

## Flexible Movement Along Continuums Yields Greater Sensitivity in Spatial Design Solutions for Adults Aging with Autism

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The staccato of today's information overload is now a dominating characteristic of global cultural. This phenomenon of free flow information acceleration is leveraged commercially and politically. Fueled with an internet of global observations, science propels exponentially past any five step method. This digital fabric defines generations, whose Digital Revolution carries their voice, tweet by retweet, across oceans and continents. The infinite info-flux yields a societal inattentiveness, mitigated only through mindfulness commerce or a surf-induced dopamine blur. And despite the connectedness, like capsized insulars, many minds are stranded, with only an iPhone, on a targeted marketed platform, surrounded by digital media white noise.

The 24/7 digital soak psychological and societal effects and affects are rich fodder for academic studies or Socratic queries. Pedagogically, higher education is challenged to hang their cap on best practices for media saturated adult learners. It is a shifting terrain, as learner traits and the university structure adapt in real time. Even time reshapes itself under the duress of byte comm flow:

- Work/ home imbalance recycles leisure time into work
- 9-5 means time spent in the physical office, the other sixteen hours are work-at-home,
- Email and texts slip through blurred boundaries and are answered pillow-side

Key words: more, faster and continual. The underpinnings of digital overload: work more, faster, continuously. Eriksen proposes that online perpetuity, ironically yields a scarcity rather than a savings, of time. Ironic, because the information highway was intended to free-up more time for scholars by reducing the time needed to manage the scholarly record, according to Levy. This is one thought modality that Levy describes: routine thinking. Its automation garner more time for the creative thought modality (Levy, 2007). Rather than simply house the scholarly record, the non-stop, high speed information traffic fragments ideas and ultimately, time, into short, sound byte intervals. We are robbed of precious uninterrupted, slow time for contemplation (Eriksen, 2001). As Levy observes, we are "losing the time 'to look and to think' at the very moment we have produced extraordinary tools for investigating the world and ourselves and for sharing our findings" (Levy, 2007) . Instead, Bawden and Robinson see tools that craft an "information landscape based on shallow novelty" such as rapid updates with new content. An expectation, even a craving, develops, for constant ephemeral novelty. The speed of information acquisition departs from leisure and from work that is deeply considered and analyzed (Bawden & Robinson, 2009) in favor of Work.

How does this fragmentation of time into short, unfocused interruptions reconcile with the need for contemplative examination within design studios? Even for faculty, the university, once the bastion for Levy's contemplative scholarship, suffers from time loss, cutting quiet reflection periods for production.

Levy recalls leisure not as time frittered foolishly. Rather, Western culture once defined leisure from its Greek roots as “not work,” or the time that “required no justification beyond itself” (Levy, 2007). Leisure meant contemplation of philosophy and the arts, with no quantifiable requirements. Levy reminds us that this was the foundation of a liberal arts that were studied without justification (Levy, 2007). Bawden and Robinson describe continuous partial attention and attention deficit trait, hyper focus on remaining “connected,” distractibility and impatience and cognitive overload as the psychological impacts of info-stream (Bawden & Robinson, 2009). All of these traits present difficulty in the studio, where the development of ideas requires solitude and contemplation. The Association for Contemplative Mind in Higher Education’s Vision posits that a pedagogy combining conventional scholarship with contemplative and experiential methods uncovers avenues for exploration that lead to effective and lasting solutions (Zajonc, 2018). Service learning becomes an opportunity for this contemplative work, which, ACMHE believes will engender a personal and social awareness that imparts service towards a common future (Zajonc, 2018). Without the uninterrupted solitude of reflection, education risks an “impoverished and largely reductive understanding of the world” (Zajonc, 2018).

