I, Luke Patrick Laverty, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture (Master of).

It is entitled:
Immersive Environments: Using Flow and Sound to Blur Inhabitant and Surroundings

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University of Cincinnati
Immersive Environments: Using Flow and Sound to Blur Inhabitant and Surroundings

A thesis submitted to the Graduate School of the University of Cincinnati in partial fulfillment of the requirements for the degree of Master of Architecture in the College of Design, Architecture, Art, and Planning.

by:
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Abstract:

Following in the footsteps of motif-reviving, aesthetically-focused Postmodern and deconstructivist architecture, purely computer-generated formalist contemporary architecture (i.e. blobitecture) has been reduced to vast, empty sculptural, and therefore, purely ocularcentric gestures for their own sake. Taking precedent over the deliberate relation to the people inhabiting them beyond scaleless visual stimulation, the forms become separated from and hostile toward their inhabitants; a boundary appears. This thesis calls for a reintroduction of human-centered design beyond Modern functionalism and ergonomics and Postmodern form and metaphor into architecture by exploring ecological psychology (specifically how one becomes attached to objects) and phenomenology (specifically sound) in an attempt to reach a contemporary human scale using the technology of today: the physiological mind.

Psychologist Dr. Mihaly Csikszentmihalyi’s concept of flow—when one becomes so mentally immersed within the current activity and immediate surroundings that the boundary between inhabitant and environment becomes transparent through a form of trance—is the embodiment of this thesis’ goal, but it is limited to only specific moments throughout the day and typically studied without regard to the environment. Physiologically, the area within the brain—the medial prefrontal cortex—stimulated during flow experiences is also stimulated by the synthesis of sound, memory, and emotion. By exploiting sound (a sense not typically focused on within phenomenology) as a form of constant nuance within the everyday productive dissonance, the engagement and complete concentration on one’s own interpretation of this sensory input affords flow experiences and, therefore, a blurred boundary with one’s environment. This thesis aims to answer the question: How does the built environment embody flow?

The above concept will be illustrated within a ubiquitous building type—the everyday housing tower—in the form of a live-work vertical artist commune in New York City—the antithesis of intimate, human architectural environments—coupled with the design of a sound sensory experiential walk through the surrounding blurred neighborhood boundaries in the attempt to exploit and create an environment one becomes absorbed within and feels comfortable enough with which to experience flow. To do so, the characteristics of flow lead to the capturing of the senses, interaction, and flexibility. This thesis will explore and exploit how one perceives, interacts with, and becomes attached to when confronted with a space or artifact; reintroducing the humanity into contemporary architecture.
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0. Preface to:

0.1 Origin: The beginnings of this thesis began with a desire to create a deep emotional connection between architecture and inhabitant in response to the formalist move from the “human scale” in architecture and in cities (with respect to height). In the search for the origin of this thesis, I believe the search for one’s deep and integral connection to a human-scaled environment stems from my childhood, moving from what I thought was the perfect house in the perfect neighborhood to a cookie-cutter house in a farm-field-based subdivision within the pastiche “German village” of Germantown, Wisconsin, where I never felt at home or a sense of personal place or retreat.

I was born in Wauwatosa, Wisconsin (an urban suburb directly west of Milwaukee), and lived in a modest two-story 1950s house nestled in a thriving middle-class area surrounded by 40- to century-old trees where I walked to Wilson Elementary School, my friends’ houses, Scheele’s Pharmacy, and the historic downtown. We had an open central staircase to the second-level and amenities such as a laundry chute and wall-sized closets—nuances and assets of a home. During the summer prior to entering fourth grade, my family moved to Germantown, Wisconsin, into a Pulte Homes vinyl-sided anonymous cookie-cutter farm field-based subdivision north of Milwaukee, where I lived in one of the first houses transplanted onto the field. The first time I visited the rigidly compartmentalized house while the realtor showed my parents around, I was unable to use the water-vacant toilets and as one of the only six people within a quarter-mile, I urinated directly on the siding, ready to drive back to Wauwatosa—not a good start for the relationship I would have with this building. Even though I now had my own room (separated with paper-thin walls), through the years in Germantown I never felt that the house was my own, even though it housed the same belongings and people as my previous house; I was as Kimberly Darey calls “homeless.”1 In a contemporary society, aren’t belongings and people the source of joy? The building became merely a box for my family and possessions. Sure it looked like a house, but that is all it remained—a form imitating a home filled with voids for things. I felt as if there was an emotional boundary between the house, the neighborhood, and I. Without exaggeration, I have more pleasant memories (potentially due to naïve nostalgia) attached to my first house (real, distorted, and/or fantastical, including a vivid one of leaping down the entire staircase in one graceful, slow-motion bound) than the latter.

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0.2 Goals: Due to my experiences with both of these buildings with respect to my appropriation, this thesis became an exploration of how one designs personally-significant architecture beyond the belongings within that allows for a deep emotional connection between inhabitant and everyday environment. This idea led to research on emotional design in industrial design, a move toward my desired human scale and where I was introduced to Dr. Mihaly Csikszentmihalyi’s flow. While not specifically related to dreaming, my dream of leaping down the stairway is an example of flow; I was in total control of the situation and the boundary between user and environment had disappeared—a flow experience. I immediately became enthralled with this concept; this is the connection I was looking for.

The experience I want people to feel when they interact with their environment is akin to that of designer Del Coates when he first saw his first love—a 1936 Cord 810 coupe:

As in all cases of love at first sight, the scene and its associated emotions etched themselves into my memory so indelibly that I recall them effortlessly and in lucid detail to this day. According to my dictionary, love is not too strong a word for characterizing the experience: I had “a feeling of intense desire and attraction,” “a deep, tender, ineffable feeling of affection.” The attraction expressed itself, quite literally, as a compelling urge to move close enough to caress it not only with my eyes but also with my hands. My dictionary goes on to say that love involves “a sense of underlying oneness” and a desire to possess it, to own it. Coming to own something we desire exceeds the legal concept of physical possession. It involves something more akin to emotional integration or assimilation. I wanted to embrace it, to merge with it, to make it not only mine but a part of me.²

This desire was so strong that Coates’ complete concentration was focused upon that moment with the car—willing it to inch closer—that the world disappeared from consciousness; it was just him and the Cord. The previous connection, however romanticized, is this thesis’ goal—“a sense of underlying oneness” and a result of flow. A deep connection to one’s immediate surroundings transcends the unimportant gestures of the formalist Architect and reaches a human-centered design. This thesis aims to create a personally-integral architecture beyond merely shelter with a minor goal of creating a sense of retreat (required for flow experiences) within the environment and, therefore, a dependence and dialogue between inhabitant and environment—an architecture of immersive environments.

1. Introduction to:

The idea that the design of our buildings really matters to our state of mind is in fact a rather alarming one given how badly-built the rest of our world is.

Alain de Botton

But then it is easy to forget that architecture is all about the senses.

Sir Norman Foster

The gradually growing hegemony of the eye seems to be parallel with the development of Western ego-consciousness and the gradually increasing separation of the self and the world; vision separates us from the world whereas the other senses unite us with it.

Juhani Pallasmaa

Enjoyment, on the other hand, is not always pleasant, and it can be very stressful at times. A mountain climber, for example, may be close to freezing, utterly exhausted, and in danger of falling into a bottomless crevasse, yet he wouldn’t want to be anywhere else. Sipping a piña colada under a palm tree at the edge of the turquoise ocean is idyllic, but it just doesn’t compare to the exhilaration he feels on the windswept ridge.

Dr. Mihaly Csikszentmihalyi

Reacting to the issues of alienating formalist digital contemporary architecture and increasing urban scale, there emerges a severe problem with respect to the scale of the built environment and those inhabiting it. This thesis calls for a reintroduction of anthropomorphic-focused and human-centered design beyond form and ergonomics into contemporary architecture by exploring ecological psychology and idiosyncratic auditory input as an attempt to reach a human scale. Design for the psyche as a human scale is not new in any way; however due to architecture’s constant response its current technology, the contemporary understanding of the brain through new technologies allows today’s architecture to speak to that—the physiological brain. The psychological concept focused on is Dr. Mihaly Csikszentmihalyi’s flow—a state of “inescapable interconnectedness” when one becomes so connected to the current activity and one’s environment that one transcends the ego, and the boundary between user and environment disappears. Through interaction and a unified user-environment system, what results is a diffused relationship to the larger context, but more importantly that of a highly-concentrated, deep connection to one’s
immediate surroundings. The interfacial aspect of architecture requires a human connection and scale; design for the senses requires the focus be at the hand- and body-scale.

The major criticism of this thesis is against formalist contemporary architecture that allows for scaleless design, which creates physically- and metaphorically-visible boundaries between inhabitant and environment. Therefore, the ocularcentrism of society (in comparison with phenomenology) and the example of formalist architect Greg Lynn’s founding of folding, a term that also attempts to blur the boundary between object and context, are the targets for this criticism. In general, Lynn’s folding falls short of fully integrating the blob within its context by ignoring the human inhabitants within the blob and that the term folding, while attempting to cohere with the bodies being folded, implies a visible border between them. These visible boundaries are the focus of this thesis’ criticism of formalist contemporary architecture.

These concepts will be applied to a vertical artist commune, including housing and studio spaces, which facilitates and envelops the integration with another body (the inhabitant) through flow. Architecture of the everyday with repetitive and extensive use with respect to active leisure activities (hobbies and socializing—the primary activities for triggering flow), will produce the desired results over time. The blurred line of the live-work program condition furthers this goal. Dr. Csikszentmihalyi has established a connection in his research between flow and the importance of objects in his books Finding Flow and The Meaning of Things—when one is comfortable enough with to appropriate and attach memories to these “things,” one is more likely to experience flow due to interaction with them.

1.1 Definitions: This thesis is a reaction to formalist contemporary architecture; that is the purely “computer-generated form-making” which can be described as postmodern, deconstructivist, and blobitecture. As a further response to the computer-generated formalist architecture, specifically blobitecture, this thesis will criticize yet appropriate Lynn’s folding—the theoretical fusion of multiple bodies through the absorption of their interacting smooth, metaphorically pliable surfaces—with the goal of “folding” one’s subconscious into his or her experience of the architecture. In response to and as a means of “folding” the subconscious, this thesis argues for the use of ecological psychology to reach a contemporary human scale. Ecological psychology deals with the constantly-changing relationships and conversation between people and their environments (the goal of this thesis). Like environmental psychology, ecological psychology aims to understand and bridge the gap between user and environment; unlike environmental psychology that only

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focuses on the one-way affect of environment on user, ecological psychology deals with the dialogue between the two. The usage of environment does not necessarily imply the organic environment of foliage and atmosphere but that of one’s immediate surroundings from one’s sensory inputs to the people with whom one interacts—all potentially leading to flow. In general, flow is the “phenomenological state” of “optimal human experience” and “complete involvement” through the subconscious integration of one’s surroundings through action when one has reached a level of concentration and comfort that one becomes psychologically embedded within the immediate action and surroundings. The specific definition this thesis will base its process and design implications off of is that of University of Cincinnati psychology professor Michael Richardson:

Flow is not simply a matter of connection but of a continuous change that involves the user in an environment, such that the user and environment become one system and the dynamics of ongoing activity (behavior) is dominated, not by the components or properties of the environment (or user), but by the relations between user and environment. Flow is a property of a unified user-environment system that is inseparable and irreducible.

Overall, the goal of this thesis is to react to formalist contemporary architecture and folding using ecological psychology, specifically flow, to blur the boundary between one and his or her environment, measured through one’s ability to reach flow experiences.

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5 Debold, “Flow with Soul.”
6 Michael Richardson, e-mail message to author, October 14, 2011.
1.2 Topics: With this thesis’ original purpose to reach an emotional connection to one’s surroundings, Donald A. Norman’s *Emotional Design* became the foundation for its research. Norman, a well-respected industrial designer and cognitive psychologist, stresses the significance of reaching one’s user beyond simple function in *Emotional Design* (a revision from his previous text *The Design of Everyday Things*, in which he posits the primary concern for designers is functionality). Norman reflects on his evolution: “But now I’ve changed. Why? In part because of new scientific advances in our understanding of the brain and of how emotion and cognition are thoroughly intertwined… Sure, utility, and usability are important, but without fun and pleasure, joy and excitement, and yes, anxiety and anger, fear and rage, our lives would be incomplete.”

Specifically, Norman references Dr. Csikszentmihalyi’s ecological psychological concept of flow as one of the first examples of obtaining an emotional connection to an inanimate object. This thesis focuses on flow because it is the archetype of user-environment interaction, leading to a positive experience and relationship with the immediacy—the goal of this thesis. His approach to psychology was innovative for the time, since it was a humanistic look at psychology, not just a top-down series of lab tests on rats for reinforcement. Ecological psychology is the driver of this human-environment design; a postmodern philosophy of psychology, ecological psychology studies the constant change between human and environment—a quality that is contrary to most architectural endeavors. Juhani Pallasmaa describes this relationship: “The percept of the body and the image of the world turn into one single continuous existential experience; there is no body separate from its domicile in space, and there is no space unrelated to the unconscious image of the perceiving self.”

Dr. Csikszentmihalyi, a highly-regarded psychological researcher and instructor, has written numerous publications on happiness and creativity, including the positive psychological notion of flow and one’s involvement with their current activity “to extend outside the body.”

When one experiences flow, simply, he or she experiences ecstasy. The discovery of flow emerged from Dr. Csikszentmihalyi’s attempt to understand happiness. Describing a musician’s experience when creating his work:

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9 Debold, “Flow with Soul.”
Ecstasy in Greek meant, simply, to stand to the side of something. And then it became, essentially, an analogy for a mental state where you feel that you are not doing your ordinary, everyday routines. So, essentially, flow is stepping into an alternate reality… So once he gets to that point of creation—a new reality—that is the moment of ecstasy. He enters that different reality. Now, he says also that this is so intense of an experience that it feels almost as if he didn’t exist.10

The goal of ancient civilizations was to “experience a different reality… in a more concentrated, ordered form” beyond their everyday lives—this “ecstatic state.”11 His challenge to contemporary society is to find “how to live life as a work of art, rather than as a chaotic response to external events”12—simply to transcend the “everyday” during everyday events. For example, Eric Bana, actor and professional motor racer featured in the documentary Love the Beast, describes his obsession with the sport: “There’s a focus and an intensity that I don’t feel anywhere else. You’re always on the edge, and you’re never holding anything back…There’s another side that you completely forget about all the other cars on the track, and you feel like you’re in another world. It’s just you at one with the road and the car.”13 Mr. Bana’s experience, “everyday” for him as an occupation, is the perfect example of flow and one’s attachment to an inanimate object—both the primary goals of this thesis. Akin to the athlete-shoes-track or artist-pen-studio relationship, this thesis aims to reach an alternate reality from the everyday and escape from it into one’s own sense of retreat—both resulting from flow experiences—with this thesis’ proposed relationship as inhabitant-reactive sensory provoking space-environment. One loses his or her sense of self-awareness through flow, creating a hyper-awareness of their surroundings—ironically without being aware of it.

11 Ibid.
13 Love the Beast, DVD, directed by Eric Bana (Australia: 2009).
Flow, as a positive psychological concept resulting from research on happiness, can lead to a positive relationship one has with his or her environment. When so attached to one’s environment, the inhabitant will feel as if “he didn’t exist,” truly becoming one with the architecture where “existence is temporarily suspended” and one “feels a part of something larger.”

Attempting to feel a part of something larger itself, Greg Lynn’s architecture, using folding to reach out to and embed its context, calls for a purely formal approach to design; the criticism of Lynn’s technique (even before the addition of a reference to aeronautics and calculus to his argument) shows that it is hollow and completely divorced from those who interact with the architecture, only dealing with the urban scale. Like ecological psychology, Lynn’s folding features a heavy focus on connectivity and holism but misses the human scale of psychology. However abstract Lynn’s use of cooking theory and *The Terminator* may be to architecture, his ideas are still significant and important to reaching one’s context. This thesis aims to restructure that context to that of the human and the senses.

Through research, it has shown that physiologically the part of the brain stimulated during flow experiences is also stimulated by sound, emotion, and memory. This thesis does not aim to redefine how one experiences space, but instead aims to manipulate that experience through the senses (with a focus sound) to trigger or create flow experiences during the everyday. Concurrently, precedent analysis shows the most successful examples of built environments that actively and passively create flow experiences manipulate sound and were further transformed due to the inhabitant’s interaction. This led to a phenomenological study of sound and its comparison to ocularcentric formalist contemporary architecture (based on Juhani Pallasmaa’s *The Eyes of the Skin*)—not unlike Dr. Csikszentmihalyi’s comparison of enjoyment and pleasure.

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14 Csikszentmihalyi, “Creativity.”
Formalist contemporary architecture, ocularcentrism, and pleasure (1-4, left)
Flow experiences, multi-sensory experiences, and enjoyment (1-5, right)
2. Reaction against:

The dominance of the eye and the suppression of the other senses tends to push us into detachment, isolation and exteriority.

