# Mind the gap: drawing (out) place and experience in design media

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**Abstract**   This paper presents six factors that favor the experiential conceptualization of place via a consideration of drawing, model-building, design-build, and digital media design tools based on extensive research, projects, and interviews with designers. It includes six key recommendations for designers to enhance their design and visualization skills with regard to achieving a mediated yet more experiential understanding of future places and experience

Fig. 1 Sensory-based Site Plan (sound, small, place) by Judson Moore
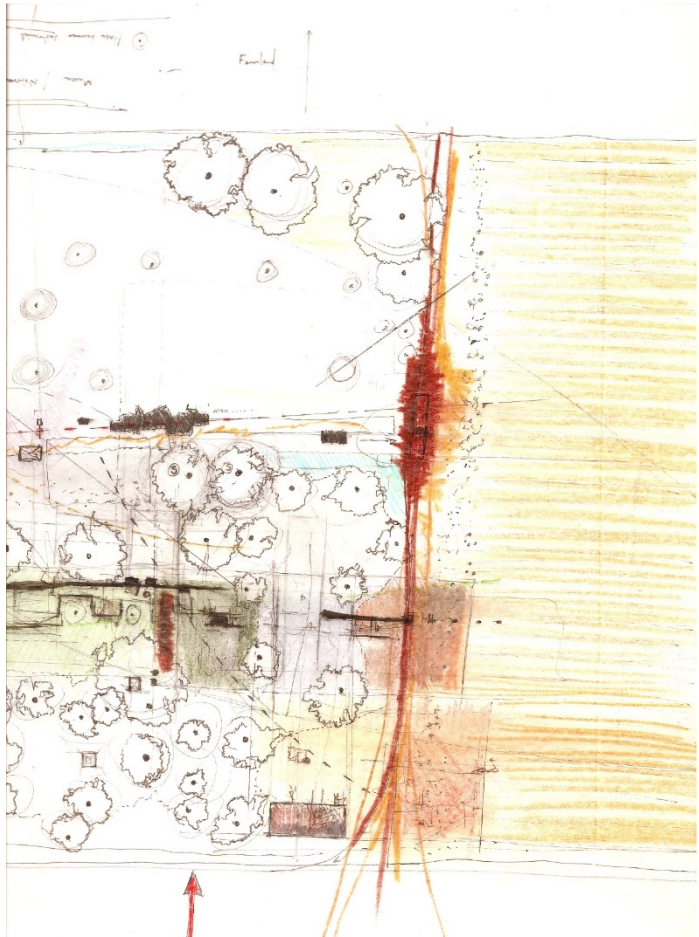
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**Mind the Gap: On the Uneasy Relationship between Representation & Experience**

*"It is easy to see why we fail so often. For one thing we do not draw space, but rather plans and sections in which the space lives. So there is a constant temptation to focus on objects rather than on the architectural space they breathe into existence. Drawing board victories (like getting everything lined up) replace and negate the real pleasures discoverable in space."*
  *- Moore, C. & Allen, G. (1976)*

*"For architects concerned with ethics and not merely with aesthetic novelty, who seek the realization of places where a fuller, more compassionate human life might take place, that these mediating artifacts and tools be appropriate is paramount." - Gomez and Pelletier (2000)*

So why must architects and designers fail so often, as Moore and Allen assert above. And, what tools or manner of use would be most appropriate to the intent described by Perez-Gomez and Pelletier above. Lastly, what is a designer to do with Robin Evans assertion, in reference to James Turrell's architectural installations, that "*there is no way that even the vaguest hint of their effect could have originated through drawing. ... The drawing has intrinsic limitations of reference. Not all things architectural ... can be arrived at through drawing.*" (Evans, 1997).

In the translation of thought to building, the answer lies with the mediating artifacts and processes on which architects and designers depend. It lies with the way such artifacts are used and the way those artifacts help, hinder, persuade, and direct thoughts. And it lies within what the designer intends and how that intent is supported through their design process. In all, the answer lies in how the mediating artifacts connect the designer to the hoped-for architectural experiences, meaning, and significances in the places they design and build.

