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LEARNING THROUGH OSMOSIS:
A Report on the Seattle Mentorship Program's Pilot Session

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ABSTRACT
Traditional mentorship can bridge the gap between industry experts and newcomers, however, time and commitment can be barriers to forming these relationships. In this article, we introduce an alternative approach to mentorship that links growing professionals with firm leaders for short-term shadowing opportunities that occur on an ongoing basis. Through observing the mentors' actions, thought processes and decisions within the context of the mentor's ongoing work, the Osmosis mentorship program sets out to determine whether an informal and low-commitment approach to mentorship can aid in career development and promote knowledge sharing within firms. The pilot session of this program paired four mentors with four mentees in two chosen areas of interest with mentees spending, on average, one hour per week partaking in related exposure opportunities. At the close of the pilot session, narrative evaluation revealed that mentees gained greater career insight and breadth of knowledge into their area of interest. Mentees also reported the success of the program in providing a platform for self-advocacy and self-direction. Mentors noted the role of the session in increasing exposure and learning at the firm, as well as preparing mentees to better contribute to their project work.

KEYWORDS: knowledge-sharing; career development; situated learning theory; legitimate peripheral participation (LLP); project-based learning

1.0 INTRODUCTION

Originating in Greek mythology, mentorship has long since been characterized by the archetype of the wise and faithful adviser sent to protect Odysseus' son while he sailed against Troy[1]. In the last half century, this relationship has become a subject of study for adult development and career theorists. Early seminal studies define mentorship as the "relationship between an older, more experienced mentor and a younger, less experienced protégé for the purpose of helping and developing the protégé's career"[2]. Since these early studies, conditions of employment, technology, organizational structure and membership have eclipsed this operational definition to embrace different types of mentorship varying in formality, intraorganizational status, and purpose. Today's career context demands that we continue to be flexible in our pursuit of mentorship. Rapid advancements in technology place increasing value on specialized knowledge that can keep pace with this growth. Individuals must, therefore, be able to adapt and learn swiftly in order to remain competitive and innovative. This requires that we have the flexibility to learn by consulting a variety of people about our work, iteratively and frequently.

In addition to the challenges we face related to the advancement of our tools, "as organizations become fast, flat, and flexible, so too does the nature of the work individuals do, necessitating both constant reconsideration of how to develop professionally and where to look for assistance"[3]. Essentially, our work is happening more quickly and, as a result, our methods for how we learn new skills and obtain new knowledge in practice need to adapt. Rather than concerning ourselves with developing a shared definition of what mentorship is, practicing professionals should understand and implement different types of mentorship to expand an organization's ability to share knowledge and teach skills.

1.1 Learning Theory and Career Development

This paper explores how a situated approach to men-This article explores how a situated approach to mentorship within project-based firms can promote iterative career development and knowledge sharing. The theory behind this approach is grounded in a perspective on learning and cognition that theorists within the fields of psychology, cognitive science, anthropology and sociology call the situative perspective. Discussed in relation to the behaviorist and cognitive perspectives, situated learning theory focuses on combining the "know how" and the "know what" of learning and cognition that the behaviorist and cognitive perspectives treat discretely[4].

Brown et al. argue that "treating knowledge as an integral, self-sufficient substance, theoretically independent of the situations in which it is learned and used" ignores the activity and culture of which it is interdependent[5]. Using language as an example, they argue that all knowledge references the world and, as such, is a product of the situations and activities in which it arises and is used. Additionally, this knowledge will progressively evolve "with each new occasion of use, because new situations, negotiations and activities inevitably recast it in a new more densely textured form"[6]. In their emerging instruction model, Brown et al. conceptualize knowledge as a tool in order to emphasize the need for educators to teach students how to appropriately use abstract knowledge.

Other theorists associated with situative learning theory, and closely aligned with the knowledge-as-tool concept, often describe cognitive apprenticeship as a model for situated learning. They argue that, in order to use tools as practitioners in their field would, learners, acting as "cognitive apprentices" must be taught in context. Apprentices enter their discipline's culture of practice, learning out of and through continuing activity within their community. This model suggests "the paradigm of situated modeling, coaching and fading, whereby teachers or coaches promote learning, first by making explicit their tacit knowledge or by modeling their strategies for students in authentic activity"[7].