Juhani Pallasmaa

2.1 Indifference: Within contemporary society, there is prevalent indifference: for the future, for others, for one’s environment, and for oneself. The general person does not care about his or her everyday experiences; every breath and experience is taken for granted. “Beyond architecture, contemporary culture at large drifts towards a distancing, a kind of chilling desensualisation and de-eroticisation of the human relation to reality.”15 With an excess of excess, one is trained to suppress the external world in favor of the internal, whether in his or her own mind or personal media device. “In a city that is all sensory overload—teeming sidewalks, roaring trains, tricked out cruisers blaring reggaeton—it becomes practically a matter of survival to be selective about what we choose to see and hear. We put on iPods. We bury our nose in a book. We simply block it out.”16 In the response to this and the ever-increasing “de-sensualisation” of art, New York-born poet and performance artist Todd Shalom, founder of arts group Elastic City, pursues the opposite, taking New Yorkers on sensory walks and asking, “How do you travel in a city that you live in?”17 This thesis will exploit the internalized society, the everyday, and how one breaks from a tedious mental routine in lieu of a rich psychological experience within the built environment to create a unified internalized-externalized system.

The problems arise from the isolation of the eye outside its natural interaction with other sense modalities, and from the elimination and suppression of other senses, which increasingly reduce and restrict the experience of the world into the sphere of vision. This separation and reduction fragments the innate complexity, comprehensiveness and plasticity of the perceptual system, reinforcing a sense of detachment and alienation.

Juhani Pallasmaa

2.2 Ocularcentrism: The isolation of and obsession with the ocular sense in formalist contemporary architecture to reach the status of spectacle deepens the boundary between its inhabitants—a distancing and alienation of the latter. Professor of architectural design at the Accademia di Architettura, Jonathan Sergison warns, “In contemporary society there is too much of

15 Pallasmaa, The Eyes of the Skin, 34.
a desire to think only in a visual way,” leading to a singular understanding and appreciation for space and society. Contemporary architecture features an epidemic of a pure focus on skin and of indifference to one’s inhabitants. Potentially due to the Bilbao Effect or the competition-driven market in practice, Pallasmaa has observed that:

The ocular bias has never been more apparent in the art of architecture than in the past 30 years, as a type of architecture, aimed at striking a memorable visual image, has predominated. Instead of an existentially grounded plastic and spatial experience, architecture has adopted the psychological strategy of advertising and instant persuasion; buildings have turned into image products detached from existential depth and sincerity.19

Professor of architecture at Harvard and Yale, Francisco Mangado once said, “It’s incredible how kids don’t give importance to sections anymore,” only interested in surface and exteriority—“a huge loss of potential in architecture.”20 German philosopher Max Scheler “bluntly calls this attitude the ‘hatred of the body.’”21

In opposition to ocularcentrism, it can be considered premature to assume it is superior to audiocentrism, gastronomocentrism, epidermocentrism, and olfactorocentrism. Along the same line, it can also be considered premature to claim one sense is superior to another, thus negating the “–centrism” from the architectural experience. It should be noted that Juhani Pallasmaa’s case for non-centric multi-sensory experience is biased toward the tactile, arguing that all senses are related to and “the only sense which can give a sensation of spatial depth is touch”—proven inaccurate with the example of World Access For The Blind president Daniel Kish’s (blind since age one) bike riding using echolocation.22

Blind Daniel Kish bike riding (2-1, left), World Access For The Blind logo (2-2, right)

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18 Minner, “Interview: Jonathan Sergison.”
19 Pallasmaa, The Eyes of the Skin, 30.
20 Minner, “Interview: Jonathan Sergison.”
21 Pallasmaa, The Eyes of the Skin, 19.
22 Ibid, 42.
This thesis aims to respond to the ocularcentrism of purely formalist contemporary architecture through the restraint of sight (yet not full extermination) to integrate all senses with a focus (similar to that of Pallasmaa) on sound due to its physiological properties with Dr. Csikszentmihalyi’s flow; through sound, the invisible intertwined layers can be not only heard but seen, felt, smelled, and tasted.

Note the conductor’s closed eyes. Varying levels of sight are required (and can be completely unnecessary) during flow experiences due to one’s comfort with and repetitive use in that environment. While not seeing the baton, orchestra, audience, or theater, the conductor is inescapably interconnected with them; flow experiences transcend those of the ocularcentric realm.

Elastic City’s series of walks through the ocularcentric New York City teach the average resident to look beyond the skin of their daily lives by manipulating all the senses. From searches for vintage fonts and repeating voiced phrases to interact with strangers, the group reframes the everyday to create a directed hyper-awareness of the exterior world and our own internal worlds. Elastic City’s founder Todd Shalom, a specialist with respect to auditory experiences, is an active member of the New York Society for Acoustic Ecology (NYSAE), “a membership organization that advocates listening and promotes public dialog about the urban sound environment. NYSAE creates and encourages new ways of encountering sound and provides resources and information on acoustic ecology.” As opposed to walking tours, Elastic City’s sensory walks rely less on factual information but instead on subjective experiences. Shalom leads his own Sound Walks to teach people to drop their indifference to their environment and get tangled up in its symphony,

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“recreating the wonder you feel anytime you are in a new place—where scents, sights, sounds, and language are totally fresh.”

The inhumanity of contemporary architecture and cities can be understood as the consequence of the negligence of the body and the senses, and an imbalance in our sensory system. 

Juhani Pallasmaa

2.3 Inhumanity: “We live at a time when the image of things is really important.”

Indifferent to or ignorant of human attachment, formalist contemporary architecture rests on the shoulders of architects that design to a certain style or brand, resulting in a continuation of the object fetish prevalent in the world of architecture today. Contemporary formalist architects are not the only guilty party; developers such as Pulte Homes are just as much to blame, building a multitude of house-forms in the name of homes. According to Donald Norman, “What do people love and cherish, despise and detest? Surface appearance and behavior utility play relatively minor roles. Instead, what matters is the history of interaction, the associations that people have with the objects, and the memories they evoke.” Yet the object and performance fetishes of contemporary architecture pervade.

Contemporary architecture remains undefined in its aspirations with respect to culture and history, pulling influence from the stark formalist Modern movement and the large scale gestures of Postmodernism and the avant garde, while focusing more and more on manipulating the technology that allows for free-flowing yet empty, oppressive forms that do not relate to the user with respect to their scale or emotional needs. Striving to eliminate ornament in art and architecture, the Modern movement was simply an aesthetic movement; this International Style tried to unite the world by caring more about rationality and universality for humanity and, ironically, took the humanity out of architecture. Le Modular is an example of the user informing Modern architecture, but it can be debated how “human-centered” this approach is; ultimately, this idea is a type of formalism, focusing more on numerical dimensions than the perfect human, not individual humans. According to Pallasmaa, the Modern movement, in general, failed to penetrate popular society due to its “one-sided intellectual and visual emphasis; modernist design at large has housed the intellect and the eye, but it has left the body and the other senses, as well as our memories, imagination and dreams, homeless.”

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24 Miranda, “Hidden City.”
25 Minner, “Interview: Jonathan Sergison.”
26 Norman, Emotional Design, 46.
27 Pallasmaa, The Eyes of the Skin, 19.
This practice continued through many other styles and continues in contemporary architecture. The conception of the entire “Less is more” argument was a visual one. The move from anthropomorphism is further evidenced by two new “-isms” emerging in contemporary architecture: Performativism and Parametricism. Deconstructivism and blobitecture are blinded by pure form-based theory and evolving into other aesthetic movements; digital design has further divorced the concept of the human experience from the act of generating the built environment, allowing for a greater focus on scaleless form.

The boundary between built environment and inhabitant continued to increase as these influences led deconstructivists to create Brobdingnagian gestures with a primary focus on form—pulling the architecture further away from the humanistic interface of design with each mouse click. Such spaces are the empty curves of some of Zaha Hadid’s current work, Peter Eisenman’s sole focus on the expression of process (not to mention his purposeful move to “break free from the
anthropocentric model established during the Renaissance”), 28 and purely sculptural spaces of Frank Gehry. A mix of modernism, postmodernism, and technological application, contemporary architecture, such as deconstructivism and blobitecture, uses extravagant impersonal moves growing more dependent and focused on the computed form. Describing the importance of camera angle when capturing the viewer emotionally, Donald Norman states, “Too far away, and the viewer is no longer experiencing but, instead, observing vicariously…Film from above, and the people in the scene are diminished; film from below, and the actors are powerful, imposing.” 29 This statement accurately describes the point of view of the form-focused Architect. Ocularcentric projects remain quite a sight and experience, but one remains disconnected physically and emotionally from the architecture, with the exception of through the grandiose imposition of the space. “Instead of reinforcing one’s body-centered and integrated experience of the world, nihilistic architecture disengages and isolates the body.” 30 In “Computation against design?” Alexis Meier argues:

… if we only reduce the architectural conception to a programmed algorithm, by some way, we may risk reducing architectural expression to a new conventional codification system like a mathematical syntax. This may produce an architectural object that is the result of formal or technical operation, for example a direct consequence of a script protocol. Thus, reducing architectural creation as an operational technique, as geneticians do in their scientific experience, disqualifies automatically all incorporeal speculation through architectural processes and puts architecturally creative systems on a neo-positivistic structure. 31

The human aspect of architecture is ignored in lieu of mathematical form and scientific process. Meier later raises the “difficult question:” “How can we integrate digital techniques as powerful as computation, without integrating formatting and some ‘alienation’ effect?” 32

29 Norman, Emotional Design, 124.
30 Pallasmaa, The Eyes of the Skin, 22.
31 Alexis Meier, “Computation against design?,” Proceedings, Association for Computer Aided Design in Architecture, ACADIA, (Wisconsin: ACADIA, 2010), 49.
32 Ibid, 50.
“When a place is lifeless or unreal, there is almost always a mastermind behind it. It is so filled with the will of its maker that there is no room for its own nature.”33

For example, Peter Eisenman’s Aronoff Center for Design and Art at the University of Cincinnati has been reduced to vast pink, blue, and green formal gestures one can only perceive with their eyes as a passive bystander—in plan. Potentially with the architect in mind, Pallasmaa states, “Contemporary architecture posing as the avant-garde, is more often engaged with the architectural discourse itself and mapping the possible marginal territories of the art than responding to human existential questions.”34 Instructor and writer Sanford Kwinter, in a panel discussing the building, raised the “dangers” regarding the “degree to which so much of the design agency had been surrendered to non-human and non-personal forces” and suggested Eisenman Architects was “run by software.”35 Eisenman’s focus on space-making and the goal to remove the human from his architecture is successful; however it may be debated his attempt to express time and remove the architect was as successful. In relation to this thesis, the aim of removing the architect is respectable to allow the users to transform the architecture, but the Aronoff Center’s sterility runs deep with its constant paint and repairs necessary to bring it to its original status, erasing its evolution.

When asked what the underlying “driven idea” of the Aronoff, Eisenman replies, “Modern architecture was box-like. Postmodern brought in all types of references from history. This says

34 Pallasmaa, *The Eyes of the Skin*, 32.
there are no references, and there are no boxes”—a stylistic venture. The building was conceived to deconstruct the box and the reference by drawing a series of lines across the site, taken from neighboring buildings and street grids, leading to its resultant form—rotated, twisted, and pulled throughout the process. In order to perceive time in the manner Eisenman aims to express, one must view the building from its representation in the plan drawing as “the bodiless observer.” Norman warns against design for Design’s sake: “In fact, the only way to critique a film is by becoming detached, removed from [multi-sensory] visceral reaction…The reflective level tries hard to make sense of the actions and behavior and of the subconscious. But in fact, most of our behavior is subconscious and unknowable.” It is a struggle to understand the building (in multiple ways) and is only Architecture for Architects. This presents a problem to the inhabitants, since “the human mind is exquisitely tailored to make sense of the world. Give it the slightest clue and off it goes, providing explanation, rationalization, understanding.” Since the vast minority of inhabitants understands the building, the remainder focuses on rationalizing the building, unable to existentially experience; the boundary begins. To design primarily for Norman’s reflective level of cognition (that of meaning) is to design for the detached, the separated; the boundary increases.

Eisenman explains, “The body has been cut off by the mind and the eye…One famous German philosopher [Walter Benjamin] said, ‘People look at architecture casually.’ This building, you cannot look at casually.” The primary acknowledgement of the inhabitant is through the eye—a separated interaction. As a means of reaching an affect and addressing the inhabitants of his building, Eisenman uses the building’s visual complexity to create a sense of anxiety: successful for the initial experience but fades with time. The acknowledgement of the inhabitant is applauded, but the intention of the building was to create an immaterial boundary between it and the built context (both present and past) primarily—as dean of Princeton University School of Architecture Ralph Lerner explains, the building “has almost no outside”—and secondarily the user—a “disturbed” visual-physical hyper-awareness of one’s body and the building (as opposed to Elastic City’s directed ethereal awareness). Buildings like the Aronoff Center preach that the large formal gesture is the most important aspect of architecture; this thesis contends that other aspects beyond the primacy of form are more important factors of design, specifically its relation to those within it to promote the role and emotional attachment of the inhabitant.

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36 Ibid.
37 Pallasmaa, The Eyes of the Skin, 27.
38 Norman, Emotional Design, 124, 137.
40 Eisenman, “A panel on architecture.”
41 Ibid.
Evan Douglis, a contemporary designer, focuses on the digital fabrication of ‘sensuous’ forms. Choice Market, in DUMBO, New York City, features the interiors and a digital sculptural ceiling application of Evan Douglis Studio’s work. The swirling urethane ceiling panels were cast in molds created by a three-dimensional printer. While displaying a certain degree of ornament, the Baroque feature attempts to create a humanity to the architecture through digital fabrication by decreasing the scale and creating sensuous, provocative forms in the sense one can ‘grasp.’ The classic French coffee and pastry store, market, and bistro incorporates a rich material use of glass and urethane in a field of wood-like stone cladding, corten steel, and Brazilian walnut furniture. The sensual, bulbous lamps entice one to gaze and touch; however, one cannot. The separation of the sculptural pieces—restrained by the ceiling—falls short of fully reaching the inhabitants (physically and metaphorically) beyond an out-of-body or quick, impersonal acknowledgement of their existence. At this realization, the environment becomes hostile, pulled away from those using the space.

Like much of formalist contemporary architecture, Greg Lynn’s Slavin House is purely (and literally) “FORM”-driven. The experience within is watered down by prolific curves; when everything is unique, nothing is. The user is overwhelmed within a biomorphic swirl of chaotic (even though calculus-based) surface with, what the architect describes as, “decorative effects.”

The interior spaces could be quite an experience for many reasons, but they will not come to life because the image below is the only building view necessary for one to understand Lynn’s intent—to create space within the word “FORM”—nothing more.

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[According to Martin Heidegger,] the narcissistic eye views architecture solely as a means of self-expression, and as an intellectual-artistic game detached from essential mental and societal connections.

Juhani Pallasmaa

2.4 Folding: At the root of Greg Lynn’s theory, however, there is the aim of connectivity and holism—a general goal of this thesis; Greg Lynn’s seminal “Architectural Curvilinearity: The Folded, the Pliant and the Supple” introduces the concept of “smooth” architecture, looking to blend buildings with their context through means beyond materiality and aesthetics. “Shaped by forces outside the architectural discipline,” this new type of architecture is what Lynn calls “flexible” and “pliant,” manipulating the connections with one’s context, both culturally- and physically-tangential. Lynn aims for “generic form” and mimicking “traits” of a building type in the pursuit of deconstructing ideal numbers and form. In the end, Lynn’s goal is also to reach a “harmonic, synthesized” architecture “coherent as a single object, but also breaks down…and has an identity of both the big scale and the small scale” that blends with the context.

However, Lynn stops folding one’s context at the point of architecture, so determined to break the focus of contradictions in architecture that he forgets to create a holism at the human scale. He states there are only two strategies for reaching unity: a reconstruction of the past or regionalism, which are not “adequate as a model for contemporary architecture or urbanism.” However, Lynn uses his folding theory as a reiterated contextualism (and, by extension, regionalism). A major part of a building’s context—physically small but arguably the most important (the inhabitant)—is forgotten. Lynn describes the blob (originally the acronym for Binary

43 Sykes, Constructing a New Agenda, 30.
44 Lynn, “Greg Lynn on calculus in architecture.”
45 ibid.
Large Object): “large-scale single surfaces out of many small components as well as adding detailed elements to larger areas,” yet he focuses on and is dependent upon the large-scale power of the computation that drives his form instead of concentrating on the small inhabitants. While referencing cooking theory (ironically dependent upon human interaction and physically exploiting “small components”) in his essay, he forgets the power and importance of how inhabitants connect to the architecture. Potentially also a “firm run by software,” Greg Lynn-FORM prioritizes the computation-centered process over the human-centered experience of it.

Another point of criticism is that the word “fold” implies visible boundaries between the layers being folded. This thesis aims to reinterpret the use of this term as the means of connectivity and holism because a more intimate method of reaching this is to blur the boundaries between these folded bodies. Lynn’s use of the terms “creaming,” “blending,” and “pliancy” (“implies first an internal flexibility and second a dependence on external forces for self-definition”) are more successful in this thesis’ purpose. As seen in Image 2-12 above, there is a distinct boundary between the spinach and tortilla in the center without any hummus; where there is a “viscous” and “pliable” sauce that coats both boundaries, wrap and filling begin to be blurred. In order to reach a continuous mixture, this thesis aims to create a wrap using a sauce of Dr. Csikszentmihalyi’s emotional integration through flow experiences.

