



Walking and Sketching as a Tool for Architectural Design

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Abstract

This study investigates the effectiveness of combining walking and sketching exercises to develop a cohesive tool for architectural design. Prescriptive walking exercises guide how to walk in order to gain insight into the surrounding environment, which is particularly valuable for preliminary site analysis in architectural design. Sketching exercises complement the walking experience by prompting questions about composition, scale, and technique. Sketching requires interpretation of the environment to reveal new patterns and intricacies. Additionally, sketches serve as a tangible memory to reflect on during the design process. This study focuses on four primary walking exercises: *Dérive*, *Synesthesia Walk*, *Radius Walk*, and *Traced Cup Walk*. Following a literature review that informed each exercise, Pilley authored an assignment pairing each walk with a complementary sketching exercise. Pilley, followed by *Architectural Design 6* students, tested and evaluated these exercises. The research testing resulted in participant feedback that informed revised versions of the exercises with increased clarity and application within architectural design. Students found the exercises helpful in grounding the rendering and narrative of studio projects in the urban context. This research is part of Gamble's broader study, culminating in a guidebook outlining applicable walking and complementary visual exercises for the architectural design process.

Keywords: walking, sketching, design process, architectural design, education

Walking and Sketching as a Tool for Architectural Design

Background

Architectural designers use walking to familiarize themselves with the spaces where they will intervene. The activity encourages one to slow down and interact with the environment. During those moments of pause, sketching enriches the walking experience, requiring an interpretation of what exists physically to reveal new information about the surroundings. Since memories of the walking experience are fleeting, sketches provide a tangible memory to reflect upon during the design process. This research examines how combined walking and sketching exercises create a unique and comprehensive tool to foster meaningful connections to place during the architectural design process.

Walking & Accessibility

The walking cadence provides a different experience of a place than the faster-moving speed of a bicycle, car, bus, or train. While a slow pace is critical, the exercise is not limited to those who can walk. People using mobility aids such as wheelchairs can complete the exercises too. The essential component is slowing down, pausing, and interacting with other walkers and the surrounding environment. Other modes of transportation enclose and separate the person from the street, limiting the opportunities to explore at any given moment.

Methodology

This research investigates pairing the Dérive, Synesthesia Walk, Radius Walk, and Traced Cup Walk with complementary sketching exercises. A previously completed literature review of the selected walking exercises provided a basis for knowledge. The initial findings from this background research highlighted how walking exercises could influence and inspire architectural design. This project began by authoring an assignment for each walk with detailed background, instructions, and complementary sketching exercises. Next, Pilley tested walks in *Architectural Design 7* (ARC 4322) at the University of Florida, as part of their project, which helped to refine the instructions further. Finally, an *Architectural Design 6* class (ARC 3321) at the University of Florida, tested the refined assignment and provided feedback through a digital survey with written responses, which guided future adjustments.

When analyzing student feedback, indications that the students enjoyed the walks or comments that they could see implementing them in the future, outside of being mandated as a class assignment, indicated that the walk was successful. Furthermore, complete and in-depth responses indicated a higher level of participation. While the written feedback was the primary tool in assessing success, documentation of the visual component of the exercise provided helpful in evaluating evidence of understanding in the instructions of the exercises and the experience that researchers aimed for students to take away from the exercises. The digital survey collection method also provided insights about future research testing and application. For example, participation and feedback were received at a lower rate when the exercises were not required for an academic class. The survey responses from *Architectural Design 6* indicated the exercises were a significant aid in site context research of an urban condition and a catalyst for the design process. Future research involves developing this tool into a guidebook.

Literature Review

Dérive

The Dérive, French for 'drift,' guides walkers toward chance encounters with the city. Participants observe details commonly overlooked within the environment through the act of walking (Knabb & Debord, 1981). Guy Debord and the Situationist International aimed to reclaim the individual's autonomy in the mid-20th century through the Dérive (Knabb & Debord, 1981). The Dérive instructs a rapid passage through varied ambiances and recommends walking in small groups of people with a similar level of awareness of walking that will complement each other (Knabb & Debord, 1981). Debord instructs walkers to absorb the abundance of information rather than document it.