Later theorists argue that the cognitive apprenticeship model emphasizes the centrality of activity in situated learning and knowledge, and is not inclusive of sociocultural factors within the situated learning environment. As noted by Geertz, "communities of practitioners are connected by more than their ostensible tasks. They are bound by intricate, socially constructed webs of belief, which are essential to understanding

what they do"[8]. Thus, social interaction between experts and novices within communities of practice becomes critical to developing a theory of situated learning. In their monograph Situated Learning: Legitimate Peripheral Participation, Lave and Wenger introduce the concept of legitimate peripheral participation (LLP), whereby novices learn by observing members of their community of practice from the periphery before gradually becoming fully participating members[9]. Peripherality, in this theory, "suggests that there are multiple, varied, more- or less-engaged and –inclusive ways of being located in the fields of participation defined by a community"[9]. Illustrated through the analysis of five ethnographic studies of formal apprenticeship, Lave and Wenger discuss these differences, acknowledging that where high levels of knowledge or skill are required within U.S. organizations, concrete realizations of apprenticeship are common. In the ethnographic study of tailor shops, Hutchins problematizes the question of learners' access to important learning resources given particular organizational structures that may locate learners in a periphery without the exposure required to more fully participate in their community of practice[10]. This question of access underscores the crucial need for broad LLP in increasing both understanding and identity within a community of practice.

This question of access underscores broad legitimate peripheral participation in a community of practice as crucial and central for increasing both understanding and identity.

Furthermore, Lave and Wegner stipulate that "changing locations and perspectives" within the periphery "are part of actors' learning trajectories, developing identities, and forms of membership"[9]. Within professional contexts, this exposure to changing peripheral locations and perspectives is critical to the career development of a newcomer in their pursuit of full participation as an expert within their community of practice. In this way learning, understood as increased participation in a practice community, "implies becoming a different person with respect to the possibilities enabled" by the social-activity systems of their environment or place of work[11].

1.2 Learning within the Architectural Profession

In the nineteenth century, aspiring architects entered architectural offices and learned directly from experienced architects through apprenticeship. Today, the profession continues to rely on this model for teaching the practical knowledge and skills required to become

proficient in the field after formal education. This model for learning comes with the same challenges discussed in the above section related to cognitive apprenticeship and LLP: sociocultural contexts can complicate learning through direct experience and can limit exposure to the breadth of learning required to become a full participant in the community of practice.

Additionally, the project-based model for architectural firms further challenges the issues associated with organizational learning[12]. Pure project-based firms are defined as firms where projects "embody most, if not all, of the business functions normally carried out within departments of functional or matrix organizations"[13]. These kinds of firms often lack the mechanisms for organizing and sharing knowledge between projects. Furthermore, the heterogeneous qualities and potentially long life-cycles can make it challenging to transfer knowledge between projects through common means that project-based firms employ: strategic positioning of firm experts and the codification of knowledge[14]. Mentorship within these project-based firms can be understood as an opportunity to mitigate these challenges.

1.3 Mentorship and Perkins+Will

Our firm believes that "continuous learning contributes to the success of our employees and achievement of our organizational goals, while maintaining the culture that has given us our competitive edge over three quarters of a century"[15]. Firmwide, this translates to programs such as the Leadership Institute, which develops the next generation of leaders, and the Innovation Incubator program that supports staff research.

Mentorship programs beyond that of the Leadership Institute are initiated at a local scale and vary by office. In Boston, each new employee has the option of pairing with a mentor within the firm after their initial 90 days. Mentors possessing a list of characteristics are encouraged to apply to the program in order to be considered part of the mentor pool that mentees can select from. These mentors are meant to "help guide the mentee in answering questions, providing information, and building a solid professional relationship." 38 mentors are listed on the website, last updated in the summer of 2015[16]. Based on this information, the program is geared toward new staff finding their way around a new workplace. In this way the program is closely aligned with the Buddy Program carried out in several offices across the United States, though the Boston Program leaves room for the relationship to develop into one akin to traditional mentoring. Similarly, the Champion program, recently implemented in the Seattle Office, pairs a member of office leadership with a newer employee to check in and ensure that the employee is acclimating and that they have someone as an advocate for their progress. Both of these programs, however, do not call themselves mentorship programs and "mentor" assignments do not involve "mentee" input.

In the Vancouver office, the Mentorship Initiative implemented in the summer of 2016 plays a different role. Developed in response to feedback from office employees stating "a strong interest in developing better opportunities to learn, improve relationships, and shape careers in the office", the program pairs mentors and mentees for a six month period based on surveying their interests and goals (Figure 1)[17].

The key attributes of the program are its non-prescriptive nature (anyone can be a mentee or a mentor), input-based pairings, and short-time frame. At the close of the six month period, mentees have the option to renew mentor pairings or match with a new mentor. This keeps the program iterative and acknowledges the fact that not all pairings will be a long-term fit, but mentees are still able to learn, build relationships and shape their careers within the office.

1   ASK   OFFER   We need to know if you are interested in participating.

2   DISCOVER   We need to understand your interests.

Complete online survey.

3   MATCH   We take the information you provide and match you with a mentor.

4   DON'T WORRY!   You will be able to choose your mentor from a few people that match.

5   COMMIT   6 months to start.

Set goals. Plan meetings. This is mentee-led.

6   MEET   Take a walk. Go get a coffee. Hang out on the Rufus. Make an effort.

7   EVALUATE   Let us know how it went.

8   RENEW   Renew relationship or match with a new mentor.

Figure 1: Infographic explaining the Vancouver Initiative Program.