Stan Allen, architect and dean of the Princeton University School of Architecture, advances Lynn’s ideas by increasing the breadth of which the site absorption occurs, including culture and those who use the space: “A complete examination of the implications of field conditions in architecture would necessarily reflect the complex and dynamic behaviors of architecture’s users,

and speculate on new methodologies to model program and space.”⁴⁹ These field conditions expand the focus of the architecture to incorporate the contingencies of everyday life. While speaking to the importance of digital technologies in contemporary architecture, Allen does not fail to reference that of the users within it. He describes the interaction with “fields,” or the context, as “bottom-up phenomena, defined not by overarching geometrical schemas but by intricate local connections.”⁵⁰ Moving away from the broad, arbitrary gestures of postmodernism, the Allen realizes the importance of reaching the “local connections”—the inhabitants. After Lynn’s theory had matured within the architectural community for six years, Allen summarizes a shift in theory against starchitecture: “Local relationships are more important than over-all form.”⁵¹

⁵¹ Ibid, 125.
3. Design for:

The current industrial mass production of visual imagery tends to alienate vision from emotional involvement and identification, and to turn imagery into a mesmerizing flow without focus or participation.

Juhani Pallasmaa

3.1 Emotional connection: Donald A. Norman writes in *Emotional Design* of the importance of catering to one’s emotional attachment to an object and including “some individualist touch.” To reach this touch, he breaks the emotional attachment into three levels: visceral, behavioral, and reflective. The visceral level deals with the initial response to an artifact dependent upon all senses; the behavioral level deals with understandability, usability, and physical feel (where “appearance really doesn’t matter…Sometimes the feel can be the major rationale behind the product”); and the reflective level deals with meaning and memory.

Norman writes, “The trick is to make objects that degrade gracefully, growing old along with their owners in a personal and pleasurable manner. This kind of personalization carries huge emotional significance, enriching our lives. This is a far cry from the mass customization that allows a consumer to choose one of a fixed set of alternatives, but has little or no real personal relevance, little or no emotional value.” Product design demands a strong integration with the product’s user, both physically and emotionally. Paul Bradley, studio chief of IDEO (one of the largest industrial design firms in the United States), aims to design products that age “gracefully,” showing the dents and marks from its use, transforming the once typical object into a unique possession. Norman states, “‘Sentimental’ means, according to the *American Heritage* Dictionary, ‘resulting from or colored by emotion rather than reason or realism.’” In the end, it is not the physical but the emotional patina that marks the object with such significance for a specific user. This thesis’ goal is to mix and blend the experiences of a building’s inhabitants into the building itself not necessarily by physical patina but more importantly through this emotional patina, folding in one’s feelings, memories, and associations. Just as physical patina displays previous uses and information into the users, such as a footpath, emotional patina can be “an agent that can influence user behavior and even become and invitation for further use.”

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A goal of this thesis is to create an architecture that is unique per user in order make the emotional connection personal (not necessarily a difficult of a task by itself), but to also add a level of uniqueness that strikes the user so much that it creates a level of importance that leads to an integral connection with one’s environment. As Norman described, patina from use leads to personalization, translating into human-scaled emotional design. Dr. Csikszentmihalyi furthers his research on happiness in *The Meaning of Things*, writing that objects become important to us because of the memory associated with it, not because of the object itself. For example, a woman interviewed stated a specific chair was important because whenever she sits in or looks at it, she is reminded of sitting with her babies and babies in general. “These are our bonds, to ourselves, to our past, and to the future.”57 “Objects take on the most value when they signify something very personal about one’s experiences or accomplishments or one’s connections to others.”58 Clare Cooper Marcus, in *House as a Mirror of Self: Exploring the Deeper Meaning of Home*, argues it is one’s desire to recreate or reach to one’s childhood, filling the environment with these memories—not just things. What creates this nostalgia is the emotional patina from repetition of the everyday and ability to deeply integrate the artifact within one’s life.

In “The Poor Little Rich Man,” Adolf Loos writes of a man desperately searching for happiness even though he was surrounded by prosperity, “had money and possessions, a faithful wife who kissed his business cares from his brow, and a brood of children that any of his workers might envy.”59 The rich man replaces everything in his house with “Art,” but with time comes to regret the loss of his former belongings. “His eyes became moist. He thought of many old things which he had loved and which he sometimes missed. The big easy chair! His father always used to take his afternoon nap on it.”60 The memory attached through everyday interaction with his former chair becomes more important than the chair itself—something that art for Art’s (or architecture for Architecture’s) sake cannot accomplish.

One attaches positive memories to an artifact, typically, when one reaches a level of comfort with an object or space, implying a level of appropriation and affording the opportunity to get caught up in its story—again something formalist architecture for Architecture’s sake cannot give one. This does occur, for example, in theaters where people experiencing a level of comfort with their surroundings to the level of feeling what English poet Samuel Taylor Coleridge refers to as “the

60 Ibid, 126.
willful suspension of belief.” 61 This exact moment is when the body transcends the everyday routine, the shallow ocularcentric realm, and one’s indifference with the world as they all fade away from one’s awareness. In comparison with scaleless formalist architecture, one cannot feel this comfort due to the fact that people anthropomorphize artifacts; like the frustration one has with a computer that cannot physically respond, a distanced formalist building cannot fulfill our proximate social needs and emotions. “After all, we evolved to interact with others in the midst of other activities, but the evolutionary process could not anticipate communication at a distance.” 62 The interactions of enjoyment, in comparison to the shallow interactions of pleasure, require a deep emotional connection; the human-scaled emotion is the gateway to the appropriation, the connection to, and the blurring of the boundary between human and artifact.

Design needs to be plugged into natural human behavior...design dissolving in behavior.

Naoto Fukasawa

3.2 Flow: Norman asserts the key to the attachment to inanimate objects is what Dr. Mihaly Csikszentmihalyi and Eugene Rochberg-Halton, co-authors of The Meaning of Things, call “psychic energy,” (mental energy or mental attention) and that flow is a “good example...Flow is a motivating, captivating, addictive state...in which you are aware only of the moment, of the activity, and of the shear enjoyment,” 63 recalling Csikszentmihalyi’s comparison of pleasure and enjoyment. “It can arise from transactions with valued things” and “mind-absorbing work.” 64 By completely focusing one’s psychic energy on an artifact, one is likely to experience an attachment to it. Dr. Csikszentmihalyi’s concept of flow is experienced when one becomes so absorbed within the ever-changing immediate unified user-environment system that the everyday, the ego, and self-consciousness are transcended; indifference is suppressed. He explains that once all of the factors of flow fell into place, “you began to forget all the things that bothered you in everyday life, forget the self as an entity separate from what was going on—you felt you were a part of something greater and you were just moving along with the logic of the activity” 65—something greater, from your immediate surroundings to humanity. Emotions are not only contained but channeled as positive, energized, and aligned with the immediate task. During flow, one is folded into his or her immediate surroundings, pliant and changing within this system. As stated earlier:

61 Norman, Emotional Design, 125.
62 Ibid, 155.
63 Ibid, 48, 125.
64 Ibid.
65 Debold, “Flow with Soul.”
Flow is not simply a matter of connection but of a continuous change that involves the user in an environment, such that the user and environment become one system and the dynamics of ongoing activity (behavior) is dominated, not by the components or properties of the environment (or user), but by the relations between user and environment. Flow is a property of a unified user-environment system that is inseparable and irreducible.66 It can be described as “being in the zone,” “in the moment,” “wired in,” “in the groove,” ecstasy, and an “aesthetic rapture” during which the distinction between self and action/environment is transparent.67 By definition, rapture is “a euphoric transcendent state in which somebody is overwhelmed by happiness or delight and unaware of anything else.”68 Associated with “being transported into the spiritual realm,” flow is a goal for those seeking enlightenment in the everyday experience. Dr. Csikszentmihalyi concluded that moving beyond the everyday routine was essential to experiencing flow and that it can be a structure on which one lives. Yet, it is underappreciated and yet to be fully understood by the public and how it can affect their lives.

Dr. Csikszentmihalyi differentiates enjoyment and pleasure “with the latter used to describe the experience of a hot bath or receiving a massage.”69 He speaks of flow in relation to evolution and human survival, gaining enjoyment from challenging activities, achieving enough to further the human race. “The difference was that pleasure lacked a sense of achievement or active contribution to the result.”70 In this same line of thinking, one can experience pleasure from formalist contemporary architecture but not enjoyment. Much like sipping a piña colada (from the introductory quotation), the shallow experience of a scaleless piece of formalist contemporary architecture doesn't compare to its emotionally-connected counterpart much like the experience of the mountain climber. He furthers this point in an interview: “But in our nervous system, maybe by chance or at random, an association has been made between pleasure and challenge, or looking for new challenges.”71

66 Richardson, e-mail message to author, October 14, 2011.
70 Ibid.
71 Debold, “Flow with Soul.”
Flow, whether in creative arts, athletic competition, engaging work, or spiritual
practice, is a deep and uniquely human motivation to excel, exceed, and triumph over
limitation. Csikszentmihalyi describes his life's work as the effort “to study what makes
people truly happy.” The emphasis here is on the word “truly”—because to him,
happiness is not simply flow nor an emotional state nor even the experience of
pleasure. The happiness he points to involves the continual challenge to go beyond
oneself as part of something greater than one’s own self-interest.72

As a poet and artist himself, Dr. Csikszentmihalyi understands one must be actively creative and
psychologically interact fully to express oneself, whether writing a poem or watching a film. In
comparison to an out-of-body experience, flow is an in-mind and in-body experience that transcends
simply thinking and acting within a space and reaches out to “something greater than one’s own.”

An abstract version of flow can be seen in the movie Limitless, which features a writer
struggling to find his muse who randomly meets an old friend, a former drug dealer. Having entered
a different market within the world of drugs and consulting for a pharmaceutical company, the
friend gives the protagonist a free sample of a new drug; the dealer describes: “They’ve identified
these receptors in the brain that activate specific circuits. And you know how they say that we can
only access twenty percent of our brain? Well, what this does, it lets you access all of it.”73 While
on the drug, referred to as NZT, the protagonist finds the inspiration he has been so desperate to
find not by thinking but by doing, just acting on impulse. As seen above, the letters metaphorically
fall into place as the writer gets “in the zone.” The drug allows him to recall and organize any
moment in his past, unlocking any barrier from reaching bits of information stored in his memory

72 Ibid.
with an unparalleled level of motivation and concentration. *Limitless* portrays a tablet-version of flow.

At this moment, the protagonist of *Limitless* is experiencing a seamless transition between him and his immediate environment—the computer, table, chair, and by extension, the room. Like the endoscope hand piece below, there is a transparent interface—an extension of the body—occurring with its use, as one cannot look at the controls because of one’s focus on the endoscopic procedure. “Seamless and often unnoticed interface with products in our environment,” such as the endoscopic procedure are in themselves flow experiences. Just as “It’s often difficult to recall what it felt like to sit in a very comfortable chair, and easier to remember the uncomfortable ones”; 74 one is more likely to experience flow in the very comfortable chair due to it allowing one to concentrate on that activity at hand. This thesis aims to blur the boundary between human and artifact like these examples, extending the body into the built environment psychologically.

The invention of perspectival representation made the eye the centre point of the perceptual world as well as of the concept of the self.

Juhani Pallasmaa

**3.2a Biology:** As the technology of the day shapes the concurrent philosophy and architecture, so should the contemporary understanding of the brain shape our spaces and inhabitation of them. During flow experiences, it has been “consistently characterized by a dissociated pattern of activity in the prefrontal cortex: extensive deactivation of dorsolateral prefrontal and lateral orbital regions with focal activation of the medial prefrontal (frontal polar)

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Regarding the deactivated areas, the dorsolateral prefrontal region is the area of motor planning and regulation; its deactivation allows for a freedom from mental and motor checks. The lateral orbital region is involved in decision-making; its deactivation frees oneself from restraining thoughts; the result is a freedom from the everyday mode of operation. The activated medial prefrontal cortex has been associated with action-outcome prediction (related to comfort from repetition), self-expression (related to creativity), autobiographical memory retrieval, emotional processing, and preferences based on those emotions (related to the synthesis of memory, emotion, and sensory stimuli). The medial prefrontal cortex “is among those brain regions having the highest baseline metabolic activity at rest,” resulting from complete mental comfort and as if “no task is being performed”—flow. The region “interfaces with the cognitive and emotional systems. It is believed that, within this structure, emotions and the meaning of things are experienced” and has been proven to be heightened by music, which will be explained in Section 4.3c: Sound.

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The frontal lobe is associated with “self-reflective consciousness, attention, memory, perception, and arousal” and involved in both explicit (explainable, rule-based) and implicit (unexplainable, experience-based) systems. This lends itself to the flow experience, as one’s focus lies inward and is completely dictated by the latter characteristics. “Halford et al. (1998) have argued that the number of dimensions we can manipulate concurrently is one quaternary relation,” meaning multi-dimensional task beyond four rules incorporates both the explicit (limited) and implicit (limitless and efficient) systems—both integrated during flow experiences. For someone to do two things at a time one has to be automatic or implicit, during which one acts using motor activity and able to analyze it simultaneously; “a flow experience must occur during a state of transient hypofrontality that can bring about the inhibition of the explicit system.” In general, the area allows one to use implicit knowledge like riding a bike, focus on explicit and environmental changes, and relate it to the self effortlessly—for example, a jazz musician is able to play a memorized song and improvise based on a series of rules and string of notes.

The medial prefrontal cortex is associated with endorphins and the neurotransmitter dopamine, which “regulates mood and affects people’s concentration and motivation. “It involves both the prefrontal cortex, which is responsible for focused attention, as well as the basal ganglia, which is involved in dopamine production.” Low dopamine levels have been linked to attention-deficit hyperactivity disorder, Parkinson’s disease and many other conditions”; this translates to flow’s association with positivity, concentration, and motivation. Exercise and sex increase dopamine and improve concentration and mood—both active leisure activities (the best activities to trigger flow and will be explained in the following section). “As a chemical messenger, dopamine is similar to adrenaline. Dopamine affects brain processes that control movement, emotional response, and ability to experience pleasure and pain”—all aspects of experiencing flow. To summarize, when one experiences flow, one’s hypofrontality specifically blocks mental boundaries and mixes music, memory, and emotions within a state of positive concentration that transcends the everyday.

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80 Ibid, 752.
81 Ibid, 757.
The best kind of design isn’t necessarily an object, a space, or a structure: it’s a process—dynamic and adaptable.

3.2b Genesis: “Household objects facilitate flow experiences in two different ways. On the one hand, by providing a familiar symbolic context they reaffirm the identity of the owner. On the other hand, objects in the household might provide opportunities for flow directly, by engaging the attention of people.”

This implies a familiarity of everyday use, comfort, and mental connection due to this, and an emotional patina; both memory and attention are significant to the attachment to inanimate objects. Dr. Csikszentmihalyi accounts for the feeling of being outside of the moment, or feeling ecstasy, with the limits of consciousness: higher levels of consciousness require more attention while more mundane experiences require less. This explains why a writer, when “in the zone,” subconsciously suppresses the environment beyond the immediate while dramatically increasing that which is attributed to the immediate surroundings. In the Limitless scene, the protagonist experiences a hyper-integration with the computer, conscious only of “being one with the [text] and expressing emotion.”

Flow is most likely to occur during a time of creativity, intense concentration, and self-expression—for example, painting. Dr. Csikszentmihalyi discovered this in his dissertation studying students at the Chicago Art Institute became lulled into a trance as if possessed. Positive psychology (a recent focus of psychologists, as opposed to the past’s negative view) shows “positive emotions trigger many benefits: They facilitate coping with stress. They are essential to people’s curiosity and ability to learn.” Psychologists Barbara Fredrickson and Thomas Joiner further this: “Positive emotions broaden people’s thought-action repertoires, encouraging them to discover novel lines of thought or action. Joy, for instance, creates the urge to play, interest creates the urge to explore, and so on.” These experiences require a certain expertise in the current subject or activity, a certain level of challenge, a certain level of interest, and a certain comfort within one’s surroundings to give in to flow. This becomes the recipe for creativity, drive, and focus—a harmony of physical and psychic energy. “Generally reported when a person is doing his or her favorite activity,” flow occurs during working or studying, driving, hobbies, and socializing, but only hobbies and socializing result in the synthesis of happiness and flow:

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86 Csikszentmihalyi, Flow.
87 Norman, Emotional Design, 103.
88 Ibid, 103-4.
89 Csikszentmihalyi, Finding Flow, 33.
We see that happiness is highest when eating, when in active leisure, and when talking with people; it is lowest when working on the job or around the house. Motivation follows a similar pattern, with the addition that passive leisure, which does not make one happy, is something we usually want to do anyway. Concentration is highest on the job, when driving, and in active leisure—these are the activities that during the day require the most mental effort. The same activities also provide the highest rates of flow, and so does socializing with others. When we look at the pattern this way, it again shows that active leisure provides the best experience overall...  

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Based on the above data and statement, this thesis aims to reach an interaction of that of active leisure, which includes hobbies, sports, movies, and active socialization, including talking and sex. The remainder of leisure activities is passive: media (for example, watching television—different from watching a movie with respect to allocated attention—and reading) and idling, or resting, and do not result in flow experiences. The average American has approximately up to 31%\(^\text{91}\) of his or her day to achieve an experience of flow and sense of happiness following the experience through these active leisure activities; Dr. Csikszentmihalyi has focused on the active leisure activities with a self-help approach to appropriating the productive activities to bring about flow experiences in *Finding Flow*; this thesis will attempt to do the same, manipulating the majority of the remaining 69% to become flow experiences as well.