For this study, the assignment authored by Pilley instructed students to embark on a Dérive as Debord prescribes while also collecting and sketching moments from the walk in a field journal. The features of the environment and small details of the place guide the Dérive. Pauses to sketch are intentional and capture thought and information from the walk. An accordion-style journal allows continuous sketches that flow from one idea to the next.

Synesthesia Walk

Synesthesia, Greek for 'perceive together,' involves a blending of the senses, where one sense evokes another. Examples include hearing colors, feeling sounds, and tasting smells. Synesthesia is also a literary device where words associated with one sense describe another.

The Synesthesia Walk originates from the Hamilton Perambulatory Unit, a group focused on walking in conjunction with artistic practices and research creation. The walk comes from an interest in finding a new language to describe a place (*Synesthesia Walk*, n.d.). Senses guide the direction of the Synesthesia Walk, instructing walkers to notice smells and recount them with language from a different sense. The walk uncovers layers of senses, stories, and emotions of the defined area (*Synesthesia Walk*, n.d.).

For this study, the Synesthesia Walk encourages students to define what sense dominates their site context in architectural design. The assignment authored by Pilley elaborates upon the original walk to prescribe moments of pause. Walkers translate the sensory experiences from the walk into a sketch, followed by a written description of the translation and its location.

Radius Walk

French Professor Carlos Moreno advocates for a city with key services that allow inhabitants to live, learn, and thrive, all located within a 15-minute walk (2020). The infrastructure of a 15-minute city suggests a different pace of life, prioritizing walkability over cars (Moreno, 2020).

Rooted in Moreno's teachings, the Museum of Walking created the Radius Walk to explore what lies within a zone deemed walkable within the Arizona State University campus (*Radius — Museum of Walking*, n.d.). The Radius Walk prescribes walking a linear path, or radius, for 15 minutes, creating a circular area to examine.

The Radius Walk provides a starting point for site context research in Architectural Design. The assignment authored by Pilley includes returning to the starting point to create a continuous sketch of findings along the walking radius. As a reflective exercise, a sketched mapping analyzes amenities needed to support a high-quality life.

Traced Cup Walk

The Traced Cup on London Map Walk, or Traced Cup Walk, originates from British writer Robert MacFarlane. Psychogeography explores how geographical locations influence emotions, behavior, and interpersonal connections. Ideas from psychogeography and the *Dérive* inspired the Traced Cup Walk. The intent is to immerse oneself in the city through walking, opening the mind to new experiences and information. The walk instructs to place a cup randomly on a map, draw a circle, and walk as closely to the curve as possible (MacFarlane, 2005).

In architectural design, the Traced Cup Walk pushes students to depart from linear walking, guiding them to wander along a random yet predetermined path. Pilley's assignment for this study instructs students to document their findings along the curve as they walk and create a reflective collage of the experience.

Sketching

Sketching is used in this study to interpret what exists physically through the hand, revealing new intricacies about the environment. The importance of the drawing's subject is conveyed

through composition, technique, and scale. Methods such as hatching, circling, or stippling reflect different moods when drawing (Figure 1).

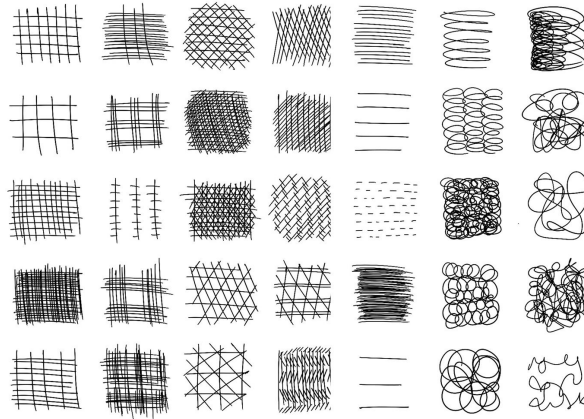


Figure 1. Sketching Techniques

Field Journal

A folded, accordion-style field journal captured sketches for this study. The journal unfolds to create a long, skinny canvas lending well to drawings focused on itinerary (Figure 2).