1.4 Situated Mentorship as an Opportunity to Broaden Legitimate Peripheral Participation

Through mentorship relationships, learners gain greater access to firm experts that may be outside of their periphery position. By gaining this access, experts can offer different perspectives or transfer inter-project knowledge within their firms. While a formal mentoring relationship can bridge the gap between office experts and mentees, office experts in mentorship positions are required to take the time to articulate their situated knowledge in transferrable ways, often abstracting what they know as a result. These traditional mentorship models may also require a time commitment that can be difficult to maintain.

Situating mentorship within the context of a mentor's ongoing work locates learning in the "increased access of learners to participating roles in expert performances"[18]. During this time, knowledge-building and learning occurs through being present and situated within the performances of experts. Mentees can be thoughtfully engaged as a "fly on the wall" at the periphery without being an active member of the dialogue or activity. This creates a program that facilitates opportunities for office experts to share knowledge with interested mentees without the additional time commitment of formal mentorship relationships and the resource-intensive processes required by knowledge articulation or codification. It also allows for the observation of tacit knowledge which is critical to the performances of experts as they engage with the nuances of sociocultural relationships, but difficult or impossible to explicitly transfer. In their work on mentoring and reverse mentoring, Fruchter and Lewis apply a similar approach in their "fishbowl" mentoring method, where students in the Architecture/Engineering/Constuction are assigned a design problem that they later watch a professional interdisciplinary design team tackle, giving the students "sufficient distance to focus on the process the experts are modeling"[19]. Osmosis seeks to provide this same "fishbowl" method without the requirement that experts engage in the same problems as those that mentee's face in their ongoing project work. This provides similar benefits without added investment by the mentors or experts.

Finally, mentoring engagements with a free range scope can present an additional burden of time and emotional investment that can prevent mentors from having more than one mentee at a time. This statement identifies the second focus of the Osmosis program to narrow the scope of mentorship engagement through focusing on

an area of practice. As growing professionals, our list of learning objectives that could be well-served by mentoring relationships is likely very long. However, each of us also likely has a particular area of practice we are most curious about or would like to know more about, whether that be an associated skill, experience or body of knowledge. Osmosis seeks to leverage this curiosity to focus a short-term mentorship engagement on bridging structural gaps between office experts and young professionals.

2.0 METHODOLOGY

2.1 Purposes of the Pilot Session and Research Design

The pilot session of the Osmosis mentorship program was intended as a demonstration project meant to assess the degree to which key participants found the program favorable, engaging and relevant to their career development and learning. The purpose of this article is not to discuss statistical analysis or outcomes of the program, but rather to provide an overview of the situated mentoring program, how it can be implemented in architectural practice, and provide qualitative analysis of the outcomes by reviewing specific cases.

2.2 Program Structure

Osmosis works by pairing mentees that express interest in a specific area of practice with mentors that can share upcoming opportunities appropriate for the mentee to attend. Mentors are expected to go about their daily tasks with the mentee acting as a "fly on the wall" at the periphery during appropriate opportunities. Mentees are expected to work with the mentor to coordinate and schedule exposure opportunities to attend and are expected to seek permission from their project manager if the hours are outside of their billable project.

Based on the literature for legitimate peripheral participation, "the community of practice encompasses apprentices, young masters with apprentices, and masters some of whose apprentices have themselves become masters"[20]. Therefore, two types of mentors are incorporated into the structure of the program: "A" mentors are experts in office leadership roles, such as design principal, managing principal or technical director, while "B" mentors are area experts in the office, such as a project designer, project architect or marketing coordinator (Figure 2). These mentors can be understood as the apprentices of the masters who have, themselves become masters. Mentees are upcoming profession-

Design
organization chart
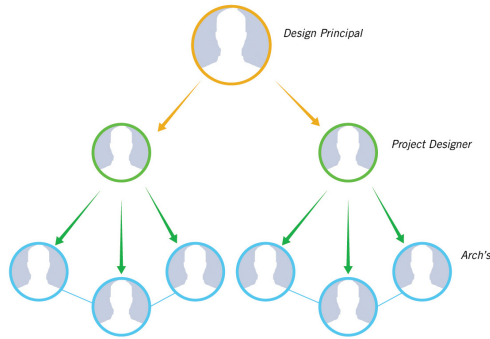
Project Management
organization chart