One cannot experience happiness and flow simultaneously because one must step back and reflect on themselves to realize they are happy; this is why one feels happy following flow as a sense of gratitude for this excellence—a matter of attention that cannot be allocated during flow experiences. As flow is not emotion in itself, time to feel the happiness from the flow experience is necessary and can consume the maintenance activities during the day. “Affect and emotion constitute a complex subject, involving all three levels, with the most complex emotions dependent upon just how the reflective level attributes causes. Reflection, therefore, is at the heart of the cognitive basis of emotions.”\(^\text{92}\) In comparison to Eisenman’s Aronoff Center where there is a constant distancing from the architecture so one can feel anxious, this thesis will manipulate the 80% of the day (100% - 20%, the minimal amount of time from maintenance activities); during this 20%, there needs to be a moment of relief from the ecstasy of flow so one can appreciate the flow experience—the time one decides to continue doing the flow activity for flow’s sake. The *retreat* offers this oasis from the everyday, to escape for hobbies, intimate social interaction, or contemplation. This evaluation allows for personal and spiritual growth by increasing skills and knowledge within the field and leading to further flow experiences. Flow is a state of constant change, occurring exponentially and more rewarding with each experience, creating a ‘vicious cycle’ of self-improvement and understanding. This thesis’ programmatic development will be based on achieving flow experiences for the majority of the day (attempting to reach 91% of the day by incorporating some maintenance activities into the leisure and productive activities with the help of the architecture and program, such as manually altering a studio space), still leaving sufficient time for evaluation and resulting happiness.

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\(^{91}\) Ibid, 9.

\(^{92}\) Norman, *Emotional Design*, 140.
Dr. Mihaly Csikszentmihalyi’s flow can be exploited to respond to each of the Reactions to of Chapter 2 and fulfill each of the Design for proposals in Chapter 3. Flow transcends the ego, suppressing indifference and arrogance with a sole focus on the immediate surroundings. Whatever the personal cause of flow itself becomes intrinsically rewarding—not due to the external, resultant rewards. When designing for flow, the architect must give up his or her personal style for that of the individuals who take precedent—removing the inhumanity from design. Lynn’s theory lends itself to flow, as flow exploits the pliancy of the experience and immediate surroundings, folding upon themselves, with a renewed focus on the inhabitant. The concentration on this activity results in the participant consciously becoming one with it and expressing his or her emotion.
4. Flow in architecture by:

The task of art and architecture in general is to reconstruct the experience of an undifferentiated interior world, in which we are not mere spectators, but to which we inseparably belong.

Juhani Pallasmaa

4.1 Understanding flow: Flow theory is not about a material manifestation in the built form, but this thesis aims to appropriate it to enhance one’s surroundings to promote the inhabitant’s emotional connection through flow experiences. There has been little research or theory with respect to the built environment and flow, but there are aspects of Dr. Csikszentmihalyi’s theory that can be translated into the built environment. According to Dr. Csikszentmihalyi, the following are the nine main characteristics of flow experiences:

- There are clear goals every step of the way.
- There is immediate feedback to one’s action.
- There is a balance between challenges and skills.
- Action and awareness are merged.
- Distractions are excluded from consciousness.
- There is no worry of failure.
- Self-consciousness disappears.
- The sense of time becomes distorted.
- The activity becomes autotelic.  

Some of the characteristics are either implied in or a result of flow experiences (in gray). Those remaining are influenced by the structure of the flow activity and/or physical environment. Through the analysis of Dr. Csikszentmihalyi’s breakdown of daily activities and the likelihood of flow experiences, there have emerged three ways to accomplish and/or incite flow: to simply envelop flow experiences (with a focus on active leisure activities), to passively provoke the inhabitant such as watching a movie, or with one’s active interaction with his or her environment. This thesis aims to accomplish all three methods through its program (a live-work vertical artists’ commune), sensory manipulation (through the building and the design of a sensory walk with performance artist group Elastic City through the over-stimulating New York City), and physically reactive environments that require extended interaction.

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What is missing from our dwellings today are the potential transactions between body, imagination, and environment.

Kent C. Bloomer and Charles W. Moore

4.1a Interaction: The underlying characteristic of flow is interaction (both physically and mentally or simply mentally); without it, one cannot experience active leisure activities, become emotionally involved, nor become psychologically folded within the architecture. Through deep mental interaction with one’s surroundings, this thesis will accomplish the goal of the blurred boundary between inhabitant and environment, as in Arakawa and Gins’ “architectural body”—that of the body and its surroundings, like that of the endoscope hand piece. One of Norman’s final statements within his epilogue in Emotional Design asserts if objects “we interact with help define our place in society and in the world, then we have love. Design is part of this equation, but personal interaction is the key…Love comes by being earned, when an object’s special characteristics makes it a daily part of our lives, when it depends our satisfaction.”94 Simply put, interaction means Csikszentmihalyi’s enjoyment; without mountain climbing, the protagonist in this scenario can only feel passive pleasure. Interaction implies more than a simple physical maneuvering of an object; emotional attachment is essential.

Positive interaction also means comfort. Flexibility in the environment can lead to this personalization of a space and, by extension, comfort. There is a reason people come up with their best ideas in bed or the shower: complete control over the environment and, therefore, complete mental and physical comfort. One’s interaction with the environment manipulates the qualities of it to make it more comfortable. “In everyday situations, behavior is determined by the combination of internal knowledge and external information and constraints. People routinely capitalize on this fact…People can deliberately organize the environment to support their behavior.”95 This means anything from making goals more explicit, shutting out distractions, or simply making a space more comfortable and, therefore, more likely to instill flow experiences.

Regarding flow, the environmental impact on concentration (necessary for flow) is imperative to the likelihood of experiencing it. The materials to manifest these effects, by extension, become imperative: “Environments that challenge a person’s capacities tend to evoke involvement, attentiveness, and maximal performance (Csikszentmihalyi, 1990; Kiernat, 1983; Lawton & Nahemow, 1973). On the other hand, when environments demand performance well below capacity, they can evoke boredom and disinterest and even result in ‘the type of negative

94 Norman, Emotional Design, 227.
affect and behavior seen in sensory deprivation’ (Kiernat, 1983)”96—those that are ocularcentric
bore viewers with a lack of total mental integration with the suppression of other stimuli. A
material’s durability and the perception of such can also impact the use and likelihood of
experiencing flow: “A practical object with strong sentimental value may be restricted from use to
avoid damage or destruction.”97 Potentially conflicting with the goal of creating a reactive yet
emotionally-significant architecture, this phenomenon requires a focus on making the environment’s
interactive malleability positive and explicit. Dr. Csikszentmihalyi discovered during research of
play that raw, free materials such as boxes and tires lend themselves to active exploration and fixed
playground equipment constrains the play that can occur.98 By using materials that are perceptibly
durable yet still malleable to invite play, one can feel comfortable enough to interact with and
experience flow with them.

Unfortunately, the self we miss at such moments, the elusively authentic, creative and
spontaneous side of our character, is not ours to summon at will. Our access to it is, to
a humbling extent, determined by the places we happen to be in, by the colour of the
bricks, the height of the ceilings, and the layout of the streets.

Alain de Botton

4.1b Concentration: Basically, when one experiences flow, the environment beyond the
immediacy fades away. Psychologists Arien Mack and Irvin Rock termed this phenomenon
inattentional blindness where subjects “often fail to consciously experience an unexpected stimulus
if it is presented while they are engaged in an attention-demanding task.”99 A well-known
experiment illustrating this phenomenon was conducted by Daniel Simons and Christopher Chabris
who asked subjects to engage in an attention-demanding task to count the number of basketball
dribbles shown in a video and then introduced the unexpected stimulus of a gorilla into the scene;
33% of the subjects failed to report the gorilla with no recollection.100 Severe limits on conscious
attention are multiplied when humans create mental visual space for anthropomorphized artifacts or
people, such as holding a conversation over the phone; the distanced artifact or person steals one’s
concentration (as one tries to visually replicate the subject) and ability for full mental capacity.
“The memory is quite fragile. Get distracted by some other activity and, poof, the stuff in short term

97 Ibid, 91.
98 Ibid, 88.
99 Jesse J. Prinz, Is Attention Necessary and Sufficient for Consciousness? 2010,
http://www.nyu.edu/gsas/dept/phil/faculty/block/M&L2010/Papers/Prinz.pdf.
memory disappears.” A lack of attention leads to a lack of emotional depth; shallow interactions lead to, as Lucius Annaeus Seneca said, “many acquaintances but no friends.”

In general, flow comes from concentration. This means a lack of distractions is essential to reach a total enthrallment with the current activity/environment, which could simply manifest in limited openings to restrain sensory stimuli physically but also ethereally. In 100 Things Every Designer Needs to Know about People, Susan M. Weinschenk notes, as number 38: “People can be in a Flow State”: “The ability to control and focus your attention is critical. If you get distracted by anything outside the activity you’re engaging in, the flow state will dissipate.” In the effort to eliminate distractions yet stimulate the medial prefrontal cortex using sensory input, this thesis’ building and program aims to constantly surround the inhabitants with unique noises that fade away to the background to a certain point yet remain in the forefront of attention due to the embedded nuances.

Concentration within a space could also manifest in the manipulation of the physical space to lend itself to the current activity, as light, color, and scale of spaces affect creativity and productivity. University of Minnesota professor Joan Meyers-Levey found evidence that lower ceilings improve results in detailed work, and higher ceilings improve results in abstract creative thought. Researchers Ravi Mehta and Rui Zhu observed that blue surroundings boost creativity (created twice as many “creative outputs” as red); while red boosts accuracy, attention to detail, and short-term memory; and white did not significantly affect either. Oregon State University researchers Sibel Dazkir and Marilyn Read found evidence that curvilinear furniture provoked significantly higher pleasure and approach ratings in a survey of 100 students due to their

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102 Weinschenk, 100 Things Every Designer Needs to Know about People, 91.
comforting and calming appeal. An experiment related to views and concentration demonstrated that college students with views of nature from their dorm rooms “scored higher on measures of mental focus than did those who overlooked entirely man-made structures.” A 2006 study illustrated the effects of the brightness of light and relaxation and openness: “the students questioned in the dim room felt more relaxed, viewed the counselor more positively and shared more information about themselves than those counseled in the brighter room did.” All of these principles speak to flexibility in the environment to elicit concentration during varying activities within and should be malleable by its inhabitants, leading to a comfort that allows for improvisation (flow) experiences.

The Fraunhofer Institute for Industrial Engineering in Stuttgart (IAO) exploited this same knowledge in an LED ceiling application mimicking the present conditions of the constantly changing sky to convey the impression of sitting outside. This constant change creates the contrast from the everyday office building ceiling to keep attention high but uses a series of reds, blues, greens, and whites to create a sensual environment according to the issue at hand; the reactive ceiling can generate more than 16 million hues—more than enough to cater to any individual. While the ceiling application is many times more energy efficient than the typical lighting system (just as any LED system), it was installed for increased concentration and comfort in the space: “The LEDs allow us to simulate these dynamic changes in lighting in a way that is not directly obvious to the naked eye. Otherwise the lighting might distract people from their work. But it does need to

104 Ibid.
105 Anthes, “Building around the Mind,” 55.
fluctuate enough to promote concentration and heighten alertness,” explains Dr. Matthias Bues, head of the department at IAO. It is meant to be engaging but not visually distracting that keeps attention and comfort elevated simultaneously.

The results of a preliminary study indicate that users find this dynamic lighting to be extremely pleasant. The study involved ten volunteers who carried out their daily work over the course of four days under these lighting conditions with a lighting surface of 30cm by 60cm. Throughout the first day, the lighting remained static. On the second day, it fluctuated gently, and on the third day the fluctuations were rapid. On the fourth day, the participants could choose which type of lighting they wanted, and 80 percent opted for the fast, dynamic lighting.

According to the institution, inquiries have already come in about the ceiling application, mainly for use in conference rooms—spaces that require open, creative socialization. In comparison with Evan Douglass’s Choice Market ceiling application, the IAO installation is meant to be a replication of the sky, a bodiless anti-object that cannot be touched and does not tempt those below by reaching down to them but falling short, just out of reach as his sculptural pieces do; the IAO ceiling creates an ever-changing environment, appreciation for, and interdependency for concentration and happiness. Conclusions from this example highlight qualities of light, color, change, movement, and a connection to nature—all of which can be applied to the built environment to bring about flow experiences.

To design for an environment that encourages flow and the creative process (in general), one must understand the basics of creativity and how it comes about. By referencing material by the same author as flow and creativity, it is easy to combine the issues and see the connections between them. In Dr. Csiksztihmaly’s Creativity: Flow and the Psychology of Discovery and Invention, he describes the five-phase creativity model: preparation, incubation, insight, evaluation, and elaboration. In preparation, one must immerse him or herself in the desired field of study to create something innovative and to avoid making common mistakes. Incubation is a significant part of the creativity process that one sits on an idea and allows it to evolve over an indefinite time. During brainstorming sessions, “it is good for the designer to be relaxed, in a good mood.” This time—a transition from inception to development—is when the idea is most vulnerable and apt to change, meaning a significant opportunity for flow and leading to insight. Insight consists of the “Eureka!” moment that can come at any time, mostly unplanned. Next comes evaluation, when one sits on the idea and seriously considers issues and strengths of it. “Now the design team must exert

107 Ibid.
108 Ibid.
109 Norman, Emotional Design, 27.
considerable attention to detail. Here, focus is essential."110 Finally, elaboration occurs, during which one develops the design and further strengthens it cyclically to make sure it is as successful as possible, testing and repeating this step. Elaboration occurs with interactions with others and criticism—a likely step for social active leisure flow experiences, as these will be meaningful and interesting interactions that attract involvement and focus. All steps incorporate active leisure activities (what Csikszentmihalyi refers to as the “best experience overall,” hence the decision for this type of program for creativity—a sensory walk and live-work facility for artist group Elastic City), but the two main activities of active leisure (hobbies and socializing) occur most in incubation and elaboration, respectively.

Preparation → Incubation → Insight → Evaluation → Elaboration

In “The Prepared Brain,” a subchapter of Norman’s Emotional Design, he explains wired-in tendencies of humans for a “negative affect”—those more beneficial for focus; his suggestions include “heights; sudden, unexpected loud sounds or bright lights; ‘looming’ objects; extreme hot or cold; darkness; crowds of people; rotting smells, decaying foods; harsh, abrupt sounds; grating and discordant sounds;”111 et cetera. These suggestions are the extremes of “negative affect,” but these can be applied in moderation to make a space more tuned for focus over creativity, a dichotomy made in his previous subchapter.

After describing the numerous elements that create the “complex experience” of film, Norman turns around and explains, “All these effects work best, however, when they are unnoticed by the viewer…Noticing takes place at the reflective (voyeur’s) level, distracting you from that suspension of disbelief so essential to becoming fully captured by the flow at the behavioral (vicarious) level.”112 The same applies to the aforementioned creative process. Product designer Naoto Fukusawa furthers this point: “We designers have been working to stimulate people’s souls and minds. But in reality, I’m not thinking about this pen when I’m writing with it. Rather, it’s when you least think about it that the pen can be held most naturally.”113 The pen doesn’t distract the user but instead becomes an extension of the hand, integrally tied into the experience. Just as Csikszentmihalyi’s flow is not explicitly happiness until after the experience and one has time to post-realize the phenomenon, one should marvel at the film following its duration—not during it. For example, a viewer buys into a film when he or she becomes one with the experiences portrayed

110 Ibid.
111 Norman, Emotional Design, 30.
113 Objectified, Netflix, directed by Gary Hustwit, 2009: Los Angeles.
on the screen and the theater disappears from consciousness. This effect is evidenced by AMC Theatres’ *Magic Chairs* theatrical opening:

This effect can be created by making these experiences that of the everyday routine and comfort, by capturing the senses (as AMC has done above simply through sight and sound), and mental interaction and challenge.

“The sense of involvement, the flow state, is much more intense in [video] games than in most movies”—a true virtual reality.\(^{114}\) Video games create this sense more successfully due to user control. Much like formalist contemporary architecture, “In movies, you sit at a distance watching events unfold. In a video game, you are an active participant. You are part of the story, and it is

\(^{114}\) Norman, *Emotional Design*, 132.
happening to you, directly.” However, the controlled manner of video games is not necessarily superior to that of structured films; there are both passive and active methods to create flow experiences. Like movies, “the fixed formats let master storytellers control the events, guiding you through the events in a carefully controlled sequence, very deliberately manipulating your thoughts and emotions until the climax and resolution. You surrender yourself quite voluntarily to this experience, both for the enjoyment and for the lessons that might be learned about life, society, and humanity.” This thesis aims to accomplish all three manners of manipulating flow (enveloping, actively-, and passively-triggering) through its program that incorporates everyday activities with a focus on active leisure activities within the building and a sensory walk with Elastic City that both actively and passively create flow experiences.

4.1c Boundary: From interaction to concentration, there is a common thread that reveals if a flow experience will occur or not: boundary. Whether physical or mental, the boundary between the current activity and person must be blurred. In general, one requires a physical retreat-environment to reach his or her mental retreat, since flow experiences “demand a specific kind of mental concentration. The result is that you are partially away from the real, physical space, even as you inhabit it.” The boundaries, solid for hobbies and welcoming for socialization, should evolve per required intimacy and activity within. More specifically, solid hobby retreats are private, personal, territorial, and require physical and ethereal characteristics that reinforce the small, individual scale of the space. The same is potentially true for social spaces, also allowing for open social spaces to be public, welcoming, and mostly defined by ethereal characteristics of personal space. Since the specific activity source of flow experiences varies significantly from person to person, a degree of flexibility must be built into the boundary system to allow for anything from personal space to a physical required space for that activity.

