension. The act of play making discloses a discovery, and references concepts for the creative imagination, since it has been said that you know what you make.<sup>14</sup> It may be the “play” aspect in the word “allusion” that opens a path of associative learning, (allusion, L. to + play ‘ludere’).<sup>15</sup> Play then, has several elements that can be compared to the uses of media for architecture. Play comprises a dialogue of “give and take,” it is representative as it may stand for something in another dimension, it is limited by boundaries that provide new opportunities, it concerns ritual and repeatability and presents an intelligibility.

Sketches of various media represent *hybrid sketches*. As an example, a computer sketch may now be what the computer does best — simple line drawings or a combination of nondescript volumes (similar to massing models). If a sketch can be defined as a both outline and unfinished at the same time it is preparatory to something else, the sketch may not need to resemble a hand sketch. A gesture may also be a sketch in a physical form presented by our bodies. It is common to use the term “sketch” for a quick humorous skit. The performance is brief, incomplete

and often unrehearsed which understandably makes it comparable to a sketch. In this way, an impromptu dance may be an example of a *hybrid sketch*. Architects gesturing on a site with their bodies might act as a hybrid method of thinking through a concept.

The activities of creativity, play, sketching and the design process are inherently interrelated. Through experience, architects have found their media to be useful and are persuaded by their revealing qualities. There are several primary functions of sketches for architects in the design process that translate to the ways *hybrid sketches* are employed. They act as recording devices, they assist in the discovery and creative imagination that finds inspiration, they communicate to the architects themselves and to others participating in the process, and they express concepts and ideas that can be evaluated for appropriateness. Following are some student projects that illustrate *hybrid sketches*, from several architectural design studios.

### THE EXQUISITE CORPSE; HAND SKETCHES

Historically sketches have been used as recording devices. The typical travel companion for architects' has long been a sketchbook and pencil/pen. The hand sketches need not be time consuming or complete, often a few lines stimulate recollection of a more complex concept. Although these sketches record thoughts that many soon escape, a reminiscence that is compelling may need to be recorded as it appears in the mind's eye. A student project that views the hand sketch both as a creative process and a collective endeavor, is the Exquisite Corpse.

Fantasy and "possibilizing," aspects of sketching, can be accompanied by an example of creative inspiration. Andre Breton, a major verbal representative of the Surrealist Movement, writes about a game that views creativity as an act of association. The "Exquisite Corpse" was played in a group, where each player in turn drew a sketch of partial image, turned over the edge of the paper and passed it to the next player.<sup>16</sup> The "Exquisite Corpse" is not unlike the stains on rocks or cloud formations since they all entail a haphazard image.<sup>17</sup> This game has each person place fragments from what is momentarily running through their minds, the resulting image was fantastical, comical and absurd in its incongruous combination. For students, this project expresses how the few lines given to them were a chance to play with associations. The project also questioned where ideas came from and how hand sketches facilitate a quick flow of imagery. The students must play with the associative dialogue of imagination as they react to the few lines they are given. They also have limits of space and time in which to stimulate their imaginations and sketch quickly. The images they produce are not intentional and thus they are surprised and fascinated by the forms appearing on the page, as well as the combination images that are the end product.

The Exquisite Corpse is also a *hybrid sketch* in that the resulting images are collective. As the sketches are passed between the players they become interrelated. The media is now collective through several minds and results in new ways to think about creative inspiration for architectural students. The students learn to appreciate and not pre-judge the origins of ideas. The collaborative qualities of the Exquisite Corpse act as *hybrid sketches*.

### MODEL MACHINE PROJECT; SKETCH MODELS

These concepts of *hybrid sketches* can find an application in other media. For example, the Model Machine project offers students several good lessons in the perception of the hybrid thinking mechanisms of a sketch model. Once the model is formed physically and can be viewed, its presence can be continually changed and referred to. A model is the three-dimensional essence of conceptual thinking.

The Concept Machine project was developed to explore the relationship between literature and the architectural sketch model, utilizing text as a source of inspiration for design production and thought. Because of their complexity, models can take on a life of their own and inform the architect of qualities never expected.

In this project, written text was used as the first representational space that initiates a journey of inquiry. This migration to and from diverse representational countries required continuous metaphoric or analogic leaps and re-framings. The design problem required students to move from an assigned Memo from Calvino's *Six Memos For The Next Millennium* to architecture by using the intentional act of interpretation.<sup>18</sup> The interpretation process was carried out and documented in four successive stages, each one a form of a sketch offering a different symbolic environments: (1) textual space; (2) image space; (3) detailed space; and, (4) physical space—the machine. This methodology demanded an engagement in both abstraction and analysis. It manifest its insights through appropriate depiction's (e.g., written, graphic, or tectonic texts). The students were made aware that this process bridged the highest level of abstraction (i.e., the written word representing reflection, the intangible) with the highest level of concreteness (i.e., the physical, the tangible). The objective of the media migration was to demonstrate: (1) an understanding of depiction as an universe of discourse that affects and is affected by what it represents; (2) insightful and progressive interpretation of the originally assigned Memo; (3) meaningful and clear conclusions about the relationships between the various architectural components in their concept machines; and (4) tectonics and craft with an interaction between representation, thought, and design products. The Concept Machine was quite successful in requiring students to engage the following questions: What is architectural about the qualities of text? What is the relationship between symbolic, thematic, and experiential content and the representational medium? When design students faced these representational issues they opened their minds to a broader understanding of fundamental design tools and concepts.