In what follows, I discuss six factors that favor the experiential architectural conceptualization (EAC) via a consideration of drawing, model-building, design-build, and digital media design tools based on extensive research, projects, and interviews with designers. In the context of a design process a variety of media are employed to give presence to a phenomenon that is not entirely physical. Place and experience are phenomena that are difficult, if not impossible, to "*represent" in the traditional sense of depicting the appearance of a thing. For, how does one represent a place's "impalpable territory,"* "social activities," or the meaning of an environment for those that might live there? Further, how does a designer get an adequate sense of inhabitation and experience through drawings, models, and digital files. The presented physicality must be capable of being interpreted as if experienced. If not, then something else must be occurring to enhance this sense. Below, I consider one set of answers in the form of six factors that play a role in enhancing a designer's EAC design and visualization skills.

**Six Factors Favorable to Drawing out Place and Experience**
**(1) Memorable Reference**
**Remembered place experiences have a significant effect on both the inspiration of place-based design as well as upon the designer's ability to judge and conceptualize imagined or designed places.**

The importance of remembered places and experiences in the design of place are key as they serve as the context for future considerations of places and possible experiences. From interviews comments like "*the key to understanding places is our past place experiences,*" "*memorable imagery is basic to architectural design,*" and "*experiences are key to one's ability to make places*" all point to the centrality of working with what you know. What we know about experiences is based on the palette of experiences we have had. Memory is key to place-making. (Downing, 2000; 1992). Touchstone memories are those that singularly guide one's design practice overall. Others are those everyday and travel experiences that form the bulk of an architect's place memory. In all such memories serve as points of reference to understand, interpret, and project (through design) place concepts.

Some noteworthy examples are childhood remembrances like sheets drying in the wind and sun, or a transitional (or indoor to outdoor space) from a summer resort. Each framed a lifelong spatial memory that has informed their respective practices. The former helped to foment a strong and sustained interest in the sun and wind as forces of place-making while the latter served as a catalyst for special attention to transitional spaces in all of her work. Touchstone place memories are those that guide and influence practices. These invaluable place memories are built over time, updated, and/or even traded in for more recently provocative memories and have been identified as "archetypes," "referents," "references."

Everyday place memories and remembrances are those that provide the richest well for designing place. Memories about how a place felt, like the sensation of walking under something large, or the commonplace experiences of everyday spaces like living rooms and offices, serve to build a designers storehouse of inhabitation (Treib, 1982). The spatial awe of the interior of a great cathedral is a bodily, tactile, and sensory experience that allow a designer to interpret media of that space such as a drawing in plan, section, or other form with that richness. And, through these experiences we develop an empathetic connectivity to places (Dodds & Frascari, 1997). Visiting and drawing such places, using arrays of diagrammatic drawings (lending a hand to the eye) allows the designer to  access such place qualities.

Disembodied visuality (studying places through pictures, as do most students) does not allow such memorable experiences. EAC relies on a background of direct experience. Mediated knowledge derived from text and images about places is incomplete and superficial at best.

**(2) Intending Place**
**Both purposeful and implicit intention to be concerned with place concepts makes a difference in the designer's ability to develop a place-based design.**

The intentionality of the designer (what one wants to do and what criteria are central) is also key (Oliver, 1982). A designer's intent (deliberate intentionality) and their non-purposive intent (absorbed intentionality) effects the course and outcome of the design process. Intentions guide any process. To intend in the deliberate sense is beneficial to the consideration of place concepts in design. One architect summarizes this view this way: *"...place intentions are good because as architects we have to intend a kind of place. The "intend" part is important for us as designers. Ideas move us along but are not the prime motivator, place intentions are."*

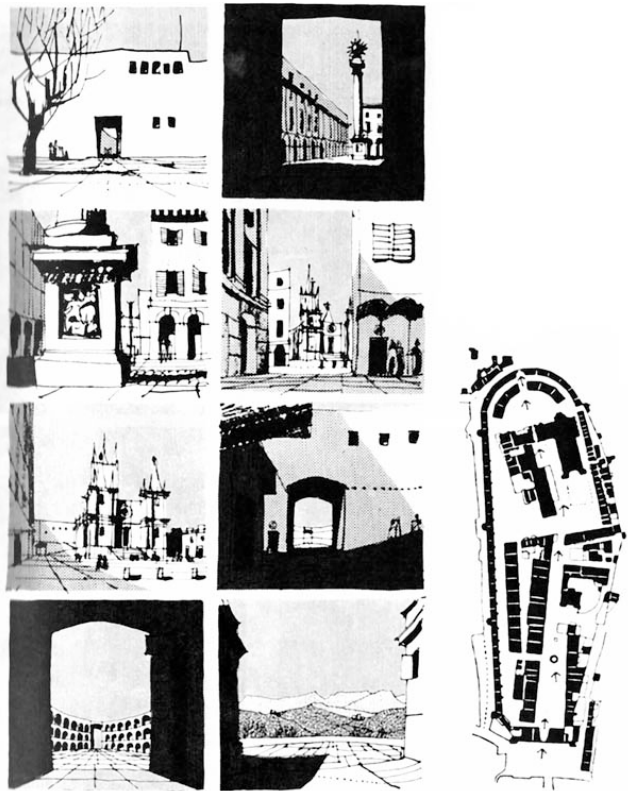For this architect and others, design in terms of place is