The VCU Community Engagement project, *Designing a Place to Be: A University-Community Partnership for Addressing the Needs of Adults with ASD* was a unique studio experience for both faculty and students. The project initiated an exploration into best practices for design of interior spaces for adults with autism spectrum disorder (ASD). The frame work for the project was designed by colleagues, Fell and Smith. As junior faculty working with a grant-funded collaboration between three departments and an outside organization, Fell and Smith observed outcomes both strategic and organic. The experience of time was initially structured. The organic observations as the work unfolded layered into thoughtful post-analysis of the perception of time and its impact on student design solutions. Rather than transverse, finite intersections of interrupted, short time and uninterrupted contemplative long time, the project traveled through those experiences along a continuum of time. This paper examines the dichotomies observed in this project’s progression and proposes that rather than finite intersections or junctions, these topics exist in a spectrum. Flexible movement along these continuums yielded highly considered and adaptable design solutions:

solitude + interaction

knowledge + novice

university + community [space]

charette + independent work [time]

self (inward) + others (outward)

stimulation + chaos

## Knowledge + Novice

Funded through a grant sponsored by the Virginia Commonwealth University Office of the Provost and Vice President For Academic Affairs Division of Community Engagement, The Partnership for Aging with Autism Research Core (PAARC) is a trans-disciplinary core of person-centered support services for adults aging with autism and their caregivers. The research focus is to promote dignity and respect, as well as demystify fears, and to foster an acceptance of diversity through community-engaged research. PAARC seeks to support both this special population and the University goals to grow and support the

next generation of researchers, artists and scholars focused on the discovery of new knowledge that advances the human experience and quality of life. By increasing inter-disciplinary research and inter-professional education, scholarship and practice among arts, humanities and sciences, PAARC is uniquely positioned to expand VCU's research enterprise.

A Grace Place (AGP) provides individualized day care and support services for adults with disabilities and age-related conditions. These adults, ages 18 - 85, typically have other disabilities including, but not limited to, dementia and autism. AGP approached the PAARC initiative, seeking design solutions that might serve as best-practices for their clients. AGP is located in a reconfigured, single story office park. Facility growth mushroomed over time without a master plan, and many areas within the space are chaotic or uninviting. For this project, students selected a day room to design a multi-purpose dayroom space serving the clients with Autism Spectrum Disorder and the staff.

Graduate and undergraduate students from two studios collaborated in short-time activities at the project onset. Sixteen undergraduate and twelve graduate students grouped into four teams. After five weeks of charrettes, the students separated to complete an individual cohesive design, informed through the charrette work. A focus group with researchers from VCU Rehabilitation Research and Training Center introduced the issue lack of support for adults with ASD. Though a short, interrupted time experience, the focus group was the start of more expansive-time research. Students research would continue in solitude, and inform short, interactive periods. Research and interactions within the focus group exposed students to myriad unfamiliar sensory experiences impacting adults with ASD and sensory processing disorders. These adults can experience stress from an influx of stimuli that are perceived as chaotic. Conversely, adults with ASD may crave stimulating or self-soothing sensory experiences.

## **Stimulation + Chaos**

After attending the focus group, students completed a sensory profile questionnaire, assessed by member of the PAARC team. Students had opportunity to consider their sensory makeup in four areas and identify sensory circumstances for themselves and for the clients with ASD. Depending on an individual's profile, students might be conscientious and focused despite distractions; possess an ability or struggle to discriminate / focus on detail; experience change as positive or facilitate or avoid change; feel either comfortable or easily affected by environmental factors.

An organic observation of the teaming phase was the significant impact of sensory profiles on group dynamics. One team faced conflict arising from one teammate's struggle to discriminate. His unwillingness to abandon an idea rejected by his teammates ultimately led him to quit the team. Contrasted to this was a team with individual of similar sensory profiles, who worked well and commented on their final surveys how enjoyable and seamless the group work was for them.

## **Charette + Independent Work [time]**

The project asked students to consider the question: How do we design spaces to support adults with Autism and their unique needs while not compromising the space of other residents at AGP, including those with visual impairments, physical impairments and/or dementia? Included project goals were:

- To create an environment which maximizes the capacity to achieve the best quality of life possible for the clients of AGP
- To design a multi-purpose space that supports the best-practice programming developed by the PAARC committee. These supports address independence, stress reduction, communication, social engagement and leisure skills.
- To define a specific program of activities: art, cooking, gardening and music
- To provide spaces of community and spaces of privacy within the overall multipurpose space.
- To design ancillary spaces for AGP staff

Following the sensory survey, phase one kicked off the first of five charrettes, designed to be “social learning” experiences. For Ryan and Tilbury, “social learning” experiences leverage co-curricular learning spaces, informal learning and social interaction. By crafting flexible opportunities embedded in and outside formal curriculum, learners self-determine their reality and learning experiences (Ryan & Tilbury, 2013). The charrette teams were assigned. Teams considered and wrote an agreement for communication. Agreements reflected the diverse sensibilities and preliminary construction of reality of student teams immediately- formats ranged from very professional to handwritten to a humorous “penalty of death” for late work.