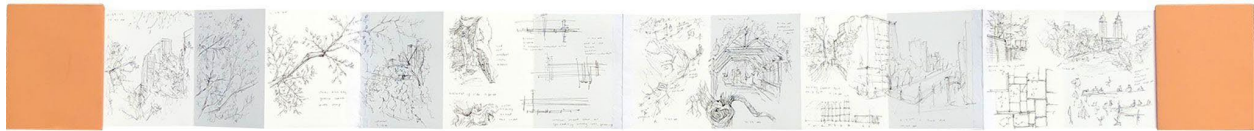


Figure 2. Unfolded Field Journal

Field journals vary in size, crafted to the individual's needs. More extensive field journals, around 5" x 8", help collect found objects, and the larger drawing surface allows for detailed sketches. At the other end of the spectrum, pocket-sized field, around 2" x 3", are convenient for everyday use. For the exercises in this study, a small to medium-sized field journal, around 5.5" x 4.25", is recommended. Figure 3 demonstrates a range of journal sizes, with the suggested size located at the top and second from the right.



Figure 3. Field Journal Sizes

Ellen Knudson, the University of Florida's book arts professor, provided feedback on early iterations of the field journal design. Professor Knudson proposed a simplified method for creating the journal called the hinged accordion (Knudson, 2021). The basics of folding the paper are the same, an 18" x 24" sheet of watercolor paper creates a 72" long field journal (Figure 4).

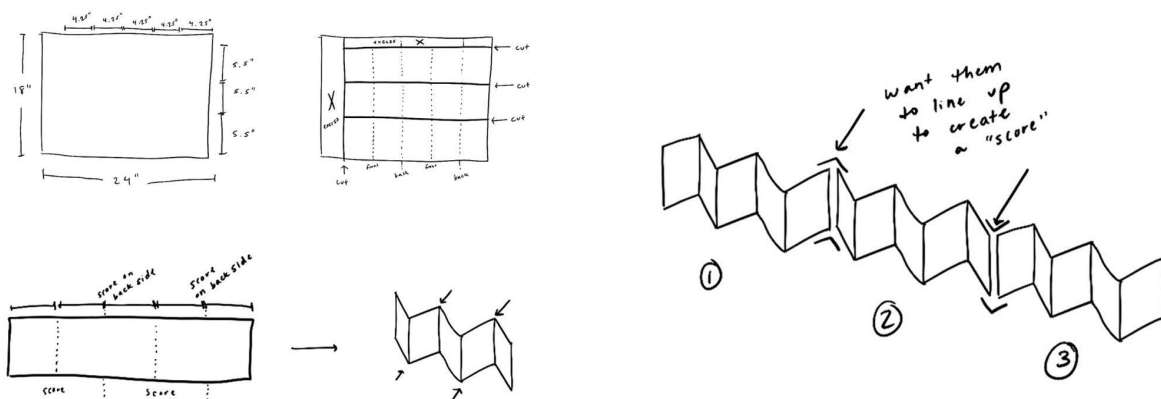


Figure 4. Diagram for Accordion Creation

The cover consists of 3 pieces: a front cover, a back cover, and a spine. The covers are wrapped with interlocking sheets of paper, allowing the folded accordion paper to slide into the

cover. The spine also slides into the covers to attach the two. When drawing on the back side of the accordion paper, the spine can be removed and placed on the other side. Mulberry paper connects multiple folded strips of watercolor paper, creating a solid connection between sheets and providing a continuous drawing surface.

Architectural Design 7

Introduction

Architectural Design 7 investigated the design of a large-scale scheme intervening within the existing urban fabric of New York City along Park Avenue. Based on the interests and discoveries from an area of Park Avenue, students designed unique programs and experiential narratives addressing public space (Sprowls, 2022).

Walking and sketching research was applied to Pilley's *Architectural Design 7* project. This section outlines Pilley's feedback from testing and implementing findings in the *Design 7* project. Feedback provided insight to refine the exercise instructions for further application.

Dérive

The adapted Dérive instructions were clear but restrictive to the execution of the walk. Instructions state that the Dérive should occur outside other tasks or walking, allotting a specific time for the exercise to begin and end. Reached consensus that a Dérive can occur when walking from one location to another, between tasks. Drifting and free movement is the critical motive of the walk.

After sketching in a field journal during the Dérive, a reflective exercise collaging the sketches was performed (Figure 5). Sorting through field sketches helped Pilley consider the project's relation to the city context. However, after testing the Dérive, Pilley noted a lack of clarity in the instructions for the sketching component as they did not prompt any specific deliverable, such as a collage. Instructions must be more straightforward and list a particular outcome if given as a class assignment.