Fig. 2 Gordon Cullen's Perspective series on Serial Vision

something the designer is motivated for and has a desire to do. "*Your energy needs to be into it*." Similarly comment like: "to have ideas about how one is to live in the world and how your work contributes to a renewed vision and desire to live in a particular way by your client. It is about order, site, context, culture, materials and the heightening of emotions in that particular place" exemplifies this point.

Place intentionality is linked importantly to "memorable reference" (above) as it is environmental memories of places of childhood, place of interest, and the like that help establish one's basic intentional stances. A designer's imagination and assumptions also hold important information about the purpose and meaning of architectural environments. "*The most important factor in the making of places is a combination of things foremost of which is the desire. A concern for people can only come from the recognition that people are the most important element.*" Further, with regard to media, intentionality proved to be more significant. Indicative of this pattern, an architect imagining the most powerful and state-of-the-art computer, stated that, "having the right machine is not the key to place-making - having a poetic imagination is - the poetic imagination that is born out of memorable experience." With both, reference is made to one's intentional stance as motivated by the assumption that design is an activity directed towards something to be inhabited and not only looked at – that is, buildings are places for people, not abstract built form alone. EAC Design must be an assumption, desire, and a part of one's absorbed and deliberative intentionality.

### (3) Skill and Comfort
**Both a certain degree of skill and comfort with the use of any medium by the designer can have a profound effect on how that designer engages place concepts in design.**

Designers who gain skill in the use of a medium or are comfortable with its use are able to deal more effectively with EAC's. Ease of use serves to connect the designer to the work at hand because both comfort and skill are paths of connection and engagement through any medium or tool. The more skilled and comfortable one is with a tool, such as a tennis racquet, the more engaged one can become in/with the game.

The first time I picked up a tennis racket, even a basic swing was a difficult skill to employ, as are almost all activities with which we are unfamiliar. Because of this tennis was somewhat impenetrable and immersion did not come easily. I did not yet have the skill. I needed to learn how to hold the racket properly, to keep my eye on the ball, move my feet, adjust my weight, and swing the racket while keeping the face open to the ball. After a certain level of competency is reached, immersion in the game opens up as a possibility. The skill of mastering a swing allows or affords the player the ability to play the game and to deal with more complicated facets of it. Walter Ong refers to this pattern of growth with a tool as the increasing "*interiorization of the technology*" (Ong, 1986). Through this process, new options of expression and understanding become apparent and available the more the tool or technology becomes a part of our repertoire rather than as something external to our actions. Hubert and Stuart Dreyfus expand on this referring to this transition of novice to expert as moving from "knowing that" to "knowing how". For the novice, the tendency is to consciously follow rules. For the expert those rules have been subsumed into their abilities - underlying rules disrupt any flow of the activity. "The expert driver becomes one with his car … experienced pilots [report] they simply experience flying itself" and not the flying of the plane (H. Dreyfus & S. Dreyfus, 1988).

Likewise, the use of any media (drawing, modeling, digital design, design-build) in design, as in any other skillful activity, requires the development of greater proficiency or transparency if the medium is to successfully aid the designer in their work. "Without the skill the designer is unable to draw out their ideas in order to work with them." By showing only a certain vantage or by leaving out information any drawing can preclude the designer from dealing with that issue.

This effect is visible at two levels of engagement and interpretation. On one, designers are helped and hampered in design through the structures of affordance and constraint in each media.