Interaction and boundary are what defines flow in architecture; both can affect concentration. While generic terms, they are starting points for the investigation of the embodiment of flow. Through the consequences of flow, dematerializing exterior world, manipulation of concentration, blurring of boundaries, personal space, socialization, multi-sensory stimuli (specifically sound), comfort, distraction, reactivity, and flexibility, there lies a number of threads through these topics that are revealed through the three ways of designing for flow: enveloping, passively triggering, and activity triggering.

115 Ibid.
116 Ibid.
117 Ibid.
4.2 Enveloping flow:

[Architecture] is not an isolated and self-sufficient artifact; it directs our attention and existential experience to wider horizons.

Juhani Pallasmaa

4.2a The everyday: To achieve a continual deep connection to one’s surroundings and manipulate the everyday experience, one requires a proximate architecture of repetitive use: “True, long-lasting emotional feelings take time to develop: they come from sustained interaction”—an architecture of the everyday. The importance of flow’s relation to the everyday is illustrated by Dr. Csikszentmihalyi’s book, entitled Finding Flow: The Psychology of Engagement with Everyday Life. Unlike ocularcentric formalist architecture that requires a distanced view to understand, flow requires proximity in general due to the necessary interaction and sensory immersion. Like the relationship between track runner and track and that of the chess player and board, a deep comfort and relationship emerges over time. Home field advantage in sporting events creates the same effect on comfort and performance. With repetition comes comfort, leading to flow. “There is poetry and consolation in the repetition of familiar things.” Like sound, there is something calming about a repetitive rhythm. The sounds may seem complex, but the integrated layers like that in classical music can be interpreted differently per inhabitant—a personalized sensory interpretation and experience in general. “Simple and familiar objects may give comfort and invite relaxing behavior.”

“We may not even notice the material qualities of spatial orderings incorporated into daily life because we adhere to unexamined routines. Yet it is through those daily material routines that we absorb a certain sense of how spatial representations work and build up certain spaces of representation for ourselves (e.g. the visceral sense of security in a familiar neighborhood or of being ‘at home’).” The unknowing citizen is dictated everyday by the invisible routine of his or her life and society, but this muscle memory can be fostered and manipulated to manifest future flow experiences. The experience within the built environment should imitate the “everyday” experience to create the flow experiences when one leaves it as well. In response to everyday advertising and name-brand architects, architect and Yale professor Deborah Berke writes in “Thoughts on the Everyday”:

118 Ibid, 46.
120 Kielhofner, Model of Human Occupation, 88.
An Architecture of the Everyday May Be Generic and Anonymous.
An Architecture of the Everyday May Be Banal or Common.
An Architecture of the Everyday May Therefore Be Quite Ordinary.
An Architecture of the Everyday May Be Crude.
An Architecture of the Everyday May Be Sensual.
An Architecture of the Everyday May Also Be Vulgar and Visceral.
An Architecture of the Everyday Acknowledges Domestic Life.
An Architecture of the Everyday May Be May Take on Collective and Symbolic Meaning but It Is Not Necessarily Monumental.
An Architecture of the Everyday Response to Program and Is Functional.
An Architecture of the Everyday May Be Change as Quickly as Fashion, but It Is Not Always Fashionable.
An Architecture of the Everyday is Built.  

A restrained, non-form-focused architecture that becomes a part of the everyday becomes essential when fading into the background during flow experiences: “We cannot take part in two intense conversations at the same time, at least not without degrading the quality and speed of each.” Concurrently a reaction to the ocularcentric culture, backgrounded architecture removes the focus on the eye and creates the opportunity for a deep emotional multi-sensory experience. Whether the current interaction is with the building, an activity, or with another person, the concentration must be focused on that one other body to allow one to fold them into their subconscious experience. The building should not necessarily mimic, but blend into its physical context, pushing the focus away from the ocularcentric and exterior world and toward the interior of the building and the inhabitants’ minds.

Related to the everyday and its relationship with flow experiences, the built environment must be within proximity of the inhabitant to facilitate the necessary interaction. During his research for Emotional Design, Norman conducted a survey of objects that the subjects had either a positive or negative relationship with. A problem he observed with this process was what he referred to as the “too obvious to notice” effect, as reflected by the old folk tale that a fish is the last to notice water. Thus, if you ask people to describe what they see in the room in which they are sitting, they are apt to leave out the obvious: floor, walls, ceiling, and sometimes even windows and doors. People may not have reported what they truly liked because that might have been too close to them, too enmeshed in their lives.” This speaks to the invisibility created due to the everyday and proximity of the backgrounded environment that can allow for flow experiences.

123 Norman, Emotional Design, 155.
124 Ibid, 213.
Whenever we speak of films or other entertainment as ‘escapist,’ we are referring to the ability of the vicarious state and the behavioral level of affect to disengage people from the cares of life and transport them into some other world.

Donald Norman

4.2b Retreat: Biologist Jonas Salk worked on a cure for polio in a dark basement in Pittsburgh, but progress had slowed. To clear his head, he stayed in a 13th-century monastery in Assisi, Italy. Salk believes it was this new “contemplative setting”\(^{125}\) that led him to the insight of the polio vaccine enough to have hired Louis Kahn to build his institute in California. Like the monastery was to Salk, flow consequentially creates an unknowing retreat and dissipation of the external world beyond the immediacy through a sense of serenity within the mind and intense focus on that immediacy; “for you are a part of two different spaces, one where you are located physically, the other a mental space the private location within your mind where you interact with the person [or artifact] on the other end of the conversation.”\(^{126}\)

The Merriam-Webster definition of the active leisure activity *hobby* is, “a pursuit outside one’s regular occupation engaged in especially for relaxation.” The hobby is a retreat from “one’s regular occupation.” The line between hobby and “occupation” is not as strong as Merriam-Webster defines it, but the point of the definition is escaping the everyday; this thesis uses a live-work program that to include work (in the cyan productive activities) to not necessarily escape but incorporate and change one’s perception of the everyday to grow the average time spent on hobbies. Flow is a form of unconscious refuge within the conscious and subconscious, a hyper subconscious awareness without conscious awareness, a retreat within the mind. “Zen Buddhists believe that we need our houses to create a refuge from the clutter and distraction of daily life—not in order to hide

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\(^{125}\) Anthes, “Building around the Mind,” 52.

\(^{126}\) Norman, Emotional Design, 154.
from reality but precisely to come closer to its central truths.”127 Alain de Botton continues this in *The Architecture of Happiness* that through architecture, “on your own...we can slowly resume contact with a more authentic self who was there waiting in the wings for us to end our performance at the end of the day...We can feel inwardly liberated.”128 The “authentic self” becomes revealed during moments of self-expression: flow experiences. Dr. Csikszentmihalyi notes it is essential at times to be alone to be involved in the vicious cycle of self-improvement and hobbies because “people cannot develop that talent unless you are able to stay by yourself and practice.”129 This requires not only a physical but psychological sanctuary.

Coincidentally only a few blocks from this thesis’ site in Madison Square Park in New York City, the public sculpture *Echo* returns monumental sculpture to a focus on the body and calls for a moment of solitude within one’s mind:

![Juame Plensa, Echo, Madison Square Park, New York, NY, 2011 (4-7, 4-8)](image)

The title of the piece reflects one’s internal focus on external sensory stimuli—the echoes within the everyday dissonance. The piece is “an otherworldly beacon amid the furor of the Flatiron district,”130 triggering a sense of serenity and, consequently, a heightened awareness of one’s place due to the inherent comparison. Inspired by a nymph of Greek myth that Zeus condemned to repeat the words of others, Plensa simultaneously aims to heighten the awareness of the everyday person to his or her own thoughts; he explains:

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Many times we talk and talk, but we are not sure if we are talking with our own words or repeating just messages that are in the air. My intention is to offer something so beautiful that people have an immediate reaction, so that they think, ‘What’s happening?’ And then maybe they can listen a little bit to themselves.\textsuperscript{131}

This is the silent goal of flow. While Elastic City’s walks encourage a heightened awareness of the exterior, whether physical or ethereal, the participants are really focusing on their own perception within themselves; what really happens during hobbies is not an indifferent relaxation from the external but that of comfort from one’s internalized state. Dr. Csikszentmihalyi’s flow is a retreat within the mind; those who participate in flow, knowingly or not, find solace in this activity in contrast to their daily lives.

Clare Cooper Marcus notes this sense of privacy is necessary for a house to be home—imperative for this thesis, as it was the transplant from home to house that planted the seeds for this thesis. Through numerous of her courses asking students to describe a special place to them, she has found the retreat is a recurring theme:

\begin{quote}
If our dwellings in adulthood are those settings where we are most at liberty to be ourselves, where we don’t have to put up any facades...all seem to serve similar psychological and social purposes—places in which separation from adults was sought, in which fantasies could be acted out, and in which the very environment itself could be molded and shaped to one’s own needs. This is the beginning of the act of dwelling, or claiming one’s place in the world.\textsuperscript{132}
\end{quote}

She continues this point regarding children and their retreat, or hiding place, “is the only corner of the environment that they, personally, are able to build, maintain, and modify, and often the question of ‘property rights’ surfaces.”\textsuperscript{133} These property rights illustrate one’s comfort and appropriation of the space—a retreat of one’s own.

Video game designers draw heavily from Dr. Csikszentmihalyi, as the games feature the constant change required to experience flow and manipulate the user-environment system to secure the user’s attention. These games serve as retreats from the everyday into a world of fantasy. Much like video game design, it is the architecture’s role to envelop, facilitate, and encourage these activities. More specifically, flow requires a clear set of goals, immediate and unambiguous feedback, a balanced difficulty with respect to skill and action, concentration, challenge, a sense of control, and few distractions—all leading to a sense of effortless action, freedom, and symphony between one’s wishes, feelings, and thinking. One’s surroundings are integral to the success of achieving this state. Dr. Csikszentmihalyi has focused very little on the physical environment with

\textsuperscript{131} Ibid.
\textsuperscript{133} Ibid, 27.
respect to flow but did mention “congenial surroundings”\textsuperscript{134} that lend themselves to this process and allow for comfort and few distractions. There is an implied connection to one’s environment.

Flow is significantly affected by the comfort with one’s surroundings that leads to interaction and concentration. Nuances such as those below create a hyper-awareness of the immediacy, yet a comfort that reinforces one’s personal space. Sou Fujimoto’s Final Wooden House manipulates wooden blocks to create personal, idiosyncratic moments within architecture. With choice comes appropriation:

![Sou Fujimoto, Final Wooden House, Kumamoto, Japan, 2008 (4-9)](image)

Though rectilinear, the resultant spaces intimately fit their inhabitants. Within one small volume, there are a wide variety of spaces to customize (work within a fixed structure) the spaces; the system could have been furthered by allowing the inhabitants to personalize (adapt the structure to their individualistic touch but keep the original intent intact) such as physically moving from the inhabitants’ interaction. Wood, an intimate material, speaks to all scales of the project from the enveloping large rectilinear blocks to the sensuous grain that carries one’s eye, nose, and hand from one block to the next, but the physically hard material limits the sensuality for the rest of the body beyond the hand. Its sharp corners also limit the comfort one can experience when moving around due to the paranoia of unintentionally “physically experiencing” a block with one’s eye. The space auditorily communicates an intimate environment due to the slight absorption of the wood but more importantly the immediate echo, reinforcing the small physical scale. Combined with light, (even with generous views to the exterior) these sensory stimuli reinforce one’s personal sense of place.

\textsuperscript{134} Csikszentmihalyi, Finding Flow, 45.
As the blocks reflect sound, the concentration of their waves illustrate the personality of each idiosyncrasy within the environment. Architecturally, solid retreats for active leisure hobbies should positively manipulate the senses to reinforce personal space, vary for each inhabitant (physically and experientially, again to reinforce one’s own space), be customizable, and advocate an emotional tranquility, thus making the external world invisible.

4.2c Intimacy: A Merriam-Webster definition of the other active leisure activity socializing is “tending to form cooperative and interdependent relationships with others.” Comfort is necessary for evocative dialogue because when people are anxious, they are more focused on details (too much focus can be negative in social activities) that do not allow for creative thinking.

To design for socialization, one must work to manipulate one’s senses and chances for flow experiences through intimate (dim, yet flexible, according to the aforementioned 2006 study about light) and welcoming spaces. Again in “The Prepared Brain,” Norman explains wired-in tendencies of humans for a “positive affect”—those more beneficial for openness and creativity; his suggestions are that of, “warm, comfortably lit places; temperate climate; sweet tastes and smells; bright, highly saturated hues; ‘soothing’ sounds and simple melodies and rhythms; harmonious music and sounds; caresses; smiling faces; rhythmic beats; symmetrical objects; rounded, smooth objects; and ‘sensuous’ feelings, sounds, and shapes.” A visual connection between inhabitants is important due to humans’ ability and habit to read into any of the “coevolved muscle systems that display our emotions, and perceptual systems that interpret those of others…We ourselves can become emotional just by our interpretation of others.” These reactions to open spaces and constant interpretation are automatic and wired into our physiological brain.

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135 Ibid, 29.
When Dr. Csikszentmihalyi does speak about the physical environment, he has translated flow with regard to playground design, allowing for creative and social experiences—spaces that require interaction with the equipment and other children. This can be translated into physically interactive spaces that require attention and collaboration that are integral to achieving a goal. Other researchers have found in office flow experiences resulting from group work generally to work in an open environment consisting of standing, or using movable chairs, and a freedom from tables—movement to keep one concentrated. The boredom that can occur during sitting is removed from the environment, and even the slight challenge of standing increases one’s attention. Overlapping public and private spaces with multiple functions can create these social opportunities, increasing the amount of interaction; therefore, these spaces are more likely to envelop flow experiences. The overlapping, or blurring, of the edges of distinctive areas creates a greater variation within the public to private gradient—a flexible environment conducive to many types of work and conversation.

For example, two years of research on office interaction and the comparison with that of other cultures and program environments such as aircraft interiors, the Spanish Steps, and “low-ceilinged meeting places of the Dogon Tribe in Mali, Africa where tribal elders have to sit and thus avoid confrontational argument” have translated into the PARCS modular office furniture collection to create the variety of spaces with three distinct traits:

- **CAUSEWAY** – a series of varied height, upholstered benches and fences that defines a new type of semi open space and encourages sitting, perching, leaning for a variety of different uses.
- **WING** – armchairs, sofas and booths that afford comfort and privacy for small group discussion or concentration.
- **TOGUNA** – a new definition of semi private meeting space


138 Ibid.
The hybrid furniture-architecture is lightweight and, therefore, easily movable, reinforcing the pursuit of adaptability and flexibility. A lighting system was introduced to visually signify a space of separation: “Without specific physical boundaries to confine the meeting area, down lighting subtly defines spatial limits.” The welcoming curved furniture is emphasized by its contrast due to the juxtaposition against a rectilinear wall. The sense of informality created by movable social settings adds to the lightness of the environment, lending itself to Norman’s suggestion for brainstorming spaces. To avoid anti-socialism in solid hobby retreats and to increase socialization regarding hobbies that will—due to a potential conversation’s topics’ intrigue—create the concentration necessary for social flow experiences, the retreats should surround or be strewn within a communal space—a separated integration.

4.2d Separation: It is the goal of enveloping flow to lead the inhabitant to a “spot where he can discover a something for himself.” As a common ground between hobby retreat spaces and open social spaces, for flow to occur there needs to be a degree of separation (physical or mental). Like flow experiences themselves, one’s interiority separates him or herself from that larger context but concentrates the connection to the immediacy constantly reacting with it.

It should be noted that flow experiences can and do occur within the entire public to private gamut (the light yellow arrow). However, within this gradient, there is an optimal range (the dark yellow arrow). In general, a level of privacy, or separation, is required; the extreme public realm is full of distractions, including the semi-public where the distractions emerge. The extreme of privacy can be negative, as noted by Norman that too much focus in social activities is a negative, leading one to pick out details and limiting one’s creativity but can be fine for hobby activities. For intimate conversations and hobbies, semi-private spaces are the most aligned with the aforementioned qualities of flow space, letting all parties know they are a part of something larger but have found, in contrast, a personal retreat space. Even though hobby and creative social spaces range in the separation necessary, they can be within the same space.

139 Ibid.
For example, Jaime Hayón’s Information Centre at the Groninger Museum features a table with varying-sized niches within it to create personal space on a public surface. The distinct zones predicate an appropriation of a certain niche but also allow for free conversation through them. Again, the curved corners of the table and surrounding furniture give off a welcoming feel with an implied privacy in the chairs with the enveloping headrest and personal cutouts of the table.

A more private version of this idea is the Rewrite table by GamFratesi, a study cocoon or cave that is upholstered and covered with sound-absorbing foam and wool on both sides for its soft visual and acoustic qualities to partially keep in and close out light and sound. This secure space within a hectic social space creates a retreat space for one to lose track of the context and concentrate completely on the immediacy. The softness of the Kvadrat Divina wool and curved shape reflects its soft ambiance, while the walnut desktop reinforces its security. As illustrated in the designer’s sketch above, the contrast of the refuge to those talking in the open space only heightens its effect, potentially translating into bringing in white noise from outside to add to the contrasting chaos. This thesis aims to do this with the added layer of a distortion to the ambient noise breaking down words so they will be noticeable not be distracting. The noticeability of ambient language heightens the sense of comfort because the inhabitant will know who or what is
around them, while a completely solid refuge can create a sense of paranoia due to one’s lack of awareness of the exterior. Just as flow experiences create an interiority while constantly reacting to the external world, “Whist staying connected, the user can isolate himself and construct for himself a very private space which is nonetheless still linked to the outside world.”