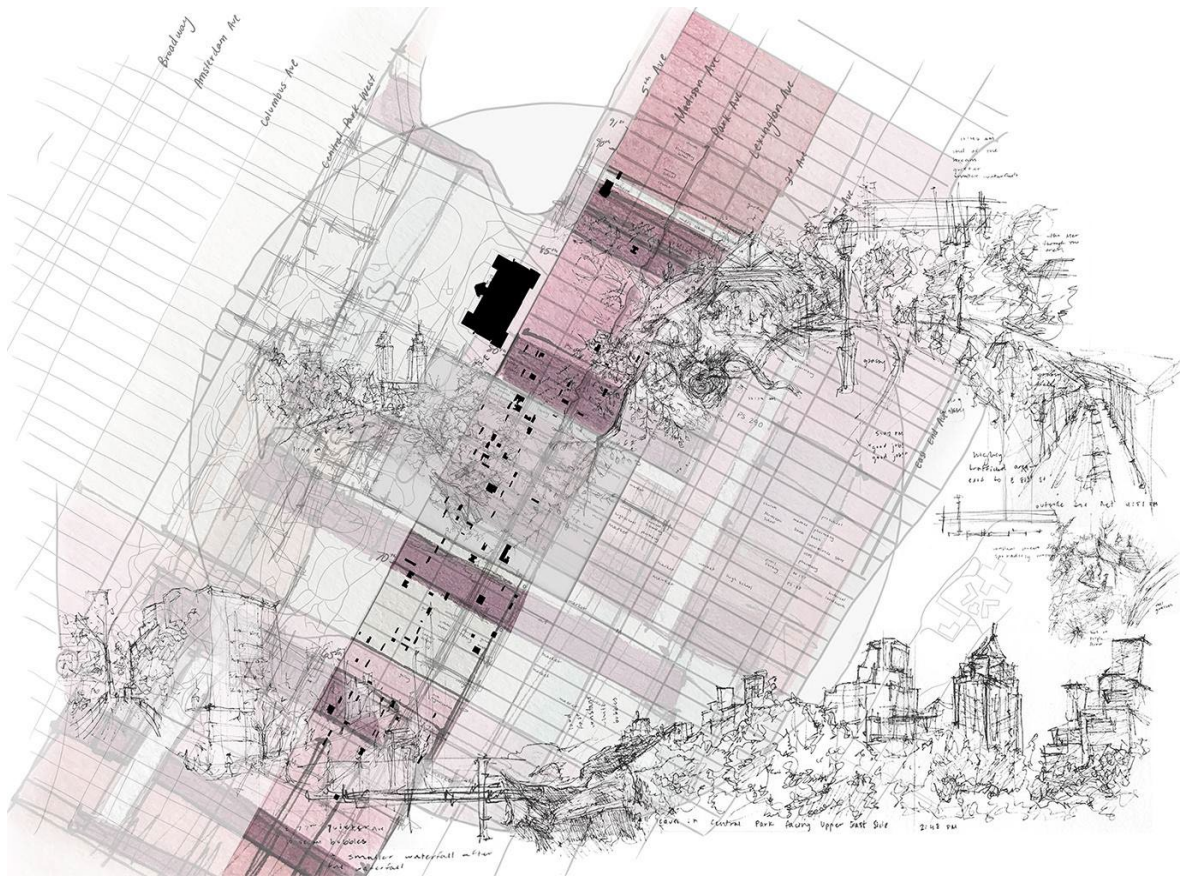


Figure 5. Dérive Collage

Synesthesia Walk

The Synesthesia Walk aided in developing the *Architectural Design 7* project narrative and the final project proposal. The sketching component was open-ended and allowed for mapping the sounds around the site (Figure 6). In addition, sketches helped Pilley reflect upon the sensory experiences of the area and how the project proposal could address those feelings. However, someone with less sketching experience would need detailed instruction on what it means to translate sensory experiences into sketches.