On the other, their abilities limit or enhance their ability to effectively deploy those media. Both militate against reading a medium empathetically and gaining a sense of what it might feel like to be there. In sum, "I think your design will be only as good as your mastery of the media you use to represent the ideas. So, learn them all, but master only a few."

**(4) Multiple Means**
**The use of multiple forms of media and the mixing of different media result in a more multivalent sense of an emerging design, and is therefore suited to the multivalent character of place.**

By mixing and/or employing multiple media, the inadequacies or constraints of each are foiled in combination with others. "Resourceful patching" is Kathryn Henderson's way of referring to the common and generally use process of combining digital media tools with manual drawing (Henderson, 1999). Each medium, being inadequate to the overall task at hand, serves as a "patch" for the other. Most designers see "resourceful patching" as a matter of course. "I am pretty happy to work with whatever is out there…, stated one designer. "*There's a ton of media out there and I use most of it*". The use of multivalent media is a part of "a balanced practice." For EAC "*drawing place requires many different types of media.*" *And "through a broad drawing process, by using a lot of different media is how [one] comes to know and deal with the qualities of the place.*" Multiple media is a key requirement for enhancing EAC.

In practice, multi-media (use of more than one), mixed-media (models in combination with drawings), and the multi-disciplinary use of media (design media with forms from other disciplines such as writing and film-making) are, at times, common. With the Carpenter Center, Le Corbusier used both conventional and unconventional multiple means. "*While plans, sections elevations, and models comprise the bulk of the recorded design process, it is often the unconventional and provocative – the poetic narrative, the visual non sequitur, the ambiguous graphic notation or the idiosyncratic technique that provides creative stimulation and transformation of idea to form at key and critical points in the design process*" (Kellett, 1999). With greater complexity of means comes greater complexity of conceptualization.

The multiplication of images, or ways of seeing, has been shown to be a powerful tool in many fields. If it is granted that one image allows a view, then it follows that the multiplication of those images allows one to see more. This multiplication or "cascade of images" (diagrams, charts, and graphs) employed by scientists are key in scientific proof (Latour, 1986). In design, the more images and vantages that can be amassed the more complete the sense of place.

Multiple means allows the designer to take advantage of the process of triangulation. Borrowed from radio operators who could locate the source of an unknown signal through fixing the angle of signal intensity from three different positions, triangulation has come to refer to looking at things from multiple points of view. Each lends the other more information and any overlap allows one to be more certain of the results. With design media, the triangulation may come from similar sources as in multi-media, or different sources, as in the case of multi-disciplinary practice. "That's when you embrace everything that is available to you. You flank out and grab all of the tools that you can." James Corner's concepts of "ideational immersivity" and "synaesthetic imaging" operate this way. "*Synaesthetic imaging*" excites and communicates a *different sense about an emerging design idea with together afford the designer* "ideational immersivity." Multiple and varied media interact opening up the possibility of living in or inhabiting the imagined and designed place. As the dimensionality of sources increases so can the engagement felt by the designer about an emerging design. "The use of constantly changing or dynamic drawings is good for working on place because it fits well with the multivalent character of place" (Corner, 1998).

**(4a) Multi-Media Practices**
is not exhausted in the standard "orthogonal set," common to architectural design. The Beaux-Arts analytique and collage are examples that combine through the medium of drawing differing

systems of projections and ways of depicting objects and scenes. In the case of collage, the potential for radical conceptualization is perhaps the greatest as it can afford the designer multiple views, ideas, and associations within a single work that can approximate the radical multivalency of architectural experience, both immediate and as accreted over time. David Leatherbarrow's concept of "alternation" is important here (Leatherbarrow, 1998). The ability to "alternate" back and forth between various drawings is a dialectical process in order to ascertain a more complete understanding. The perspective "*allows vision to roam around within it, as if the view were enclosed by the space... The development of a design always involves some alternation between these types....*" Andrea Kahn on Carlo Scarpa explains his mastery and comfortable use of multiple views within the two-dimensional drawing surface, allowed Scarpa to live in the three-dimensional space of the drawing (Kahn, 1992).

**(4b) Mixed-media Practices**

*"... where CAD was specifically employed for design evolution, some of the architects expressed the view that design quality suffered unless there was also parallel inquiry via freehand drawing or model-making.* (Edwards, 2005).