Design Principal

Project Designer

Arch's

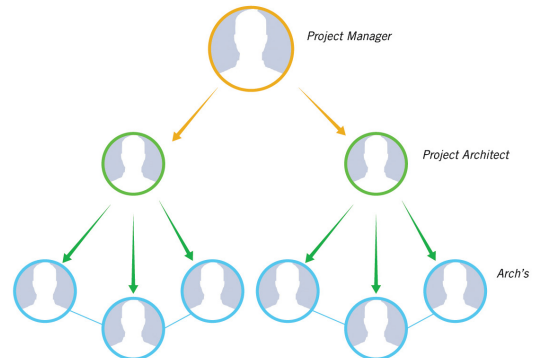Project Manager

Project Architect

Arch's

Figure 2: Infographic explaining the Intended Structure of the Design and Project Management Areas of Practice.

als who express interest in a particular area that they would like more experience in. Areas of practice identified in the pilot session included project management, design, sustainability, and marketing. The identification of these practice areas was informed by the knowledge functions within our practice that Perkins+Will already invests resources in articulating and codifying for use by the rest of the firm. As mentioned in the introduction of this paper, the relatively long life cycles and heterogeneous nature of design projects makes it difficult for young professionals to access the contextual performance of these practice areas, particularly given their application in varied phases of a project. As a result, Osmosis, seeks to be another means in which this knowledge can be shared.

Each Osmosis session lasts 10 weeks, with kick-off and debrief meetings occurring at the beginning and end of the session. The duration of the program, intended to roughly match the standard fiscal quarter in length and timing, was selected in order to provide mentees the opportunity to attend at least one weekly, monthly and quarterly opportunity type within their selected area of practice. Anyone with an interest in a particular prac-

tice area can be a mentee. Osmosis mentees bill their time to Seattle Professional Development unless Osmosis opportunities correlate with their current billable project. Osmosis mentors bill their time to their ongoing project work given that, beyond scheduled lunch meetings, the program does not require their additional time.

2.3 Implementation
At the launch of the mentorship program, the Perkins+Will Seattle office chose to run a pilot session with a small group of participants prior to making the program public to the rest of the office. As a result, a limited number of mentees were selected by the facilitators and advisors based on their understanding of who in the office would likely be interested in participating as a mentee. Each selected mentee was then asked what area of practice they would be most interested in learning more about, and the facilitators of the program worked to find mentors within the expressed areas of practice willing to participate. This convenience sample, informed by the closed nature of the pilot session, will be discussed further in Section 4 of this article, where we discuss methods for future candidacy selection.

Table 1: Mentor-Mentee Pairing.

Area of Practice	Mentee	Mentor	Approach
Design	Mentee 1	Mentor 1 / Mentor 2	Isolated
Design	Mentee 2	Mentor 1 / Mentor 2	Isolated
Project Management	Mentee 3	Mentor 4	Integrated
Project Management	Mentee 4	Mentor 4	Isolated

The pilot session ran from mid-August to the end of October 2016. Two areas of practice were selected based on the expressed interest of the mentees and the expertise of the mentors that volunteered to participate in the pilot. In the Design area of interest, Mentor 1, a project designer, expressed his interest in being involved as a "B" level mentor. Mentor 2, one of the firm's design principles was then folded into the program as an "A" level mentor. Shortly after Mentor 1 expressed his concern in not having sufficient opportunities to offer, Mentor 3 was brought in as an additional "B" level mentor working closely with Mentor 2 on numerous design projects. Mentees 1 and 2 were then asked if they wanted to participate in the pilot session and they became the mentees in the design track. The second area of practice included in the pilot session was that of Project Management. Mentor 4, a key adviser in the genesis of the Osmosis program volunteered to be a "B" mentor with his experience in project management. Mentor 5, one of the firm's managing principals was then asked to participate as an "A" level mentor in the pilot. Mentees 3 and 4 then joined as mentees in the program's project management track (Table 1).

2.4 Integrated vs. Isolated Approach

Not all mentees interested in the pilot session were staffed on the same project team as their corresponding mentors. This created two different approaches to the program, one isolated and one integrated. In a format akin to job shadowing, the isolated approach would benefit mentees by providing greater access to experiences and mentors not currently available to them in their project teams and work. This approach would work to address the issues of access and breadth that we identified as crucial to the legitimate peripheral participation of learning professionals. Within the integrated approach, mentees would benefit from ongoing and applicable learning opportunities central to their project work, though their experience would be limited to the context of their current project. This approach intends to focus learners' experience on their interests by providing access to new opportunities within their project through the established mentor-mentee relationship.

In the pilot session, three of the four mentees were isolated from the teams of their mentors, and one was integrated. Due to the selection process for mentees, not all mentees where staffed on projects within a project phase or with mentor-figures conducive to providing exposure opportunities related to their interests. This impacted program implementation in two primary ways: billing time and coordination of exposure opportunities. While mentees that were integrated in the same project as their mentor would use less professional development hours, mentees isolated from these teams would likely need to invest more of their own professional development hours. Despite these differences, program facilitators moved forward with piloting both approaches due to the unique benefits predicted for each.