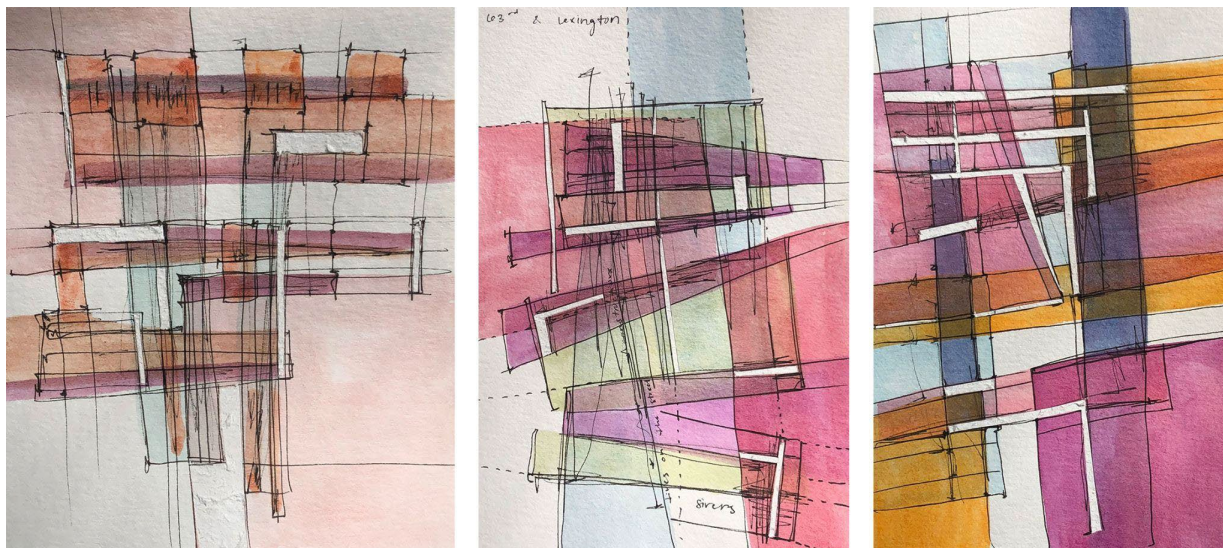


Figure 6. Synesthesia Walk Sound Mappings

Radius Walk

Mapping the 15-minute walkable area and analyzing its amenities and patterns provided deeper exploration and research for the site context (Figure 7). It helped Pilley consider the project's impact on the city and its people. While the Radius Walk instructions were clear, the sketching component needed further integration into the walking exercise, as Pilley's sketching was primarily completed as a reflective activity. The objective of the walk itself did not allow for time to pause when walking, as that would decrease the size of the walkable area. Walking back along the radius to the site could resolve this issue.

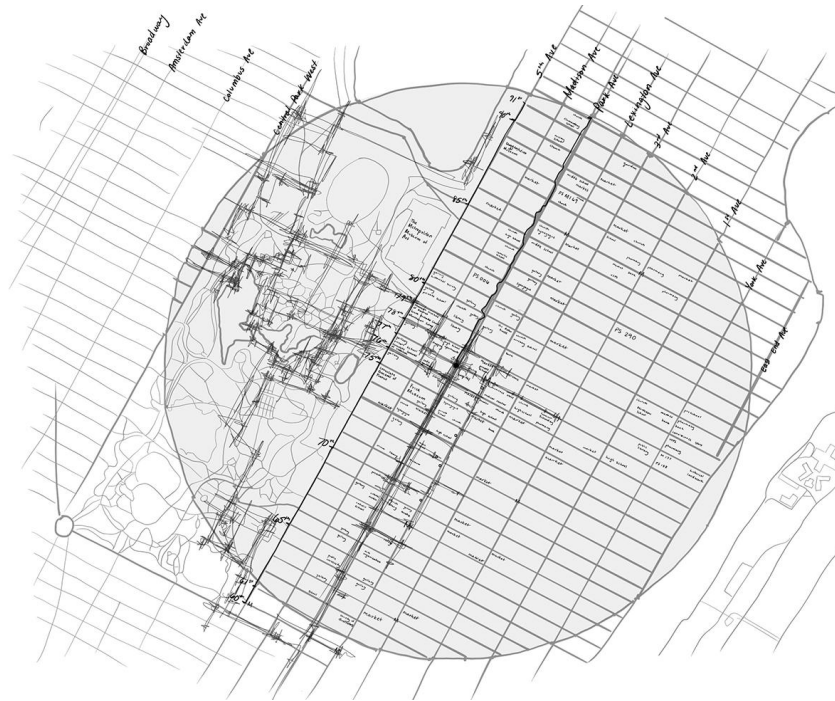


Figure 7. Walking Radius Mapping

Traced Cup Walk

The Traced Cup Walk was less helpful than the other walking and sketching exercises. It was challenging to stay close to the circumference of the circle. Due to the city grid structure, walking occurred in an orthogonal way instead of the intended curved path. The walking path was a pixelated version of the circle (Figure 8).