As these examples are essentially furniture that can be placed in any space, an example of an enclosed room for separation yet integration is the cardboard “meeting pavilion,” or conference room, (arguably also furniture) in the Rabobank Headquarters. Cardboard, a sound-insulating and malleable material, lines a cylindrical conference room within an open plan office building. By playing with the thickness of the cardboard, Sander Architecten created varying an interesting visual setting and varying levels of sound absorption. The playful use of a raw (as Csikszentmihalyi prescribes) everyday material creates a space for creativity, inspiring the inhabitants within. The wooden “punched” openings in the envelope allow for views out and some sounds to penetrate the space to create the contrast of a personal space. As a cheap material, the cardboard can be manipulated during work sessions and easily replaced if necessary; while the space is sculptural the material choice has the potential to positively undermine limiting formality of such a space, leaving room for physical and, potentially, emotional patina. The curved walls speak to an approachability of the space; however as a cylinder made of perfectly laser-cut and placed pieces, this project remains sacred, uninviting to the foreign touch; a more irregular shape would have created a warmer and more inviting environment to manipulate the surrounding surface. Another problem with circles is the noise reflection that creates a distracting echo, but this project avoids this due to the table being in the center (that with the highest probability of an echo) by placing the conference table there. Sander Architecten also created a translucent Japanese paper cylindrical conference

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room as a lighter alternative. This provides flexibility in choice of a different space first but another layer is added, as the paper cylinder expands and contracts vertically; again the flexibility compounds, as they are placed around skylights to create a variability in lighting levels per activity within the space or outside of it (the ability to manually control the light would have once again multiplied the space’s flexibility).

A very similar application of the paper cylinder of the Rabobank Headquarters can be seen in *The Drop Series*, a hung paper installation in which one physically manipulates a shell to create an intimate space to bring about intimacy, privacy, and concentration. The translucency lends itself to the awareness of others around that may lead to distractions but more importantly reinforces one’s physical and visual separation—however not necessarily complete audible separation due to the material’s thickness. Such a lightweight and versatile structure can be moved anywhere and adjusted to any desired height. As a successful demarcation of one’s space, merely sitting below the completely collapsed structure indicates one’s personal zone.

Flexible private environments, Olivia Decaris, *The Drop Series*, 2009 (4-20, 4-21)

Sander Architecten principal Ellen Sander explicitly describes the Rabobank Headquarters with respect to Dr. Csikszentmihalyi’s flow—as she puts it “form follows flow.”¹⁴² The project manifested in an open plan with as few vertical partitions as possible, allowing one to perceive that he or she is a part of something larger for group cohesion and that of the contrast of privacy to create retreat spaces. Sander also placed these private spaces within public spaces due to the challenge necessary for flow: “Diversity is required in order to stimulate people, and despite the enormous

scale of the building, people are not left wandering around lost in sterile areas.”\textsuperscript{143} The washi paper and paperboard cylindrical meeting pavilion creates a tactile experience, capturing the senses and bringing one’s attention to the boundary itself as an appreciation for the material. Overall, the project is very successful in its application of Dr. Csikszentmihalyi’s theory of flow to create a beautiful, flexible, playful, and sensual “work” experience.

As an extreme in ephemeral separation, \textit{Echo Point} at the University of Cincinnati, appears simply as a semicircular sitting space between the Geology-Physics and the Design-Architecture-Art-Planning buildings; it is in fact an audio mirror, a space that is the exact dimension related to the speed of sound, reflecting one’s own voice to his or her ears immediately after speaking. The space exploits its shape for the exact potential echo problem with the circular Rabobank meeting pavilions, creating an intimate space of sound outdoors compared to the experience inside of a drum. Surrounded by vegetation, this cool spot in the shade exists as a refuge from the pedestrian walkway just off of \textit{Echo Point} and elevated above a heavily-used service road to the north, but the added effect of the sound mirror creates a refuge unlike any typical retreat space. While the seating allows for physical comfort and a place for relaxation, \textit{Echo Point} allows for the claiming of one’s place beyond physical belongings strewn out on a bench. A sound “bubble” forms around one when speaking toward the semicircle—an invisible cocoon envelops the speaker even though in the wide open outside. The staggering effect of \textit{Echo Point} is beyond memorable, creating a unique sensory space within an everyday one. Through simple vocal interaction, the space immediately becomes personal: the circular ground brickwork is subtle enough to make its location and effect somewhat inclusive, as people inches away cannot understand the effect; the space is one’s own. \textit{Echo Point} raises the question if audio mirror effect can be created using a group of people to create an ethereal “social bubble” instead of a physical space.

\begin{center}
\includegraphics[width=\textwidth]{image.png}
\end{center}

\textit{Elevation: Invisible personal space through vocal interaction, Echo Point audio mirror, Cincinnati, OH (4-22)}

\textsuperscript{143} Ibid.
For an extreme of both physical and ephemeral separation, anechoic (meaning echo-free) chambers absorb every decibel of sound within it by suppressing any reflection. Double skins can be used for sound insulation, essentially as a box within a box, but anechoic chambers take the concept exponentially further by insulting the space from the exterior and then isolating any sound from reverberating, let alone escape from the sealed room. According to the Guinness World Records, the quietest place in the world is the Anechoic Test Chamber at Orfield Laboratories, Minneapolis, Minnesota, at a background noise reading of -9.4 decibels A-weighted; the typical human ear can detect that above 0 decibels A-weighted, so one would perceive the environment as completely devoid of sound. The complication of anechoic chambers (that lends itself to flow experiences) is the complete lack of ambient sound (or distractions of the everyday) that the inhabitant completely loses his or her sense of place within it, as one cannot physically sense the walls—only the separated visual sense can inform one, but if the chamber is large or dark enough this fails as well. Therefore, anechoic chambers are the archetype of complete separation; however this is also where the boundary between inhabitant and environment are most perceptible—that is unless the environment passively triggers a flow experience.
4.3 Passively triggering flow:

Architecture can arrest transient and timid inclinations, amplify and solidify them, and thereby grant us more permanent access to a range of emotional textures which we might otherwise have experienced only accidentally and occasionally.

Alain de Botton

4.3a Transition: The previous sections illustrate the active leisure activity of hobbies flourishes in a retreat-like environment and sociality in an open, welcoming one; Alvar Aalto said, “In every case one must achieve a simultaneous solution of opposites”144—eluding more to the intimate environments in Section 4.2d Separation. But what is supposed to happen between these controlled activities? While flow is a retreat into the mind, it is also a transition between a pure external focus and an inward one; therefore, the blurred boundary of this thesis becomes a blurred transition between exterior ocularcentrism and complete inward separation. The transition to interiority due to one’s focus on his or her own interpretation of ambient sensory input in the absence of direct interaction creates the focus necessary for flow that usually lacks during times of transition; this concentration creates the trance that blurs the boundary between one and one’s environment, achieving a flow experience. Related to Section 4.1b Concentration, the transition between active leisure hobby and social activities (like that of incubation within the creative process), one is most vulnerable within these interstitial spaces to external stimuli due to the lack of a single attended focus:

Because most activities do not require continual, full-time conscious attention, we are able to go about our daily activities continually dividing attention among multiple diversions. The virtue of this division of attention is that we keep in touch with the environment: we are continually aware of the things around us. Walking down the street chatting with a friend, we still have considerable resources left for a multitude of activities: to notice the new stores that have opened on the block to glance at the newspaper headlines; even to eavesdrop upon neighboring conversations. The difficulties arise only when we are forced to engage in mechanical activities…145

During this entire description, Norman implies “we” are in transition between “mechanical activities.” Ephemeral daily transitions consist of these repetitive mechanical activities such as walking—a fact Elastic City exploits in its sensory walks—not unlike Dr. Csikszentmihalyi’s “maintenance activities,” such as cooking (typically too fragmented of interactions) and cleaning. The lack of pure focus keeps one open to sensory stimuli.

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144 Pallasmaa, The Eyes of the Skin, 29.
145 Norman, Emotional Design, 156.
Much like flow, idiosyncrasies (physical and ethereal) create a sense of challenge and awareness (both essential for flow) of one’s place within an environment, typically lacking in transition spaces. For example, one of the most interesting and exciting aspects of the Georgetown, Washington, DC, area is the preserved brick sidewalks. Oscillating due to two-century-old tree roots and soil failure, the mere procession through city streets becomes an all-out phenomenal experience. What strikes the pedestrian is the occasional loose brick pushed higher than its peers, heightening one’s senses and his or her sense of place within the environment.

While at first a distraction, the brick paves the road to an intimate emotional relationship with it. Related to one’s comfort due to repetition (without getting into memory theory), this anomaly affects the passerby enough simply for him or her to remember to walk to the side next time. This situation would most likely occur during a transition space when the typical pedestrian “zones out,” mentally indifferent to and removed from the environment. If he or she hits that same brick, the victim will experience the emotional patina of the space (negative or positive), instantaneously remembering the previous connection with that brick, city block, and Georgetown. Much like a souvenir, the brick as a gateway to a memory is more important than the brick as a building material. Describing an experience with a memorable door handle moving through the transition from outside to in, Sir Norman Foster recollects, “It was not only good to look at; in its own way it was eye-catching. But more important and equally memorable was the way in which it sat in the hand—so comfortable and generous…It made such a deep impression on me.”

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It is clear that only the distancing and detaching sense of vision is capable of a nihilistic attitude; it is impossible to think of a nihilistic sense of touch, for instance, because of the unavoidable nearness, intimacy, veracity and identification that the sense of touch carries.

Juhani Pallasmaa

4.3b Sensuality: The manipulation of the transition is illustrated in Carlo Scarpa’s Querini Stampalia, the restoration and reorganization of an old palazzo in Venice, Italy, on the Rio Santa Maria Formosa canal. It now houses the Fondazione Querini Stampalia, an art museum and library, which includes a bridge and series of transition spaces to a garden behind the building. This project is prominent due to its attention to human-centered detailing, the details’ existence as idiosyncrasies within an existing contextually-everyday building type, and the architect’s ability to tie each moment to the rest of the architecture. Scarpa’s understated architecture is the epitome of

147 Norman Foster, “The Human Touch,” Foster + Partners, 1.
Architecture of the Everyday: “In architecture, standards of good taste seem to dictate that the presence of the body not be acknowledged in or by buildings…, and the true user is often ignored by the architect… [But,] The everyday world is sensual. It not only provokes sight but also touch, hearing, smell. The architecture of the everyday encompasses places known by their aroma, surfaces recognized by their tactile qualities, positions established by echo and reverberation.”

Carlo Scarpa, Querini Stampalia, Venice, Italy, 1963 (4-26, 4-27)

Every detail carried through in Scarpa’s Querini Stampalia conveys his attention to the human scale and experience. Reexamining the Venetian bridge, his elegant linear elements are stripped of any excess décor, reduced to their pure sensory qualities, requiring closer examination than from that of the voyeur—the only interaction required by formalist contemporary architecture. The first step of the bridge acknowledges the materiality of the typical gray stone bridges; the second sets up a subtle contrast—or idiosyncrasy within a transitory space—with a rigidly thin-cut white stone that incongruously acts as the transition to the spanning wood decking. The sensuous iron bar and smooth wood handrail synthesizes a tactile experience over the short approach. Although every material is aesthetically designed to stand by itself, these subtle choices find their counterpoints throughout the architecture, highlighted by moments of auditory sensuousness in the second room featuring a bubbling fountain and its counterpart outside later in the procession. The symphony of these affects creates a sense of awakening, discovery, and rapture through every turn. It is in these transition spaces one is most vulnerable to passivity and indifference; this is where Scarpa shines and grabs the inhabitants with exquisite detailing and beauty:

Like Scarpa’s Querini Stampalia, the above photograph shows the designer’s appreciation of the building’s inhabitants—a sensory choice they have during the transition from exterior to interior. The different door handles, installed simultaneously (evidenced by their identical series, connection to the door, and patina) allows users to choose the handle with which they want to interact. The choice offers a more personalized interaction and opportunity for appropriation. Coincidentally, the current tenant InterAction’s name implies a value of a connection to people. Tactility is a significant driver in one’s experience in a space, but it lacks the constant contact necessary for one to reach flow; the fleeting moment can be that of such pleasure and enjoyment, but it remains that—fleeting. Eisenman’s Aronoff Center attempts to continue its anxiety affect through the ever-changing floor level, which does create the opportunity to increase the interaction necessary for flow throughout the entire experience using tactility. The effect is limited due to the lack of texture on the floor and the dampening of such an effort due to the shoe—the boundary of constant tactile exploration of space. While an exciting and ever-changing environment, the Aronoff crosses the line between stimulating and distracting, its secondary goal. The inconsistent level changes accompanied by a complicated floor plan require a torn attention between destination (a distanced mental effort) and existential action. The hyper-awareness of one’s environment moves beyond the immediacy, planning for steps ahead and preparing for pitch changes. The idea takes the effect of the one brick of the Georgetown sidewalk and rotates every one of them differently; the distraction takes attention away from performance and communication necessary for flow.
All senses are integral during flow experiences, but in general, sound is the mediation between the large and small scale—the same effect of flow experiences. Like sight and smell, sound’s saturation illustrates the experienced scale, but sight is limited experientially to a physically distanced relationship between inhabitant and experience. Like touch, sound can be felt, but touch is limited with respect to the typical time of interaction in architecture (flow experiences require extensive interaction). Taste is limited (however still important) in its application to architecture. Smell acts just as sound does with respect to mediating between scales and is extremely important with respect to memory (as the strongest stimuli of recollections) and concentrated connection to the immediacy. Due to the limits of the thesis process and the physiological qualities of sound (proven in the following section), this thesis will focus on sound as the primary (yet still a part of a multi-sensory experience) phenomenological driver.

4.3c Sound: Like Elastic City’s walks that aim to break the norm of the everyday walk, idiosyncratic sensory experiences break the tedious 24-7 everyday routine. From an urban growth and political boundaries point of view:

Elastic cities are those that either embrace some form of regionalism or, better still, expand their boundaries by annexing suburbs. Elastic cities… have fewer competing jurisdictions, stronger job growth, and higher incomes, less segregation, and better fiscal management. Inelastic cities such as St. Louis and Chicago have many more suburban jurisdictions and suffer from concentrated poverty, racial segregation, and so forth.149

Elastic City in New York has appropriated the term to represent how one experiences a city and the resulting personal growth. Work on the outer edge of civilization illustrates how one captures the fringe of experience and adapts within the everyday. This adaptation relates to the continuous

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change of flow and one’s subconscious growth during the experience. According to the Merriam-
Webster Dictionary, *elasticity* lends itself also to flexibility as one is “receptive to new ideas” and
“applies to something which may or may not be resilient or elastic but which can be bent or folded
without breaking.” According to the Merriam-Webster Dictionary, *elasticity* lends itself also to flexibility as one is “receptive to new ideas” and “applies to something which may or may not be resilient or elastic but which can be bent or folded without breaking.” During an analysis of interest and attention (necessary for flow), Donald Norman references classical music:

For many it is boring and uninteresting, but for others can indeed be listened to with
enjoyment over a lifetime. I believe that this longevity derives from the richness and
complexity of its structure [and that of the flow experience]. The music interleaves
multiple themes and variations, some simultaneous, some sequential. Human conscious
attention is limited by what it can attend to any moment [what Dr. Csikszentmihalyi
refers to as psychic energy], which means that consciousness is restricted to a limited
subset of the musical relationships. As a result, each new listening focuses upon a
different aspect of the music. The music is never boring because it is never the same.

He continues, “the viewer must be able to take the time to study, analyze, and consider such rich
interplay; otherwise the scene becomes commonplace.” The layering of the classical music lends
itself to the ambient white noise analyzed during Elastic City’s sound walks, rich with layers and
complexity. Emotions, directions, tones, and rhythm vary infinitely within one block in New York
City. Each layer speaks differently to each person. The analysis of one’s environment comes from
concentration; this can be manipulated toward that of the senses, internalizing one’s concentration.

“Note the critical role played by music and lighting: dark, creepy scenes and dark, foreboding
music [when viewing a film]…Music seems to modulate our affective system to enhance the
experience at all levels of involvement: visceral, vicarious, and voyeuristic.” The sound creates a
retreat from the world, blocking out the ambient white noise. Such experiences in a theater do the
opposite of Elastic City by shutting out the everyday while the artists try to integrate it, but both aim
to rethink the everyday ambient noise, thereafter creating a higher awareness and appreciation of it.

“A huge amount of the brain is taken up by the sensory systems, continually probing and
interacting with the environment…[With respect to sound] The whole brain is involved—
perception, action, cognition, and emotion…Rhyme, rhythm, and melody are fundamental to our
emotions…The best of products make full use of this interaction.” Sound is a unique stimulus,
varying in intensity from “the one extreme where it is a deep, fully engrossing experience where the
mind is fully immersed to the other extreme, where the music is played in the background and not
consciously attended to. But even in the latter case, the automatic, visceral processing levels almost

150 Ibid.
152 Ibid, 111.
153 Ibid, 124, 128.
definitely register the melodic and rhythmic structure of the music, subtly, subconsciously, changing the affective state of the listener.”\textsuperscript{155} In both cases, sound is an external link to the subconscious, an extension of the environment. Regarding Norman’s three levels of cognitive processing, sound affects all three: rhythm and tunes affect the visceral, the enjoyment of playing or mastering it speaks to the behavioral, and the pleasure of analyzing it appeals to the reflective level. Norman states researchers believe music is a motor activity in both active and vicariously ‘passive’ contact (for example, when one views a film they are subconsciously affected by it), as rhythm is “built into human biology”\textsuperscript{156} with respect to patterns within one’s anatomy.