2.5 Data Collection

Due to the small size of the pilot program, no statistically significant conclusions were intended at this stage in the program's development. Therefore, a qualitative approach was used to gain insight into the strengths and weaknesses of the program. Our primary objective was to gather responses on the situated mentorship approach and its implementation. We expected that retrospective experience summaries of each exposure opportunity written by the mentees would enable us to focus our data on how the program contributed to their learning and career development. These qualitative accounts included a record of the individual opportunities each mentee attended and the information they learned from each.

At the close of the pilot session, both mentees and mentors were asked to participate in a debrief session including program facilitators and advisors, during which the program was evaluated based on participants' narrative accounts. Our strategy was to use mentees' retrospective experience summaries to focus group interview questions for the program's debrief session – highlighting experiences that were most beneficial to key participants and working to identify consensus. Contradicting accounts informed further questioning in the debrief session to provide opportunity for discussion and ad-

ditional input by mentor participants. Participants were asked what worked well, what could be improved, and how the saw the program evolving in the future. This conversation was essential in understanding the unique perspective of both participant groups.

3.0 MENTEE EXPERIENCE
Design Track: Mentee 1, then assigned to Schematic Design for 3031 Western
- Week 01 – First Landmarks Board Brief for 400 Westlake, a core and shell office building in early schematic design
- Week 02 – Participated in a DLC Review meeting for UW 3.2, Waimanalo, and the K2 Office. Met with Mentor 2 to discuss focus topics and next projects
- Week 05 – EDG draft review session with Mentor 2 and Seattle land use planner for the Lennar Town Hall project, a residential high rise in schematic design
- Week 08 – Lunch meeting with Mentor 1 to discuss the Baton Rouge and K2 projects and share career insights
- Week 08 – First design presentation by the interior architect designing amenity spaces for 3031 Western
- Week 09 – Second design presentation by the interior architect designing amenity spaces for 3031 Western
- Week 10 – Second Landmarks Board Brief for 400 Westlake (reassigned to this project)

Mentee 1 spent 12 hours participating in exposure opportunities, of which nine were billed to internal professional development. Because Mentee 1 was on the same project team as his associated mentors, the intent of the program was to align him with design opportunities on his own projects. However, because their project was off and on during the duration of the 10 weeks, it afforded minimal hands-on design opportunities. Regardless, Mentee 1 was exposed to many parts of the design process, both with the public and with the client. Of the four mentees, Mentee 1 had the most frequent and diverse learning experiences.

Design Track: Mentee 2, then assigned to Construction Administration on 3rd+Harrison
- Week 01 – First Landmarks Board Brief for 400 Westlake, a core and shell office building in early schematic design
- Week 02 – Participated in a DLC Review meeting for UW 3.2, Waimanalo, and the K2 Office.

- Week 02 – Met with Mentor 2 to discuss focus topics and next projects
- Week 03 – Lunch meeting with Mentor 1 discussing K2 design concepts
- Week 08 – Reassigned to 3031 Western, a residential high rise in schematic design

Mentee 2 spent 5 hours participating in exposure opportunities through Osmosis. All five of these hours were billed to professional development. Mentee 2 summarized his experience as opportunities to make relationships with people at the firm who could help advise him on what phase his interests would be best suited to and who to connect with to gain further insights. Half-way through the pilot session, an opportunity opened up on a project where Mentee 2 could further the learning objectives he had expressed to Mentor 2, one of his Osmosis mentors. He was reassigned and withdrew his engagement in the program.

Project Management Track: Mentee 3, currently assigned to Construction Documentation for 3rd+Lenora
- Week 02 – Troy Block Punch Walk, issues related to coordination of specialty items
- Week 03 – Troy Block OAC meeting, constructability of transition between horizontal-vertical seismic joint
- Week 05 – 3rd + Lenora Client Coordination, separate contracts between owner and tenant requiring high level of communication and coordination
- Week 06 – 3rd + Lenora Design Presentation and Coordination Meeting, managing expectations early to prevent confusion

Mentee 3 spent approximately 8 hours engaged in Osmosis exposure opportunities, of which half were billed to professional development. Remaining hours were spent integrated in his assigned project team, and were therefore billed to the project. Mentee 3's experience was characterized by applying lessons he learned during exposure opportunities to his own project assignment.

Project Management Track: Mentee 4, assigned to Design Development for 3rd+Lenora TI Contract
- Week 03 – Troy Block OAC meeting, conducting a site walk of entire site and an elevator punch
- Week 05 – Troy Block OAC meeting
- Week 06 – Troy Block OAC meeting and worked to brainstorm solutions to a steel channel design issue
- Week 07 – Troy Block OAC meeting observed approval of steel channel solution and sidewalk rebuild

- Week 08 – Troy Block OAC meeting conducting a site walk with a focus on courtyard and paving

Mentee 4 spent a total of 15 hours participating in Osmosis related activities. Mentee 4 volunteered her own time to these opportunities and chose not to bill these hours to professional development. However, these opportunities helped Mentee 4 gain hours toward construction administration for the NCARB internship development program which was important to her career development.