Figure 8. Traced Cup on Map

Refining the Assignment

The following section details the revised exercises based on Pilley's feedback during *Architectural Design 7*. Findings from testing in *Architectural Design 7* indicated that some exercises were more valuable than others. Furthermore, sketching instructions were not yet integrated into the walking exercises. The Traced Cup Walk was not successful as a stand-alone exercise. Still, similar motives of measuring site context present an opportunity to combine it with the Radius Walk, becoming the Adapted Radius Walk. Similarly, The Synesthesia Walk and Dérive were incorporated into one walk, the Synesthetic Dérive, to focus on sensory experience and investigating details of the site.

Adapted Radius Walk

The Adapted Radius Walk explores the difference between measure when walking a linear path versus a curved one. Combining these exercises grounds the ideas from the Traced Cup Walk in the actual site instead of a random area.

Students walk in a straight line for 10 minutes from their starting position. With their site at the center, students draw a circle using the radius created from the 10-minute walk. Then, students walk as close to the circle's curve as possible while sketching a continuous drawing measuring the itinerary. The measure could respond to their walking pace, how many streetlights they pass, or the sidewalk markings. The walk is finished when students complete the circle and return along the radius to their site.

Synesthetic Dérive

The Synesthetic Dérive explores sensory experience when walking. Students are instructed to take special notice of their senses throughout the walk. Instructions prescribe moments of pause to translate notable sensory experiences through sketching. Students translate the experience from one sense into another at least ten times. Moments of pause are collaged to create a cohesive mapping or story of the site context's sensory experience. The mapping creates a tangible document to refer to during the design process. Students are encouraged to assess how they felt in that space and what their architectural design could do to improve or maintain that experience.

Architectural Design 6

Introduction

Pilley led an *Architectural Design 6* class, with 14 participating students, taught by Professor John Maze to implement walking and sketching exercises in two projects. *Architectural Design 6* focuses on the urban condition within a regional historical context (Maze, 2023). Students establish a critical design approach to a site, responding in a way that respects and challenges the perceptions of architecture and its interaction with urban context (Maze, 2023).

The first project implemented the exercises into a smaller, local urban project in Gainesville, Florida. Feedback from the first project aided in further refining the walks for implementation in a larger-scale project in Savannah, Georgia.

Testing in Gainesville

Architectural Design 6 student feedback indicated that the Adapted Radius Walk was confusing, time-consuming, and ineffective in aiding in designing their projects. Even when paired with the Radius Walk, the Traced Cup portion did not appear as applicable to the design process. When asked if the Adapted Radius Walk was valuable to their design process, an anonymous student, Aria Yousefi, and Breanna Pedraza commented: "My group ended up far from our site, and some of the areas felt sort of out of context"; "I could see myself using this exercise less than the other exercise since it's too literal"; "The measured walk was my favorite, and I connected all of the drawings like it was unfolding as I walked" (Gamble, 2023). The walk limited the site context's exploration but was still beneficial in creating a continuous drawing.

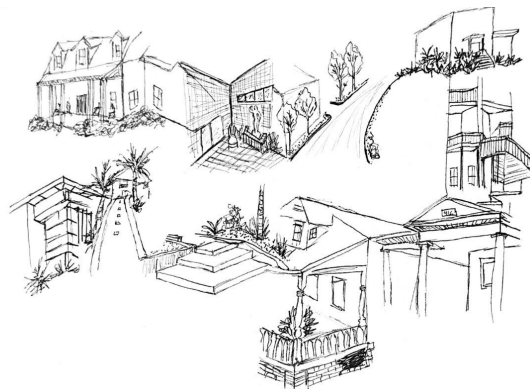


Figure 9. Continuous Drawing of Downtown Gainesville (Source: Breanna Pedraza)

The Synesthetic Dérive provided a new method for site analysis for the participants in this study. Students described the walking exercise as fun and helpful; they could use the information gained to further their architectural designs. Sensory experiences brought to light qualities of their site that they may not have thought to explore or consider when designing, such as "the liveliness in some of the places" as described by Minh Tam Nguyen (Gamble, 2023). Figure 10 examines the senses that guided Aria Yousefi's walk through Downtown Gainesville with a "prevalent theme of rigid structures contrasting with organic forms" (Gamble, 2023).