Many processes involve the use of mixed-media but few do so strategically for EAC. The use of models with drawings is common. Design-build involves 2D & 3D drawings, physical and digital models, and hands-on interactivity. Outside of convention mixed-media suggests more fruitful yet previously untried combinations of media. Ideas worked out on paper and "in place," imparts the dual advantage of mediation and direct experience.

**(4c) Multi-disciplinary Practices**

Adding "non-drawings" (text, physical presence on site, etc) to mixed-media design while not uncommon is also key for EAC. "Creative design may be as dependent on words as it is on pictures … in the three-dimensional fields such as architecture" (Lawson & Loke, 1997). Gänshirt cites how Oscar Niemeyer used writing or "verbal design tools" "as a form of self-interrogation …to check the conclusiveness and comprehensibility of an architectural concept."(Gamshirt, 2007). For Davids the combination of plans, perspectives, and scripts in order to introduce a narrative into the design consideration. "*The narrative implicit in the storyboard encouraged students to think about people's movements in space in ways which suggested inhabitation as opposed to merely using human figures to decorate a space*" (Davids, 1998). *The Pattern Language* captures experiential situations, the use of which and integration into design enhances experiential awareness and attention to EAC. Site visitation is an exceptional means to "a grip on the sensory experience of that place." "*It is important to get a feel of the wind, a sense of how the place smells, the views, and the sounds that are there if you want to design in terms of the place.*"

**(5) Innovation and Empathy**
**Through adaptation, augmentation, and innovative use, any medium can be made more engaging and therefore conducive to EAC.**

"Feeling through the media," "Living in the drawing," going "into the spaces in my drawings," "being able to understand the building as if I were there, and "running simulations in my mind about the place, about how it would be used" are all examples of idiosyncratic and innovative strategies aimed at achieving a heightened sense of place while designing. Gänshirt refers to "a sensual experience that is naturally experienced differently for every material. The ability to 'crawl into a model' in one's mind in order to imagine the model's full-size potential can be enhanced by building oneself as a 'model' on the same scale as the one present."(Ganshirt, 2007). For Paul Emmons, it is the use of scale that allows for the "imaginative inhabitation of drawing."

Edward Relph's notion of "empathetic insideness" is helpful here referring to the "taking in" of a place in such a way that you understand it both as an inhabitant and as an outsider (Relph,

1976). As designers we are always "outside" of the emerging design. Through media that can foster an empathetic or sensory response, such as how we feel the motion of the roller coaster ride with only our eyes, we open the door to other possible associative feelings. Key is that the medium is the agent that "draws out" that empathetic sense, leaving the interpretation to the designer. Frascari and Dodds, referencing the work of Carlo Scarpa discuss the architect-drawer who "mimics" physical movement through the act of drawing (Dodds & Frascari, 1997). Drawing serves as a surrogate for the human body's participation in the drawn environment allowing the designer access to the drawn space as a place. A few tools that enable this sense are:



Fig. 3 The Use of the Human Figure by Judson Moore

**(5a) The Human Figure as Guide: Motion and Inhabitation**

*"In contemporary architectural drawing, the presence of the human figure, to give scale, is absolutely indispensible." (Frascari, 1987).*

As important and common as it is, the human figure is underutilized in "representational" forms of media. In design/build, physical presence on site is assumed yet often ignored yet analogous and powerful. Some scale figures are only scalar ciphers. For others they help inhabit a place activated by stories or as an empathetic "ambassador" who participates in the space of the drawing or model FOR the designer.

By drawing, building, or rendering these human figures, they demonstrate "the effect of architecture in everyday life" (Anderson, 1997).

**(5b) Recognizable and Meaningful Phenomena**

Here the strategy is the inclusion of meaningful objects to act as interpretive or empathetic ambassadors. The depictions of objects, such as a familiar piece of furniture or artwork can serve to foster EAC.

**(5c) Realism and Materiality**

The inclusion of realistic materials, details, and images allows the designer freedom to deal with the thing, place, or situation being represented rather than the representation itself. Minimizing distortion, one designer said that it is "the communication of material qualities that imparts an understanding of the place."