Differences and Similarities between Tracks
For both Mentee 4 and Mentee 3 in the Project Management Track, contact with Mentor 5 did not extend past the pilot's kick-off meeting where he offered his engagement as a mentor. This meant that Mentor 4 was the only mentor available to coordinate learning opportunities with both mentees. Since neither mentee was working in the construction phase or on the same team as Mentor 4, these opportunities offered a look into management related to project delivery. Mentees saw the problem solving that occurs during construction of a new commercial building and how proper documentation can contribute to a smoother construction process. Mentee 1 and Mentee 2 had similar experiences, in that they were also offered a look into processes they were unfamiliar with before. These processes revealed the impacts that careful preparation, politics and collaboration have on the successful delivery of a design narrative. For Mentee 2 and Mentee 1, their highlights from the program were the relationships they built moreover than the lessons they learned.

4.0 DISCUSSION
4.1 Program Strengths
Mentors stressed the program's strengths related to increased exposure, while mentees expressed its contributions to their learning and career development.

4.1.1 Gaining Breadth through Situated Learning
Today, the tools, methods and skills used to deploy expertise are constantly changing. Within this context, learning from an expert is not necessarily about having them distill the lessons they have learned through decades of experience. Instead, it is about watching that mentor adapt to his or her circumstances and identifying the skills and knowledge necessary to do so successfully. Mentorship needs to focus on situated learning in real-time in order to meet the challenges posed by a rapidly evolving workplace.

Formal mentorship relies on a mentor with the time to a) reflect on their experience, b) synthesize what essential lessons relate to a mentee's career objectives and c) sit down to discuss these in conversation. Formal learning opportunities, forum discussions, and council meetings within the firm are similar in this way. Lunch + Learns, for example, require experts to package their knowledge for the use and consumption of a group of people. This knowledge articulation and codification is very important in developing the quality standards of our practice, however, the narratives associated with these teachings are not always directly experienced, nor are they always discussed. Shadowing opportunities grant practicing professionals the vantage point to watch the narrative unfold, whether or not they are involved in the project.
In the Design track mentees reflected on how design ideas were communicated to different audiences ranging from the city, land use planner, and developer client. Mentees included their observations on audience feedback, noting when it surprised them and speculating as to how our firm would respond going forward. Their situated learning provided them insight into the social relationships that inform experts' behavior. In the Project Management track, mentees reflected on client-contractor relationships and lessons learned through construction. Mentees commented on the coordination required for equipment items and the careful detailing necessary to meet design intent. Both mentees felt that the site walks were an effective learning tool, and gained insight into the relationships that defined what was noted as a flawless OAC process.

4.1.2 Creating an Open Network: Fostering Relationships
Perkins+Will is a firm with incredible resources distributed over numerous areas of practice. It is also a firm that defines its most valuable resource as its people. Firms that rely on people-embedded knowledge "emphasize experience accumulation processes and knowledge transfer through people-to people communication, and are characterized by a strong and receptive culture"[21]. Across the globe we have office experts in twenty different practice areas. Bridging the gap between office experts and interested mentees requires that we connect with our people and build relationships.

Participating in a larger network contributes to career success because of the increased exposure to new ideas. In several experience summaries, mentees reported learning about processes and projects that they did not know existed prior to their exposure through the program. By starting the conversation, the pilot encouraged mentees to engage their curiosity, and mentees

reported feeling more comfortable to reach out and ask questions.

In both the isolated and integrated mentee-mentor pairings, mentors and mentees had an educational relationship, initiated through the interest of the mentees. For the integrated mentee-mentor pairing, this created a stronger working relationship. For the isolated mentee-mentor pairings, this established a resource for mentees to reach out to with questions in the future. While all the mentor-mentee relationships evolved on their own, Osmosis facilitated the relationship needed to open the conversation.

4.1.3 Brokering Information and Breeding Innovation
Visibility is incredibly important in a large firm. Knowledge sharing and collaboration are essential in advancing the firm's success.

Narrative evaluation of the pilot session proved to provide a framework for mentees and mentors to extend communication beyond the silos of their project teams. Most basically, this opened up the conversation to the sharing of information that wouldn not have happened before. The pilot benefitted the mentees in providing them insights into the context of their current work. One mentee expressed how a wider range of experience creates better informed decisions because "you're not just sitting there drawing this detail but you're thinking about how it's impacting the rest of the project – how it's being elevated and how it's going to affect the long run". The exposure opportunities of the pilot offered this mentee knowledge applicable to his current assignment. "Troy block provided insight of CA process and post occupancy issues. There were a few 'Lessons Learned' that I picked up on and was able to go back and have a discussion with my team on 3rd+Lenora."

In a field with a great deal of complexity and nuance, this transferring and application of knowledge are the greatest benefits that the Osmosis program can provide to the firm.