With this project, the students were allowed to play with various sketch media and explore its possibilities. The models were playful in that they provided the intelligibility that informed the process. The Memos provided the boundaries to the play, since interpretation of the text stimulated the conceptual thinking. The move of discovery and remaking in several stages of the process, supported the playful expression of design.

The students were asked to present their conceptual interpretations first as two-dimensional analysis. In groups of three students (another example of a hybrid), they composed a demonstration of their interpretation. Continually through the process, specific media were not specified, so that they could exploit whatever media pertained to their concept. They utilized, paper, computer, paint, traditional building materials, foam, found objects and plaster.

The concept machine models communicated ideas to the architect (their designer) but conversely, they communicated an understanding of the form to a viewer unable to perceive the concept in a verbal way. A surprising "truth" was revealed, as the students comprehended how the ideas of "text" can be translated into physical form. As to the definition of machine, interconnected parts that perform a function, and the relationships between the components in the text, acted as relationships between component parts of the concept machine. These parts may, because of their varied expressions, each needed to be represented in different media. This movement between and through media questioned the recombination and "transtextual" aspects of the concept machine project.<sup>19</sup>

## COMPUTER MULTI-MEDIA PROJECT; COMPUTER SKETCHES

Although initially considered a recording device, the computer also creates a *hybrid sketch*. The computer sketch may be a way to produce abstract images of conceptual ideas. The serendipitous qualities that emerge from the hybrid methods of sketching with the computer are evident in the Multi-Media Computer project.<sup>20</sup>

The goals of this multi-media computer sketch project were to explore representational characteristics dependent on the instrument, apparatus or technique, design opportunities brought by the use of different media, and/or media iteration methodologies. Teams of three students began by photographing a construction site and emphasizing and isolating perspectival viewpoints through the site. Then each team constructed a transparent spatial manipulation model using five plexiglass planes. Next students were asked to examine the re-interpretive potential of their model and to plan a video performance. Before the actual video-taping took place, each student was to draw a minimum of five free hand sketches exploring different points of view. The goal here was to search for unexpected spatial viewpoints through the model. It was important that the student explored how the new media (video) differed from traditional photographic media and free-hand sketching. Then the students were asked to convert the VHS tape to TEN (10) *spatially provocative* still frames stored on computer disk. These video images were *digitally manipulated and enhanced* through, repetition, isolation of elements, changing context, deformations, subtractive processes, graphic overlay, application of filters, etc. using Adobe Photoshop. Finally the students selected two spatially enhanced images that were edited and enhanced to improve their inherent spatial qualities.

This project depended upon the serendipitous qualities of the sketch as they crossed boundaries of media. Beginning with a photograph, and scanning it into the computer, initiated a process of abstraction that produced unexpected forms. The computer could act as a recording device to save the initial images, and additionally, the students could continually revert to these original construction forms. This progression offered the ability to edit and evaluate at various stages throughout the process. As an example of play, the computer encouraged the repeatability and ritual of these manipulations. The computer also provided rules within which to play. The software limited the possible moves and at the same time, these new combinations of photography, plexiglass models and computers allowed new hybrid thinking mechanisms.

As a good example of a *hybrid sketch*, this project was specifically designed to have the students reinterpret or manipulate the computer as a sketch. The process of abstracting (from a photograph and a model) and then interpreting (manipulating and making judgments) helped the students see possibilities in ambiguity and question what sparks creative imagination.

## 2-2-2 MOVEMENT THROUGH SPACE PROJECT; DANCE SKETCHES

It is possible to believe that architectural learning about sketching takes place within a variety of realms. A theory exercise assigned to the students, were two-minute (*hybrid sketch*) performances, in teams of two students, using two props.<sup>21</sup> The students were allowed to select a space in the fine arts building for their performance. Of all the art forms dance is perhaps the most immediate and obvious example that engages space through time. But, likewise, so does architecture. Human bodies move in spaces through the medium of time and thereby obtain information regarding the environment. The experience informs the user, allowing for a certain degree of learning to take place. It allows a certain ability to abstract design issues through observing the basic parallels of the fundamental ordering principles between dance and

architecture. As educators, it was noticed that part of the success of the assignment was due to the students' manipulation of existing space as well as using the existing space uniquely. The design problem required an interpretation and definition of three assigned concepts of space such as threshold, axis, contradiction, etc., providing a common vocabulary of the movement through space in dance and architecture. Due to the experimental nature of performance, it was observed that the students were able to break stereotypical responses to fundamental spatial concepts. The faculty found that this was due to the unfolding of the ideas that occurred as the students rehearsed and practiced their performances. The students learned how architectural insight may come from non-architectural sources and how to form intersections between interests and talents outside of architecture such as music, dance, and a multitude of other arts.