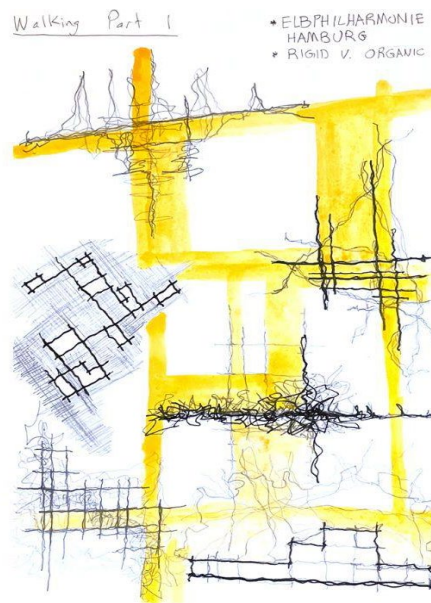


Figure 10. Synesthetic Dérive Drawing (Source: Aria Yousefi)

Addressing Feedback

Further refinement addressed feedback from *Architectural Design 6* students' testing in the first project site in Gainesville. Instructions were revised to include parameters for the expected time to complete the walks. These parameters promote a more directed and intentional time for walking and sketching. The revised instructions included sketching techniques and styles, providing detail and inspiration for students with less sketching experience.

The Traced Cup Walk was removed from the Adapted Radius Walk assignment, as it negatively impacted motivation for walking. The Radius Walk became an individual exercise but still involved rewalking to the starting point and developing a sense of measure through drawing.

Testing in Savannah

Students found the revised Radius Walk instructions clear and more valuable to their design process than the previous iteration of the assignment. Students Minh Tam Nguyen and Breanna Pedraza commented: "I was able to develop a sense of measure, hierarchy, and scale through this exercise" and "It helped me understand the layout of a new city" (Gamble, 2023). This walk contributed to a sense of scale when investigating the unfamiliar context of Savannah.

Feedback from the Synesthetic Dérive was similar to the first round of testing. Zoe Zwack commented that the walk led them to uncover the smaller-scale details of Savannah, things typically overlooked in the environment (Gamble, 2023). Figure 11 demonstrates how walking and sketching work as a cohesive tool when experiencing and analyzing the surrounding environment. Zwack's drawing shows a deeper understanding of place. Sketches and writing break down findings from the environment. The illustration includes small-scale details within Savannah's urban fabric alongside large-scale ideas and landmarks of the city.