Fell and Smith launched each weekly charrette with brief review of the instructions. Each charrette investigated designs for single spaces for art, music, gardening, cooking and sensory props. As a tool for pedagogical flexibility, the charrette work was student led and non-formal. The fast pace of the charrettes within the semester timing did not allow for critique of each completed charrette. Fell and Smith acted as facilitators and “floated,” as needed to answer questions.

Self-reflection and peer feedback on the individual nature of sensory processing experiences presented many complexities to the charrette designs. A sensory stimuli that might innervate one individual could present great distress to another. Students began to appreciate the importance of sensitivity, flexibility and thoughtful consideration in designing a multipurpose space for a population with individual singular needs. As the charrettes progressed, most teams structured themselves in different modes, responding to the work and the group dynamic experiences. Post-project student written reflections predominantly supported the student-led charrette framework, reinforcing Ryan and Tilbury “learner empowerment” as central to flexible learning. The increased contribution from empowered learners and displaced conventional HE expert authority paradigm fosters self-regulated learning (Ryan & Tilbury, 2013).

*Q. How did your team structure the timing of each charrette? Did you work with your group the entire time or did you work independently?*

A. My group really dragged their feet, and were slow to get things done during the allotted class time, so much of our time producing work was spent individually. The group time during class was typically spent in concept development and also delegating parts of the prompt to different people and really coming to an agreement about what we were going to do (after having spent a significant amount of time hearing everyone's ideas).

A. Our team used about 30 minutes individually to brainstorm for a concept and came up with drawings to support our concept. We then used another 60 minutes to explain each one and come up with a group design using each of our drawings. Once we came up with the design we used the rest of the time to assign each member a design task and do drawings, make concept models and watercolors for our team developed design.

*Q. What was the most impactful experience during the project? Did you have an eureka moment that affected your design strategy?*

A. No eureka moment, but it was really helpful to use some of the charrette experience as a trial-and-error phase for my own personal concept development (like with dichotomies and space planning).

A. I really loved this, it made me friends with some of the grad students, and we all still talk to one another. Since the grad students are obviously more experienced than me, it was really awesome to see how passionate and driven they are, and I started to try to have the same work ethic.

*Q. How was your team structured? Did you have a team leader or did your group have another approach?*

A. We did not have a team leader. We understood what our strengths and weaknesses were on the first day and assigned each other jobs that would work well with our strengths and the following week changed up the schedule so we could do get better at our weak spots in design. This pushed us harder to get better and gave us all a chance to do every part of the design each week.

A. We self-selected a leader without really discussing it; it was very helpful to have someone in charge of pacing and timing.

Throughout the charrette phase and transitioning to completely solo work, students were neither completely experiencing long (slow) or short (fast) time. Exposure to varying interaction dynamics and responsiveness to rapid ideation fueled for learner experimentation. For Ryan and Tilbury, pedagogical approaches that regard flexibility as a learned capability better equips people "to think, act, live and work differently in complex, uncertain and changeable scenarios" (Ryan & Tilbury, 2013). Ultimately, the compressed charrette work sessions either maximized or pressured short/ fast time constraints for students. Outside of the team work, quiet contemplation of the work simmered back-burner and intentional.

## **Solitude and Interaction**

The uninterrupted solo phase was rooted in contemplative consideration. There was no distinct switch, however, from short, fast time to long and slow. Even on a back burner, design projects mull in the mind. As Levy observes, all creative work has an immersive, contemplative element (Levy, 2007). Scheduling for focused work is difficult in the Mega-media Age where urgency is always task-master (Eriksen, 2001). To combat urgency, Fell and Smith directed students towards quiet uninterrupted focus. For the university- and its design studios- are "the one place in the culture, supposedly, where deep study and reflection are not only sanctioned but encouraged and taught" (Levy, 2007). Though eureka moments occur, Levy cautions against assumptions that "creative insights are limited to certain

specially gifted individuals,” and suggests “many people who have worked diligently to make sense of difficult ideas, or to write with clarity, know times when insight comes suddenly and seemingly from somewhere else” (Levy, 2007). Students seemed to sense the charette’s nascent quality as individual solutions developed:

**Q. As far as the (charette) pace, each week, there was single-purpose space to examine focused on one sense. Did you find this repeating framework supported, enhanced, diminished, or complicated that flow?**

A. In some way, I felt like the (charrette) prompt complicated the rhythm because the programs were closely linked to each other and did feel somewhat repetitive. I also noticed a lot of the charrette team members becoming hyper focused on the programmatic element of the prompt and not really addressing the "sense-based" part of the prompt. In the moment this was difficult, but it also promoted a lot of idea generation that really enhanced my design process afterwards when I started the next phase of the project individually.

**Q. When redesigning the shared programmatic space at A Grace Place, what considerations were made for the autism community that may differ from another project? Describe your understanding of ASD before and after the project. Did anything change?**

A. My understanding of ASD after the project is night and day and I feel grateful that I had the opportunity to spend time researching and designing for this population. I know it will impact my future approach to communities like these, and has opened me up to new opportunities.

A. This different way of going about work definitely pushed me out of my comfort zone. Working with others and depending on them to bounce ideas off of and create decent work was refreshing, and after getting good constructive criticism from group members it helped me refine my work in different ways that I wouldn’t have thought of while only working alone.

## **University + Community [space]**

Service learning has significant impact on students. Numerous studies support the efficacy of moving beyond the classroom into the greater community to which the university belongs. Qualitative findings from Astin et al., suggest that an increased sense of awareness of self and the world coupled with greater civic responsibility are major outcomes of service learning experiences (Astin, et al., 2000). Mitchell supports service learning models that foster reflection after action. It is through contemplation that students become aware of individual and institutional relationship to social problems and social change measures (Mitchell, 2008).

At the close of the charette phase, students volunteered at A Grace Place (AGP), an adult day center. Students interacted with adults with various intellectual and developmental disabilities in the space that they occupied daily. Students and AGP members played games, danced or talked. After volunteering, many students stated that time “seemed to stop” during their visit- they experienced a sense of timelessness while they enjoyed the interactions. Students reached beyond the design studio into their

larger community to consider design solutions nuanced for a special population previously unknown. For many students, this was a favorite project component or even a life changing experience.

*Q. And how did visiting A Grace Place change your perspective on the project? Were there any design elements you reconsidered after the visit?*

A. The visit was the most important part of the project...yes, the design did change after the visit. A first hand interaction with the people, staff and coordinators gave me a newer perspective of what their needs and wants from such a project would be.

A. Visiting definitely changed the way I approached the project. I have worked with children with autism, but realizing that we were designing for adults made me reconsider certain elements. I wanted to respect the autonomy they had and support it, which meant trying to make the space feel more refined than what I was initially envisioning.

A. Visiting a Grace Place was one of my favorite parts about the project as a whole. Seeing the people we were 'building' for was a delight and I loved being able to interact and spend time in the space. Personally, I reconsidered how much space I gave to circulation after visiting and seeing those who were disabled struggle to get from place to place.

A. Visiting A Grace Place allowed me to better apply the research on autism more effectively, in part because it was very obvious what design applications could assist/and enhance with the programming at A Grace Place. Understanding the "user" better is always a valuable exercise.

*Q. And how did visiting A Grace Place change your perspective on the project? Were there any design elements you reconsidered after the visit?*

A. Not to sound cliché but it was very life changing and eye opening. It was our first time meeting both a client and end users, so it made the project feel more real, not just an assignment for studio class.

A. I think visiting the Grace Place helped to remind us that of the people who we are designing the space for and it allowed us to see how much we really needed to change about the space to make it work for how they operate.

### **Observed Lynne K. Seward, Interim CEO, A Grace Place:**

We are practioners and research on evidenced based practices is not our field of expertise. Together, (with PAARC), we are building a body of knowledge that is evidenced based and lays a strong foundation for best practices for a group of adults that are underserved.

I was completely amazed by how quickly the students understood autism and the need for acceptance and the role of the environment in building a quality life. They easily incorporated these concepts and more into their design... In short, the partnership is transforming the way we and others care for adults with autism and the role of space and design in building a positive and therapeutic environment.

I developed a new appreciation for the power of the arts.





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