University of California Davis psychology professor Petr Janata has an interest in basic neural systems fundamental to perception, attention, memory, action, and emotion with an emphasis on music. He performed an experiment that mapped the areas of the brain, specifically the medial prefrontal cortex (MPFC)—that which is activated by flow—with its response to clips of familiar music, and concluded “the dorsal medial prefrontal cortex associates music and memories when we experience emotionally salient episodic memories that are triggered by familiar songs from our personal past,” an area already understood to be where memories are supported and retrieved.\textsuperscript{157} The memories specifically brought about are autobiographical memories that would make a certain object/place important, a fact Janata had observed in previous studies regarding the MPFC’s use to track music through tonal space and that music serves as a strong retrieval cue for autobiographical memories. This area within the brain is one of the last to be affected by Alzheimer’s, and a previous study revealed that the memory for familiar music was retained longer than many other memories for those patients. There is a concrete link between flow and sound—creating an emotionally memorable experience through tonality.

\textsuperscript{155} Ibid, 116.
\textsuperscript{156} Ibid.
\textsuperscript{157} Janata, “The Neural Architecture of Music-Evoked Autobiographical Memories.”
The above image shows the results of a test of playing a series of thirty-second excerpts of thirty Top 100 charts popular music from the subjects’ extended childhoods (ages 7-19) to test to see if there is a correlation between music and autobiographical memories in the MPFC. This was based on numerous previous studies that proved the MPFC to be involved in autobiographical memory retrieval, tracking music’s harmonic and tonal organization, and that music acts a powerful retrieval cue for these autobiographical memories. The longitudinal brain section (left side of Image 4-31) taken at -5mm (left hemisphere) and transverse brain section (right side of Image 4-31) at +40mm illustrate the upper part of the MPFC as the center of FAV—what Janata describes as “the combined effects of hearing pleasing, familiar, and autobiographically salient songs relative to unfamiliar, emotional neutral, or displeasing songs that elicited no autobiographical association,”158 or the synthesis of emotional self-relevant memory retrieval due to sound. This is contrasted to indicate the location of the simple tonal analysis while listening to the song for the first time in the study (in green) and the question and answer period (QAP, in blue), when the subject had to psychologically separate oneself from and reflect on the experience. The latter, in relation to flow experiences, is the time following flow that one realizes and appreciates the experience that would not have occurred during the experience itself—what this thesis aims to accomplish during the remaining time of maintenance activities during Dr. Csikszentmihalyi’s daily activity analysis.

158 Ibid.
The familiarity of the music in Janata’s experiment, or “the everyday,” and one’s self-referential connection to it stimulated the same brain area as that of flow. To further this evidence, when new notes were introduced into the familiar songs, as the subjects were not in control of the new randomly-placed sounds, the MPFC slowed in activity. The lateral areas of the brain were instead stimulated, bringing one out of the flow experience, like that of the separating QAP phenomenon. To blur the boundaries between emotion, the self, and external stimuli, the medial prefrontal cortex must be stimulated.

As a common trigger of flow, the combination of sound and scale act to facilitate this feeling of ecstasy and promote creativity. Performance company Elastic City works to “make its audience active participants in an ongoing poetic exchange with the places we live in and visit. Artists are commissioned by Elastic City to create their own walks. These walks tend to focus less on providing factual information and more on heightening our awareness, exploring our senses and making new group rituals in dialogue with public space in the city.”159 Todd Shalom leads, as he describes, “active listening walks”160 during which participants learn about acoustical ecology and create their own sound poetry (out of sounds rather than words), lending themselves to all of the necessary active leisure activities to experience flow. “We use music to fill the void when pursuing otherwise mindless activities,”161 and Elastic City teaches the participants to harness the potential of sound within the repetitive everyday instead of using a personal music player to supplement the boredom of the typical transition. The walks can “open a world you haven’t seen.”162 This previous quotation can be taken literally, as half of the participants walk with their eyes closed, and as a commentary on the everyday to awaken the participants out of their indifferent daily stupor. Varying in topic, every walk has an underlying goal to create poetry out of the ubiquitous and everyday, and it is the aim of this thesis to design a walk that continues the experience within the artist commune for Elastic City.

160 Miranda, “Hidden City.”
161 Norman, Emotional Design, 117.
162 Miranda, “Hidden City.”
As a performance group, Elastic City’s walks have a very strong potential of introducing and maintaining flow throughout the entire experience. The walks exploit curiosity, sensory manipulation, education, attention and concentration, one’s own creativity, and interaction with others. By holding the shoulders of a fellow participant while walking, the task of concentrating on the overload of New York is disburdened to allow for full concentration on sound and one’s surroundings, allowing one to learn more through comfort in the current activity. As Dr. Csikszentmihalyi recommends for group creative work, movement and socialization is key. Shalom explains:

I think it really takes [the artists leading the walks] letting themselves be vulnerable, and letting everyone watch that, experience that, and let them know it’s okay, even preferred—that you can be yourself, and that you’re not going to be judged for it…that’s how this dialogue moves forward…There is an education component to this walk…I think with a knowledge of these things one can be informed of how they listen. And in doing so, it really brings the focus to listening.  

Related to Dr. Csikszentmihalyi’s nine characteristics of flow (“There is no worry of failure. Self-consciousness disappears.”), subconsciously overcoming vulnerability is a part of experiencing flow. Ecstasy—the result of flow—includes rising above the internal ego (e.g. self-consciousness, arrogance) and the exterior distractions (cultural projections) associated with it. Architects R&Sie(n) exploit vulnerability in their Hypnosis Room installation by giving each inhabitant a “personal” space—not unlike Sou Fujimoto’s Final Wooden House—within a biomorphic form to overcome the alienation deliberately created in the surrounding gallery space and control their immediacy and consciousness. Overcoming self-consciousness is imperative to the flow process (successfully transcended by Elastic City’s example); as an example, tennis player John McEnroe, aware of this, would compliment an opponent “in the zone” on their forehand while switching sides of the court to force them to concentrate on that action. When one is “in the zone,” the “one-
pointedness of the mind” blocks the explicit worry of failure and time. Therefore, as Elastic City proves, with vulnerability comes education.

What Elastic City is able to expand beyond the aforementioned physical examples is the creative aspect of flow. Responding to a question regarding the walks to be considered performances:

I think they’re performative. But I think they’re a genre unto themselves. Because in many of the walks there is an educational component, there’s a participatory aspect, chances are you will have some sort of emotional experience, you might be put in a vulnerable spot, you may be entertained. There are all these different things going on, and I think performance can accommodate most of that. The educational component is not necessarily part of a performance, though it can be. Most of the walks have something educational in them, because they’re led by people who, you know, that’s their angle.165

Participants create poetry and “[play] the sounds” of that location like a grocery store; they create their own work. Shalom describes, “The street has all poetry we use, it’s a question of really focusing ourselves to realize that.”167 The walks teach the participants to investigate the everyday through exploration and concentration. Coupled with creativity, these sensory walks exploit every aspect of flow unknowingly. After the participants remove their blindfolds from the sound walks, they are finally able to ‘open their eyes.’

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164 Dietrich, “Neurocognitive mechanisms underlying the experience of flow,” 758.
165 Parker, “Todd Shalom, Elastic City.”
166 Ibid.
167 Ibid.
Carlito Carvalhosa’s *Sum of Days* in the Marron Atrium of the Museum of Modern Art in New York exploits the inhabitants’ interaction by forcing them to be involved with the piece simply by being in proximity to it. Made of a soft, light, white fabric with speakers hung throughout the spiral path created by the fabric, the environmental and participatory sound installation creates an increased awareness of the senses, the immediacy, and one’s place within it.

Upon entering the exhibit, you pass an array of speakers affixed to the wall. They are emitting a low hum—the sound of voices and echoes that are distant, yet recognizable. It is unclear at first from where these sounds are originating, but behind the fabric bodies are drifting in and out of view. The curtains, which are constantly swaying, direct you in an ellipse to the center of the space where a single microphone hangs, picking up the noise within the exhibit and sending them to the dozens of speakers that hang at intervals inside the curtains, along the walls of the exhibit, and up through the galleries at the mezzanine levels that overlook the atrium. One enters an otherworldly realm that effortlessly hangs from the ceiling sixty feet above and ethereally hovers just above the floor below. The goal of the installation is to separate the inhabitant from the everyday and create a sensual retreat through a multi-sensory experience. As soon as one is immersed within the elliptical labyrinth of fabric, one can sense his or her relation to the immediate environment but loses track of all relation to the exterior due to its mazelike and billowing reaction from one’s movement that captures one’s attention.

While not an everyday experience, the majority of the piece is a transition space with a balance of comfort and challenge, creating a mentally stimulating yet relaxing experience along the way. The lightness and translucency invite those within to touch, push, and pull their surroundings—always moving, always folding the inhabitant within. The softness continues through one’s auditory sense of the space, as a continual white noise of current and past ambient voices and sounds folded with 60- to 90-minute-long musical performances play overhead in the lightly hung speakers—a sound sculpture of encouragement of socialization and a conversation with previous inhabitants. The sense of retreat within the city is heightened due to the distorted white noise—something familiar yet unique to this immediate context—that reminds one of his or her place within a larger context with a constant relation to that immediacy. The ever-changing noise and fabric evolve from the foreground to the background, making the ephemeral experience the foreground. *Sum of Days* immerses its inhabitants by completely involving all of one’s senses with a focus on sound and scale. Like Elastic City’s sound walks and *Sum of Days*, this thesis aims to bring one’s sensory experience to the foreground, tying the external environment within one’s internal sensory interpretation to passively trigger flow.

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4.4 Actively triggering flow:

A space can only be made into a place by its occupants. The best that the designer can do is put the tools into their hands.

Steve Harrison and Paul Dourish

4.4a Reactivity: In “The Poor Little Rich Man,” the protagonist is unable to purchase anything, change anything, add anything. In a conversation with his architect: “But what if my grandchild gives me something he has made at kindergarten?” ‘Then you must not accept it!…You can’t even move a picture. Just try to find a place for a new picture!’ Then a transformation took place in the rich man. The happy man suddenly felt deeply, deeply unhappy…He thought, this is what it means to learn to go about life with one’s own corpse. Yes indeed. He is finished. He is complete!”

The architect demands to control the life and, by extension, death of the building’s inhabitants to the point of discomfort within one’s own house. Without evolution, the man remains stagnant and dead. The fundamental need for comfort (required for flow) is unattainable, as the space is no longer belongs to and is unable to react to the Rich Man; the Rich Man must be oppressed by the space and instead react to it, akin to how one must react to formalist architecture.

Donald Norman states, “[Designers] cannot make something personal, make something we bond to. Nobody can do that for us; we must do it for ourselves.” Agreeing with Norman from a self-help side of his writings, Dr. Csikszentmihalyi explains, “I don’t like the top-down pronouncements like ‘Everyone should do this’ or ‘Everyone should do that.’” Ecological psychology reinforces this concept due to the constantly-changing dialogue between inhabitant and environment, what Dr. Csikszentmihalyi refers to as an “evolving conversation.” The experience of flow comes from varying sources for varying people in varying ways. Dr. Csikszentmihalyi explains:

Colleagues have interviewed by now ten thousand people around the world—women who weave tapestries in the highlands of Borneo, meditating monks in Europe, also Catholic Dominican monks, and so forth. They all said these same things. So “flow” seems to be a phenomenological state that is the same across cultures. What people do to get into that state varies enormously, but the experience itself is described in very similar ways.

The “frontal lobe provides for cognitive flexibility and freedom, and it releases us from the slavery of direct environmental triggers or the memory stored in [temporary, occipital, and parietal cortices].”

170 Norman, Emotional Design, 225.
171 Debold, “Flow with Soul.”
172 Ibid.
173 Dietrich, “Neurocognitive mechanisms underlying the experience of flow, 749.
In general, flexibility leads to the patina described in Section 3.1: Emotional connection. Norman notes an object’s graceful and personal degradation with the owner “carries huge emotional significance.” While the physical interaction with the building may occur over months or years, those moments may only last seconds (such as opening a door), and they may not in themselves be flow experiences, they may lead to the emotional patina essential to allow for future flow experiences.

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174 Norman, Emotional Design, 221.
Therefore, touch will be involved in this thesis to create a multi-sensory experience and allow the space to physically evolve around the inhabitant, being exploited in cases of longer exposure such as a stair railing. Sound incorporates this relationship through composing, performing, listening, singing, dancing, and the experiential artists of Elastic City. Reactivity in such an environment leads to potential interaction with the space acoustically with respect to echo, absorption, and transmission.

Even flexibility enhances concentration: “We realised that creating dynamic movement in a chair can actually help a person’s concentration,” says [designer] Jay Osgerby. Research shows that increased muscular activity in the abdomen and back regions can be beneficial to health because movement increases the flow of oxygen around the body which can aid concentration.”

This is illustrated in the design of the Vitra Tip Ton chair. Its indestructible material qualities also allow for any environment and activity acted upon it. “It’s a very dynamic way of sitting, which has proven physical and mental benefits, but it’s also fun because your movement occurs in an intuitive way.”

“Control is an important condition of the flow state. You don’t necessarily have to be in control, or even feel like you’re in control of the entire situation, but you do have to feel that you’re exercising significant control over your own actions in a challenging situation.”

100 Things Every Designer Needs to Know about People notes the importance of user control to reach and maintain concentration for a flow state; direct reactivity to the inhabitant by any means creates a sense of control. Also related to Donald Norman’s dichotomy of focus and creativity (as illustrated in the diagram above), Vitra’s chairman Rolf Fehlbaum points out, “The issue with chairs is that there are many ways to sit…[The Tip Ton] offers two positions – a forward-leaning position and a relax position.”

In the Norman’s subchapter entitled “Focus and Creativity,” he calls for a space that can change from eliciting a positive affect to that of a negative one, reacting from a situation that requires creativity to one that requires focus. Like the raw, free materials used by Dr. Csikszentmihalyi’s subjects that promoted active exploration, the environment must be free to manipulate and personalize. Manipulable materials also allow for Norman’s graceful degradation with the owner, creating the emotional patina necessary for a connection. To create for reactivity and flexibility is the true means to achieve Deborah Berke’s “Architecture of the Everyday,” by designing for the anonymous, sensual, and functional. In comparison with formalist architecture, “In its mute refusal to say ‘look at me,’ [Architecture of the Everyday] does not tell you what to think. It permits you to provide your own meaning…An architecture of the everyday allows for personal rites but avoids prescribing rituals.”

“The attributes that make something personal are precisely the sorts of things that cannot be designed ahead of time.” Even more specifically, R&Sie(n) asks, “Can we envision something totally different, urban structures driven by human contingencies? Can we work out adaptive scenarios that accept unpredictability and uncertainty as operating modes?”

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176 Ibid.
177 Weinschenk, 100 Things Every Designer Needs to Know about People, 91.
178 Ehterington, “Tip Ton and Map Table by BarberOsgerby for Vitra.”
R&Sie(n), an architectural office in Paris, is internationally-known for their use of scripting and biomorphic forms. Shallowly, their work seems purely form-based and that of blobitecture; quite the opposite is true. The firm creates their work through form-based scripting to create an adaptive experience “concerned with the bond between building, context and human relations” within an ever-evolving world. The firm’s work tries to break the tight grip scripting has on design, only setting invariable geometric projections to allow the form to grow as necessary, and removing from the equation the generally overconfident, indifferent architect. François Roche, one of the three principals of R&Sie(n), describes the firm’s work regarding “chameleon architecture, which link and hybrids the human body to the body of architecture” inaudibly pursuing the goals of [socialist] Antoni Negri—a socialism within the user-environment system, lending itself to Michael Richardson’s definition of flow. The ephemeral flexibility within R&Sie(n)’s socialistic view comes from “a democracy deficit and the abuse of tools that date back to a time when the reason of the few presided over the destiny of the many.” To define an environment based on “human contingencies,” the firm has consulted with psychologists, hypnotists, singers, and sound engineers to “use climatic, topographic or organic data as their primary tools in elaborating a structure’s shape and function in purely logical form.”

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163 Ibid.
164 R&Sie(n), “Rumours.”
The *Hypnosis Room*, an installation at the Modern Art Museum in Paris as a part of a series entitled “I’ve heard about,” is a “zone of emancipation,” personal growth, and transformation within a world of alienation, paranoia, and chaos. “The architects seek to transform our perception of the spaces we inhabit and that psychologically inhabit us.”

Using a variety of stimuli throughout the Modern Art Museum exhibit, the viewer is exposed to anxiety and video of a strange girl staring at them complemented with various sounds and voices, representing the everyday overstimulated experience. R&Sie(n) exploits the fact that sound has its negative side, as well. While a “potent vehicle for expression, providing delight, emotional overtones, and even memory aids,” it can equally become a “vast source of emotional stress.” This anxiety can lead to a reduction in effectiveness and degrade or remove the opportunity for flow; thus, a level of auditory flexibility is a requirement for such spaces.