Most people, especially those dedicated to a specific project, will likely stay within the same project teams because it is comfortable and validating. This clustering is a basic principle of network science[22]. Individuals build a reputation, become efficient in coordinating with others in their group and develop an identity within their team. However, the mastery developed within these teams does not travel quickly between teams without firmwide opportunities for knowledge-sharing and peo-

ple that can act as "brokers" of information to translate "one group's knowledge into another's insight"[23]. Typically, these brokers of information are relegated to leadership in the firm and people assigned to more than one project team. However, Mentee 3's experience demonstrated that this can also happen through the mentees paired with mentors not on their project team. In these circumstances mentees can act to pull information from other teams, and quickly present it to their own team in an applicable manner. Doing so gives mentees an "overall vision advantage to see, create and take advantage of opportunities for their career development and for the sharing of useful knowledge within the firm"[24]. Sharing useful knowledge across teams in real-time is hugely important to the innovation and creative capacity of our firm – both of which are fundamental factors in economic development and prosperity in the knowledge economy[25].

Whether or not a mentee acts on these advantages is difficult to predict[26]. We also cannot know whether all Osmosis opportunities will provide explicitly useful exposure opportunities within its time frame. However, mentees will be able to consider their current work within the processes of our community of practice. Critical reflection on experiences outside a mentee's regular project scope will contribute to a more comprehensive understanding of the profession and, in turn, help them engage their work in a more meaningful manner. This is essential to the mastery of knowledge and skills that moves young professionals toward more-intensive participation and, eventually, "full participation in the socio-cultural practices of a community"[27].

4.1.4 Self-Advocacy Platform
Exposure better prepares mentees to meaningfully contribute to the firm, and it also creates a platform for mentees to express their interests and career goals. For mentees the pilot session was a great opportunity to have face time with upper level people within the firm and to introduce themselves and their interests. For mentors, expressed interest and engagement demonstrates who is trying to get out of their comfort zone and willing to get on other tasks. This also provides leadership a better understanding of the interests, talents and strengths of mentees. In Mentee 2's case, the Osmosis pilot session closely coincided with an opportunity for him to work on a project aligned with the learning objectives he expressed through the program. Remarking on this experience, Mentor 3 pointed out that when "you get engaged in a project in some way and when a position opens up, it's an easy fit".

Additionally, by requiring mentee initiative in coordinating with senior associates and principles, the mentees practiced articulating their goals and directing their own experience. Practicing this skill is essential to defining one's identity within a community of practice and, in turn, directing one's career. The informal nature of the program demands that mentees be proactive about their experience. As noted by Mentee 4 in her experience summary, "you get out of Osmosis what you put into it". We cannot predict whether mentees will take advantage of exposure opportunities, however, the program's insistence on mentee initiative requires active engagement so that mentees exercise their agency.

4.1.5 Career Insight
Within our field, architects can engage in a variety of practice areas and roles. Regardless of a person's level of experience, there is opportunity to specialize in an area of practice or (re)direct your strengths into a particular role. However, doing so requires an investment of time and resources that may not be in the immediate interest of an organization. Making this decision is challenging without previous experience in an area of interest or previous experience in a particular role. In this way, Osmosis provides a "looking glass into the world". The program is designed to provide this exposure with minimal investment of time and resources. In this way it helps mentees direct their careers by affirming interest or revealing disinterest in an area of practice.

4.2 Program Challenges and Future Refinement
In addition to providing feedback on what participants felt was successful about the program, participants also discussed what issues there were with the program structure. These issues primarily dealt with scheduling, coordinating and selecting participants.

4.2.1 Building in Flexibility
Due to the nature of our field, projects are often put on hold or starting back up again. This is a challenging variable to track, however, scheduling was one of the main factors that impacted the mentee and mentor experience.

At the start of the pilot session, Mentor 1 was included as a "B" mentor in the design track and Mentor 5 was included as an "A" mentor in the project management track. In the final stages of development prior to the pilot session kick off, Mentor 1 noted that his project had been put on hold and that he believed his new project would have limited Osmosis opportunities. As a result, his role transformed into an advisory position during the pilot session: he met for lunch with each mentee in the

design track to discuss their interests and his experiences related to career advancement.

Mentor 5's limited engagement was also a challenge discussed by both mentees in the project management track at the close of the session. Mentee 4 and Mentee 3 were not able to make initial contact with Mentor 5 to discuss their learning objectives and, as a result, no level of investment was made by either party.

In the next pilot session, these challenges will be mitigated through a detailed survey completed by both mentors and mentees interested in participating in the program. This survey will ask all interested mentors what projects they are currently staffed on and what the working schedule is for these projects during the session's timeframe. Mentors will also be asked what specific opportunities they envision being appropriate for the goals of the Osmosis program and how many hours they work per week, on average. Mentees will be asked to identify critical insights they would like to gain during the ten week program and how they will measure their success. They will be asked to be as specific as possible in order to intentionally direct their experience. Osmosis facilitators and advisers will then go through and match mentors to mentees based on these surveys – providing more than one mentor for mentees to select from.