Dance, or movement through space, is not necessarily a medium for recording, in fact it may be a detriment. Memory for brief performances is difficult. Although the choreography of the movement is precise, each performance is slightly altered. This aspect of repeatability and change is distinctive of play. Also similar to play is the momentary activity. Play is only play, during the process. When a dance is completed it is no longer the dance, it exists as a choreography for a dance. The temporal qualities of the performance make it a form of dialogue. The students rehearsed and designed their performance as a gradual relationship between the props and their experimentation with movement. Their bodies' relationships to the props helped them create environments, because the props were equated with the boundaries of space. As architectural representations of space they were using their bodies' as a sketch. The gestures became the media of design, constantly adjusting to the environment and reacting to the props. If the ritual of dance is considered the first architecture, then this assignment returned to the origins of the sketch as creation of architectural space.<sup>22</sup> As a form of play, the movements provided the students a medium to design, a gestural sketch.

## CONCLUSIONS

The concept of *hybrid sketches* expands on definitions of sketch. Contemporary uses of media require this expansion of definition as the creative imagination cannot be limited, especially in view of new technologies. As ways to spark imagination in early processes of design, these projects reinvest in the necessity of play. Sketches may now be seen as a general overview, their specificity enhanced by media. Through perceiving design media as *hybrid sketches* designers and educators can engage creativity through utilizing the inherent qualities of various media.

## NOTES

<sup>1</sup>Mary Warnock, *Imagination* (Berkeley and Los Angeles: University of California Press, 1976), 193.

<sup>2</sup>Ernst Kris and Otto Kurz, *Legend, Myth and Magic in the Image of the Artist* (New Haven: Yale University Press, 1979). Kris and Kurz discuss the legendary 'hero' qualities of artists and use the term "divino artista" to express God's hand through the artist who emulated the creator.

<sup>3</sup>Ibid.

<sup>4</sup>Wolfgang Meisenheimer, "The Functional and the Poetic Drawing" *Daidalos* 25, 15 September 1987. Seductive Drawing, 119. Our brackets [media].

<sup>5</sup>James Smith Pierce, "Architectural Drawings and the Intent of the Architect" *Art Journal* 27, (Fall 1967).57-58. The media with which an architect begins to explore a design has an effect on the finished building. Vincent Scully speculates on this connection when describing the method Paul Rudolf used to design. Rudolf

employed a technique of parallel pencil lines to give texture and shade. Scully feels this technique is the reason Rudolf uses so much vertically striated concrete in this architecture.

<sup>6</sup>The Compact Edition of the Oxford English Dictionary.

<sup>7</sup>Ibid.

<sup>8</sup>Richard Wollheim, *On Art and the Mind* (Cambridge: Harvard University Press, 1974), 24.

<sup>9</sup>These ideas of play are taken from philosophical writers such as: James S. Hans, Joel C. Weinsheimer, Gregory Bateson, Hans-Georg Gadamer, Johann Huizinga and Roger Caillois.

<sup>10</sup>Joel C. Weinsheimer, *Gadamer's Hermeneutics: A Reading of 'Truth and Method'* (New Haven: Yale University Press), 104.

<sup>11</sup>James S. Hans, *The Play of the World* (Amherst Massachusetts: University of Massachusetts Press, 1981), 28.

<sup>12</sup>Hans-Georg Gadamer, *Truth and Method* (New York, Crossroads, 1989), 102.

<sup>13</sup>Hans op. cit., 8, 11.

<sup>14</sup>Giambattista Vico, translated by T. Bergin and M.H. Fisch, *The New Science of Giambattista Vico* (Ithaca: Cornell University Press, 1968).

<sup>15</sup>*The Compact Edition of the Oxford English Dictionary*.

<sup>16</sup>Patrick Waldberg, *Surrealism "The Exquisite Corpse"* (New York: Oxford University Press, 1965), 93-95.

<sup>17</sup>Leonardo suggested that one good method of inspiration was to observe stains on rocks.

<sup>18</sup>Italo Calvino, *Six Memos for the Next Millennium* (Cambridge: Harvard University Press, 1988).

<sup>19</sup>Linda Hutcheon uses the term "transtextual" to mean across texts in her book, *A Theory of Parody* (New York: Methuen, 1985)

<sup>20</sup>This project was given to beginning design/communications students the Fall semester 1999, by Professors Albert C. Smith and Julio Bermudez. The project builds upon the collaborative work between Bennett Neiman and Julio Bermudez.

<sup>21</sup>Graduate Theory seminar by Kendra Schank Smith at the University of Utah. A similar project was given to a beginning design studio the Fall 1997, in anticipation of a dance collaboration between the Dance Department and the Graduate School of Architecture, University of Utah. The professors involved were: Albert C. Smith, Robert Hermanson, Jody Johnson and Kazuo Matsubayashi.

<sup>22</sup>Alberto Perez-Gomez, "The Myth of Daedalus" *AA Files*, 10:51.