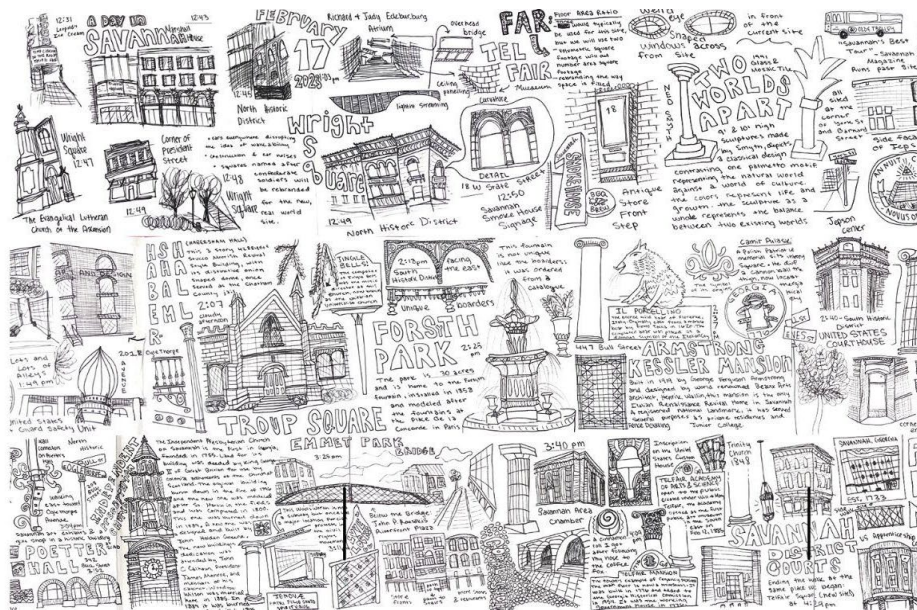


Figure 11. Synesthetic Dérive Drawing (Source: Zoë Zwack)

This walk led students to explore Savannah in a manner they would not have completed otherwise. When asked if they could see using the Synesthetic Dérive in their design process, students Minh Tam Nguyen, Courtney Mai, and Olivier Benghiat commented: "Yes, to develop and understand my site and how the surrounding environment plays a role in designing my

building"; "Yes, I think this is an interesting project if you are exploring a new area. I think it is more difficult to truly do when you know a site"; "Yes. I could think about how I want someone to feel moving from one space to the next" (Gamble, 2023).

Design 6 feedback indicated that students could see themselves integrating information gained from the exercises in their design process. Students also noted that the exercises provided two different experiences of their site.

Conclusions

Sketching exercises amplify the power of walking. The combination of walking and sketching exercises shows promise as a cohesive tool in the architectural design process. Positive feedback from *Architectural Design 6* and *7* students indicates a broader application of these exercises in architectural education and practice. These classes introduce the investigation of a physical site. Students must learn to fit their projects into an existing urban fabric in a way that respects and considers the history and surroundings. The Synesthetic Dérive and Radius Walk pushed students to learn more about site context and provided design inspiration for students' project proposals.

With previous experience in sketching, architecture students can draw upon that skill while walking to deeply analyze and take note of the area surrounding their site. In this research, sketching exercises pair well with architectural education as they prompt students with ideas for what to draw and visual connections within the environment instead of instructing them how to sketch. In designing this research, a primary anticipated impact of the walking and sketching exercises is application and helpfulness in the preliminary stages of the architectural design process as students analyze the site context. Researchers found the exercises successfully fostered a connection to the environment as students spent an intentional period experiencing the context and how their designs could respond to it, as evidenced by their written feedback and sketches.

This research had multiple unanticipated impacts, including the adaptation of the exercises. From the original selection of walks, exercises were synthesized and removed. The Synesthesia Walk and Dérive were combined into the Synesthetic Dérive. This walk brought together motives of experiencing the context through various senses while uncovering the small-scale details of a place. Unanticipated negative feedback from the Traced Cup Walk led to an

exploration of pairing it with the Radius Walk. Eventually, the Traced Cup Walk was removed from the research as it negatively contributed to the walking experience and progress when designing. This feedback from testing led to the Radius Walk becoming a stand-alone exercise focused on linear measure and walkability.

Another unanticipated impact included the time to complete the walks and the delay between completing the walks and providing feedback on the experience. Students commented that some walks were time-consuming, which led to the inclusion of parameters for completing the exercises. Testing was conducted by the *Design 6* class, but was not a graded assignment, leading to lower participation in feedback response forms. Students are often motivated by a grade in the class instead of the learning experience, which indicates a need for incentives to complete the walk and fill out the feedback form.

Future research centers on developing a guidebook for walking with complementary visual exercises. The book will provide in-depth descriptions of exercises, their origins, and their applications for architectural design. The guidebook will lead designers to develop their own style and how to implement information learned through walking and sketching into their design process. The guidebook will create a valuable and descriptive resource for those genuinely interested in learning more about walking and sketching.

Acknowledgments

This project builds upon the Why We Walk research project led by Gamble. Why We Walk, studies the importance of walking to develop a guide of 20+ walking exercises for designers and creatives to learn about the places where they work more intentionally. Thank you, Professor Gamble, for your continuous support throughout our research. Thank you to Professor Sprows, Professor Maze, and Maze's *Architectural Design 6* class for participating in this research. Student feedback was collected in the *Walking Experience Testing* data.

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