Due to the program being vetted through this first pilot session, participants in the next session will more clearly understand the intent of the program and how it will work. Therefore the kick-off meeting will be used as a time to field questions that participants may have after reviewing the program brief, rather than introducing the program to them. The remaining third of the hour will be used for individual mentor-mentee pairings to discuss mentee goals compatible with mentor opportunities and skills. Facilitators will immediately follow-up with any mentors or mentees unable to attend the kick-off meeting in order to ensure that pairs meet to discuss mentee goals and possible exposure opportunities within the first kick-off week.

In the future, the program may consider being run on a rolling basis, initiating pairings and kick off when exposure opportunities are most in sync with mentee goals. However, in this next session, scheduling issues will be controlled through carefully pairing participants and ensuring initial contact in the first week.

4.2.2 Streamlining Program Structure: 1 to 1
Lack of opportunities due to current work load - not enough or too much - will also be mitigated through 1:1

mentor pairings in the next pilot session. With only one mentor for each mentee, tracking and coordinating opportunities will be more straightforward. This change is not being made to shift away from the interest-based approach of the Osmosis program, but instead it is being made as a response to mentor input to simplify the program and allow mentees "a deeper dive in a narrower direction". Allowing the program to evolve in this way will strengthen the objective of the program to provide mentees insight into a specific subject they would like to know more about. It will also eradicate the "A" and "B" mentor distinction which did not prove to significantly contribute to the experience of any mentees. Lastly, one-to-one mentoring will make it easier to provide specific clients the attendance they expect from our design team.

4.2.3 Mentor and Mentee Selection
Selection for mentor participation in the pilot session was largely determined by those who expressed interest in being involved. Mentees were folded in as young professionals in the office engaged in the conversation and showed interest in self-development. While this worked for the closed nature and small-scale of the first pilot session, the Osmosis program will benefit from an inclusive approach to both mentor and mentee participation in three ways. Allowing anyone to be a mentor acknowledges the fact that many employees, despite age or experience, have a skill to teach and can provide their applied experience. Additionally, opening up participation to the whole office increases the likelihood that compatible and productive pairings will occur. This acknowledges the fact that not every interested mentor will have an active project appropriate for the Osmosis program during any given session. Lastly, as an office we should offer everyone equal-opportunity for advancement. If we experience too much interest during planning of the next session, methods for ensuring equity will be further explored.

4.2.4 Research Design and Data Analysis
Given the demonstrative intent of this pilot session, research design and data analysis were limited to the first level of evaluation in Kirkpatrick's Model for the effectiveness of training. Kirkpatrick's model provides a standard for evaluation across four levels: reaction, learning, behavior and results. While the first easily lends itself to narrative analysis, the second - determining "the degree to which participants acquire the intended knowledge, skills, attitude, confidence and commitment based on their participation in the training" requires a more extensive research design that is more resource intensive[28].

Future research for this program will work toward the second level of Kirkpatrick's evaluation model, establishing measurable terms to define the intended learning and career development objectives of the initiative and the degree to which these are achieved. Implementation of prospective and retrospective surveys, as well as individual interviews will provide methods for capturing this data, while further sessions will provide a larger sample size to support statistical analysis and longitudinal tracking of learning and knowledge transfer.

The development of measurable terms to define the learning and development objectives of the program will reference existing research in the design of situated learning instruction – noting the focus on process rather than explicit knowledge in the situated approach to learning. Attention will be given to nonlinear measures of learning such as attitude, efficacy, perceptual skills and higher order thinking gained through the peripheral experience. Efforts to integrate practitioners, researchers and developers in the program's development will continue, given the strength of this interaction in informing improved methods for the program's implementation in our practice. This emphasis on an interactional approach to research will be examined in greater depth, with the shared goal that our research works to understand and articulate practitioners' activity, from their perspective and the perspective of those learning from them[29].

5.0 CONCLUSION
Mentorship is one of the most critical and effective components of professional development in our field, particularly due to its collaborative and nuanced nature. However, in such a fast paced work environment, the commitments required of traditional mentorship are limiting to our growth as a firm. Though not seeking to replace traditional mentorship, our culture demands an additional flexible and iterative mentorship approach. Osmosis seeks to be part of the evolution of our individual and collective professional education.

The pilot session of the Osmosis program serves to illustrate the program's strength as a tool for professionals, at any stage of their career, to gain insight into an area of practice that they have limited experience in. While mentees gain breadth in this area of practice, the program also serves to foster the exposure and relationships necessary for long-term knowledge sharing and innovation. Finally, the mentee initiated program demands the self-advocacy required for career-advancement.

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