**(6) Freedom and Ambiguity**
**Media and styles of mediation that more openly structured and which foster ambiguity in their communicative interaction with the designer are important for EAC.**

Freedom is a medium that allows idea exploration. "The situation that is conducive to place-making is freedom to draw a lot, and to use a lot of trace," is one "wherein I can feel free to make mistakes." Alberto Perez-Gomez, Kimberly Dovey, and Susanne Langer, each have advocated for imaginative freedom (Perez-Gomez, Pelletier, 1992) (Dovey, 1993) (Langer, 1951). Drawings based on descriptive geometry describe places in an overly definite and mechanical manner, and are not open nor ambiguously structured enough to allow exploration - to present place concepts in their incompleteness and complexity means of going beyond conventional use are central. Processes that are "definite" and overly structured, are impediments to EAC. As one designer put

it: "When I visit the site I do it alone. I ask not to be disturbed. And when it is possible, I do this without knowledge of the program and the issues I am being asked to solve ... It is good because I am able to analyze the site without the specifics of the problem influencing me ... In this way I get to know what the influences that exist on the site are without the constraints of a program being brought to it. When one does look at a site without a program many possibilities present themselves that would not with a program in hand."

## (7) Conclusion

The relationship between EAC design media is based primarily upon the achievement of a particular mode of engagement; one in which the designer is able to get beyond the sense of working through simulations and come as close as possible to having a direct experience. This type of engagement is facilitated in four interrelated ways. The first is through the involvement of body's sensory input, getting beyond a sole dependence on the visual system for the assessment of a design. The second is through the forging of a connection between the designer and the physicality of a proposed place. This can occur through a connection to the actual site of a design (i.e. being on site), through the conveyance of imagery that corresponds to physical reality (such as adherence to the force of gravity), through imagery that evokes an embodied view (such as a situated perspective), or through the approximation of physical form (in models, actual construction, and graphic three-dimensionality. The third is through any aspect of mediation that affords a sense of the spatiality and/or physical movement that might occur in the designed place. The fourth is through an aspect of mediation that presents no impediments to any of the above aspects. It is characterized by the promotion of possible ideas, the exploration of those ideas, and a general sense of openness to broad and multiple forms of knowing.

What this mode of engagement allows, in its simplest sense, the designer to forge a sense of inhabitation. The above facets make it possible for a designer gain that sense of "empathetic insideness" and to "live" in the depicted or mocked-up environment. Recall that "empathetic insideness" is the "empathetic involvement in a place... [that] demands a willingness to be open to the significant aspects of a place, to feel it, to know and respect its symbols – much as a person might experience a holy place as sacred without necessarily believing in that particular religion." (Relph, 1976).

Finally, the relationship rests on interpretation. It rests with the abilities of the architectural designer ("implicit media" i.e. remembered places, intentions, and skills). It requires interst in EAC and willingness" Edward Relph describes as key to the sense of "empathetic insideness." On top of this, the designer needs to be unconstrained in the use of a medium. They must "see" or "feel" through" which Ong, described as interiorizing the technology.

In conclusion it is apparent that there are three distinctly salient and informative points about the relationship between media and place. They are: (1) EAC are not directly represented by design media, it is therefore dealt with indirectly in architectural design. (2) Design media, despite the individual differences in effectiveness, are as a whole ambiguous in favoring the conceptualization of place. The relationship between media and place is variable. (3) Key to the conceptualization of place in architectural design is gaining a sense of inhabitation of the emerging work. Thus, the relationship between media and place is defined by empathetic insideness.

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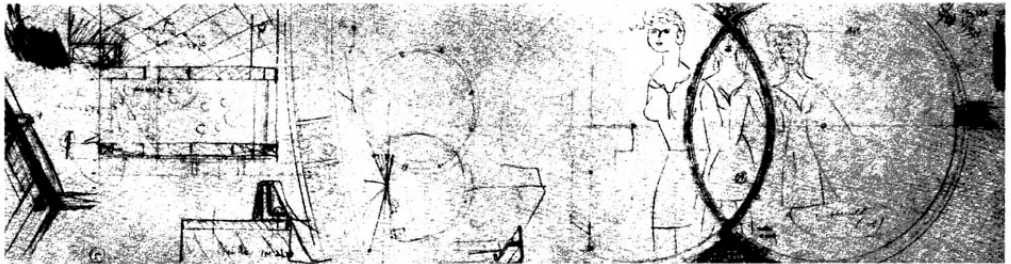Treib, M. (1982). Place Description: Written; Rendered, *Journal of Architectural Education*, 36, 1.

Fig. 4 Carlo Scarpa's "Three Women" portion of a drawing for the Brion-Vega Tomb project