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186 R&Sie(n), “Rumours.”
187 Derieux, “R&Sie(n).”
R&Sie(n)’s manipulation of the resulting anxiety reinforces the sense of escape and retreat from the everyday within the *Hypnosis Room*. “The atmosphere becomes more sensual in the ‘immersion room,’ an alveolar protuberance where visitors can sit in one of the five cells and listen to François Roustang, Jacques Lacan’s hypnotist.”\(^{189}\) With a number of idiosyncrasies throughout the installation with respect to sound (the space is filled by vocal information about urbanism), light, and physical dimension of the cells, one can find his or her personal place within the public piece. As Lynn stated that “smoothing does not eradicate differences but incorporates,” the user is actively incorporated into the architecture, reaching a higher connection with the surroundings. The chamber acts as a place of retreat (through scale and sound) where one can block out the exterior alienated social state throughout the procession and focus on one’s own heightened consciousness to “reveal a new relationship with the world, others and oneself”\(^{190}\). 

The *Hypnosis Room* is a very successful project but could be taken further with respect to its personalization through materiality and haptic sensuality. The piece was created in collaboration with the Laboratory for Robotics of the University of Southern California using a machine that secretes “an organic-looking spongy substance similar to coral”\(^{191}\) in one secretion that can be unforgiving after hardening but does lend itself to Lynn’s theory of smoothness as a singular material that folds in the bodies that interact with it. Ironically, R&Sie(n) believes that “nothing can remain fixed; everything must evolve continuously,”\(^{192}\) but uses a fixed, static material. The materiality and construction also remove the sense of scale due to the lack of scalable construction pieces in lieu of the singular blob that could be any size. *Sum of Days*, in a sixty-foot tall space, exploits its materiality to subtly and continually reflect, absorb, and engage inhabitants’ sound and touch while still enveloping its inhabitants with a perceptible human scale.

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\(^{189}\) Derieux, “R&Sie(n).”

\(^{190}\) R&Sie(n), “Rumours.”

\(^{191}\) Derieux, “R&Sie(n).”

\(^{192}\) Ibid.
Architects and artists Tommi Grönlund and Petteri Nisunen collaborated on a sound installation at the Musee de Art Contemporain de Barcelona. Not unlike Elastic City, the installation forces its inhabitants to create poetry with their body movements. The constant dialogue between inhabitant and environment challenges the spaces and inhabitants’ experiences within them. The collaboration creates pieces that constantly react to natural inputs and make invisible forces that subtly affect all phenomena explicit, from human interaction in their first works to elemental interaction such as heat, magnetism, and weather in their later works. The assumedly static items or phenomena that are housed within their pieces become temporal with the introduction of these natural inputs. As the director of legendary electronic music Sähkö Recordings, Grönlund and Nisunen show a specific interest in sound.

For *Off-Sonic*, an installation for the Musee de Art Contemporain de Barcelona, Grönlund and Nisunen renovated a church by demolishing the floor, pouring a new concrete floor, and leaving an excavated strip with a set of chimes that slowly run on a set of sliders. The constant sound produced by the chimes varies through the day due to the slow movement of the chimes from one end of the church to the other and is audibly affected by one’s movement through the space. The sound waves become a part of the perpetually-changing architecture, an armature bonding the space and inhabitants together.
Akin to Off-Sonic’s reactive personal psychologically-absorbing experience using sound and the Rabobank Headquarters’ (refer to Section 4.2d Separation) use of cardboard, artists Robert Irwin and James Turrell worked to achieve a space of sonic deprivations “explicitly engaged in researching aspects of perceptual psychology”\(^\text{193}\) (a direct tie to this thesis, linking perception, psychology, and sound). A part of the Los Angeles County Museum of Art’s (LACMA) unprecedented pairing of contemporary artists with high-technology corporations in the *Art and Technology (A&T)* program (1967-1971), the artists collaborated with The Garrett Corporation’s (a jet engine manufacturer that uses anechoic chambers to test their products) Life Sciences Department (dealing with environmental control systems such as pressure) and later artist Larry Bell and architect Frank Gehry. The cooperation, specifically with scientist Dr. Edward Wortz, Ph.D. in Experimental Psychology, was to push the envelope with respect to new art forms, using cardboard to manipulate the physics of sound in a room. Like this thesis’ foundation of using the technology of the day in architecture, the A&T program’s curator Maurice Tuchman posed he question: “What if artists had access to the materials, expertise, and manufacturing processes of the day’s most advanced technologies?”\(^\text{194}\)

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A Los Angeles Times writer noted Robert Irwin’s “serene work”\(^{195}\) above any of the 23 other proposals in the A&T program due to its power as an immersive environment of “perhaps the outstandingly valuable example of a purely interactive situation”\(^{196}\) and “evanescent phenomena.”\(^{197}\) The above image illustrates the resulting space after a year of research, experimentation, and collaboration with James Turrell (who left the project before NASA’s First National Symposium on Habitability in 1970). The corrugated bleacher-like seating, designed by Gehry, was intentionally uncomfortable to make it impossible for the audience to relax when listening to the debates regarding habitability in NASA’s equipment from undersea vehicles to spacecraft. The space, overall designed by Irwin, changed every day for the 3-day symposium. On the third day, the exterior wall was torn down to leave the space open to the street noise to make it difficult to hear, increasing the required attention to hear the panels. The results of this symposium were of concentrated heated debate—exactly the environment for which Irwin, Bell, and Gehry designed.

Irwin’s interest in theoretical experiences in perceptual psychology and responses to special environmental experiences started in his work previous to the A&T program but blossomed with his introduction to anechoic chambers, evolving into questions of what determines perceptual and sensual awareness, basic orientation, how sound affects this, how optics could be diffracted, and how this was all measured\(^{198}\)—essentially the minor goals of this thesis. Irwin, Turrell, and Wortz’s collaboration manifested into Turrell’s following prescription for such an immersive [flow] space (an unbuilt installation for the LACMA):

**PART 1**
A queuing area, to be seen as a part of the museum, but isolated, sound dampened, 2 or 3 persons at one time. This area to develop a time span and positioning for Part 2.

**PART 2 Sensory Deprivation**
  a. One person for a period of from 6 to 15 minutes using an anechoic type space.
      1. This space to be fully sound dampened and in total darkness.
      2. Time span to be experimented with using subjects to determine optimum lengths.
  b. Person to enter with as little orientation to size, shape and his position in space, as is possible.
      1. Entrance should obscure outside scale, and position of room within museum space.
  c. Within first minute or two, stimulus to be introduced/visual, audio/to define a space on his senses and to focus and heighten attention on his sense awareness. This is to be done near his area of expectancy.

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\(^{195}\) Ibid.
\(^{196}\) Tuchman, *Art and Technology*, 12.
\(^{197}\) Ibid, 29.
\(^{198}\) Ibid, 127.
d. Events not to be repeated. This will leave him with a lingering anticipation and a form of participation; in his sense isolation his focus should fall back on his own sense phenomena.
   1. The sounds of his own system, retinal color fields, etc.
   2. He could back into a subtle form of meditation.

e. Sensory deprivation seems to alter the orders of our established sensory dependence.

PART 3 Sensory participation/controlled input, person to enter directly from deprivation space, to spend 6 to 15 minutes.

a. Content of this space to be seen as a singular sense experience, to see space as surrounding and positive.

b. Stimulus information to avoid any imagery identification/non object/a major objective is to make all stimulus harmonious.
   1. Development of sensory crossovers/the support of any awareness or positioning by the use of more than one sense.199

Robert Irwin (seated) and James Turrell (standing) in preliminary testing of the “sensory chamber” (4-50)

The goals and methods outlined by this thesis have been embodied in the above design principles for what they called a “sensory chamber,”200 or what this thesis aims to call a flow environment—both immersive environments. In Part 1, Irwin, Turrell, and Wortz set up the contrast necessary to make a special personal space separated from the everyday routine to which one is indifferent. The queuing area, a sound dampened transition space, heightens one’s awareness and absorbs one’s concentration. “Less complex than the outside world,” it removes distractions and creates a separated (“2 or 3 persons at one time”) social space that automatically elicits a compelling conversation undoubtedly about the current sensory stimuli and experience. Part 2 requires time (note the lack of focus on haptic phenomena due to the time necessary to create a flow experience in this preliminary prescription but does later feature a chair to primarily create a sense of comfort) to make a unique completely personal retreat experience; this thesis posits a flow experience will be more likely with a sense of control for the inhabitant to move around (which was

200 Ibid, 130.
limited due to the amount of space available in their sensory chamber as a twelve-foot cube and the environment being completely dark). A potential problem is also in the decision for a cube space due to the likelihood of getting reverberations even in an anechoic chamber. It should be noted that the chair is made from movable parts, creating a physical flexibility and reactivity. In this design, the trio exploits the project’s existence as an installation (in contrast to the everyday) to allow for as little orientation as possible; this thesis aims to create the same experience by manipulating the everyday ambient noise using a familiar, comforting stimulus in a unique manner to create attention and concentration. The similarity between these two concepts is the quality of challenge required for flow. This continues in the sensory chamber’s lack of repetition in stimuli with an added layer of challenge due to one’s lack of sight in the blacked-out room. As this thesis has posited, Irwin and Turrell’s conclusion claims that the inhabitant’s “focus should fall back on his own sense phenomena” by subverting the oculocentric culture (“[altering] the orders of our established sensory dependence”), which “could back into a subtle for of meditation”: the trance of an immersive flow experience.

The boundary between inhabitant and environment has been blurred at this point, creating an interiority from what Turrell regards to in his notes as the “outside world,” yet reinforcing the bond with the exterior due to their creation of “the point which seems to be between hallucination and reality…This chamber is a sensitizing situation for the following chamber as well as a unique experience in itself.” Part 3 includes a Ganzfeld experiment, a phenomenon that tests extrasensory perception, overloading the subject with a homogenous, unpatterned sensory input to creates the effect of sensory deprivation—the antithesis approach yet identical effect of an anechoic chamber. This experiment is typically created with one lying down blindfolded, completely focusing on one’s sense of hearing. This could potentially bring about a flow experience, but the physical challenge is completely removed with one lying down and physical comfort level may be too high, potentially leading to relaxation, boredom, and lethargy.

This thesis aims to pursue the understanding of these artists, their application of perceptual psychology, and manipulation of sound. As this thesis does not aim to redefine experiential perception, Maurice Tuchman summarizes the similar findings of the Irwin/Turrell/Wortz research as “poetic and inconclusive: they do not at all reveal the dense complex of occurrences stimulated through the respective processes of obtaining them.” Like designing for flow experiences, the work can only lay the grounds for the perception to act on its own. Aligning with this thesis’ initial argument and goals, James Turrell summarized his efforts with Robert Irwin:

201 Ibid.
202 Ibid, 46.
Technology is merely a means—not an end. Technological instruments are extensions of ideas, i.e.: they measure what you already think is there, what you have decided to measure.—Symptoms—not necessarily what is significant. Allowing people to perceive their perceptions—making them aware of their perceptions—We’ve decided to investigate this and to make people conscious of their consciousness. We’re concerned with manipulating the conscious state.203

4.5 Conclusion: Through the manipulation of concentration, the everyday and proximate, interactive boundaries of sensuality and sociality, physically and ephemerally reactive interstitial spaces and personal retreats, and the medial prefrontal cortex, this thesis attempts to turn one’s focus toward a hybrid of inward-outward to subconsciously tie one’s being with the surroundings, blurring the boundary (and, by extension, the transition) between inhabitant and environment. These concepts manifest in the built environment through materiality (malleable and sound-manipulating), programmatically (through a live-work setting to exploit the extended period of time within the environment and higher likelihood of enveloping active leisure activities), and circulation (the manipulation of one’s sensory input during transition spaces) with every decision yielding to a psychologically-personalizable environment that reacts to its inhabitant sensually and emotionally.

The looming issue of creating an architecture of flow is that there is no specific material, location, building type, et cetera that can guarantee a resulting flow experience due to the innate differences between people, their creative processes, and means of reaching comfort. Even Donald Norman admits, “It is tricky to design things that must accommodate both creative thinking and focus.”204 However, the following formula (The integral factor of sound, along with additional factors such as views of nature, and color fall under the general “sensory input” additive; separation implies an accordingly private space) and Image 4-51 summarize the approach to creating an architecture of flow to be carried out according to the analysis of this thesis’ program and site.

\[
\text{Indifference} \rightarrow \text{Ocularcentrism} \rightarrow \text{Inhumanity} \rightarrow \text{Physically and Sensually Reactive Space} \rightarrow \text{Interaction} \\
\text{Control} \rightarrow \text{Appropriation} \rightarrow \text{Personal Space} \rightarrow \text{Retreat} \rightarrow \text{Connection to Environment} \\
\text{Comfort} \\
\text{The Everyday} \rightarrow \text{Self-consciousness} \rightarrow \text{Sensory Input} \rightarrow \text{Distraction} \rightarrow \text{Separation} \rightarrow \text{Challenge} \\
\text{Attention} \rightarrow \text{Concentration} \rightarrow \text{Stimulation of the Medial Prefrontal Cortex} \\
\text{Transition between Interiority and Exteriority} \\
\text{Blurred Boundary between Inhabitant and Environment} \rightarrow \text{FLOW}
\]

Formula of the environment to lead to comfort and then flow

203 Ibid, 131.
204 Ibid, 27.
ELASTIC CITY SOUND WALK

INTERACTION BETWEEN PEERS & ENVIRONMENT

FLOWER DISTRICT CONTINUED ON GROUND LEVEL

PERSONAL REACTIVE SPACES FOR CREATION

STREET BOUNDED & BACK MANIPULATED FOR SOUND

SENSUAL MATERIALITY REACTIVE TO ONE’S TOUCH & SOUND

MANIPULATION OF EXTERIOR WHITE NOISE ON INTERIOR

EVERYDAY EXTERIOR ARCHITECTURE

NYC EXTRUDED SITE CONDITION

INTIMATE SEPARATION SPACES

RETREAT BY BLOCKING DISTRACTING 6TH AVE NOISE FROM NORTH

WHITE NOISE BY HARNESSING 6TH AVE SOUND FROM SOUTH
TRANSITIONS MANIPULATED SENSUALLY FOR CONTRAST WITH INTERIOR SPACES

ENGAGE & REROUTE EVERYDAY TEDIUM WITH ELEVATED WALKWAY

SOUND & SCALE DECREASED USING VEGETATION

NICHEs WITHIN FLOWER DISTRICT FOR PERSONAL SPACE
5. Analysis of:

5.1 Program: Based on the aforementioned relationship between Elastic City and flow, this thesis will design a sensory walk and live-work facility for the performative artist group. Based in New York City, this thesis aims to reevaluate the traditional skyscraper with the motive of applying total humanistic design features that cater to each inhabitant’s emotions in the form of an artist commune—vertical due to its site. This verticality allows this thesis to evaluate the horizontality of the majority of Elastic City sensory walks, integrating the walk throughout the building. This thesis’ goal is to impose a human scale on a barren (for New York City) mid- to high-rise area, so one is afforded the opportunity of a retreat from the everyday resulting in a connection to the architecture. This thesis will provide a vertical artist commune and general facility for Elastic City.

In general, a live-work environment will extend the amount of time spent in the building and increase the chance of making an emotional connection to it. The “live” portion of a live-work creates the opportunity to rethink the oppressive residential building type that does not react to the inhabitant and address this thesis’ foundation “reaction against.” By blurring the boundaries of the typical separated multi-use, the entire facility becomes the personal space of each inhabitant.

![The blurred boundaries possible in a live-work environment (5-1)](image1)

![Average time spent on daily activities in the U.S. (5-2, left), Best activities to experience flow in leisure and productive activities, experienced in a live-work environment (5-3, right)](image2)
The everyday residential building type lays the foundation for a repetitive proximate relationship. More importantly, the live-work building type multiplies the amount of interaction with a building exponentially. The artist commune is the ideal program for this concept, as a high turnover rate of artists (typically six months to one year) again multiplies the amount of interaction with the building and does not allow a sense of boredom to occur with the constant introduction of new sensory stimuli throughout the building whether from public guests or new residents. When the “working” portion of one’s day or of the typical live-work building becomes a hobby like that of an artist in an artist commune, the amount of time for hobbies increases, there will more likely be stimulating social occurrences to elicit flow socializing activities, and the amount of time spent on work (the highest percentage of the average time spent on a daily activity) will reach its maximum time due to Dr. Csikszentmihalyi’s *enjoyment* and consume more of the indifferent maintenance activities of the day.

![Program matrix (5-4)](image-url)
5.1a Program and flow: The live-work program increases the building’s ability to envelope flow activities, as within a program needed for flow, there must be spaces for the everyday habitual routine most importantly to create a sense of comfort and retreat one can be oneself—necessary for improvisation. The contrast set up by the everyday creates the opportunity for sensory idiosyncrasies within the elongated exposure to the building. Interaction with the building in a vertical artist commune is significantly higher than in the typical residential tower due to the artists’ constant physical manipulation of spaces for installations and exhibitions. The reactivity inserted into the ubiquitous residential tower as a part of the artist commune creates the proximate comfort and requirement to physically and ethereally interact with the built environment as the environment and inhabitant react to each other.

With respect to Dr. Csikszentmihalyi, as an artist and poet himself, it was his initial research and dissertation on painters that his discovery of flow began. In general, artists have the luxury of working in a field that is simultaneously a hobby, an active leisure activity folded within their daily work full of both focus and creativity. As a part of an artist commune, the artists will live and work together, again creating active leisure social activities in their daily collaboration from the kitchen to the gallery. Elastic City’s walks bring in a variety of artists from a variety of disciplines, adding to the diversity of interests, hobbies, and social topics. The 6-month- to year-long residencies allow for intimate relationships, while the new opportunities from the ever-changing residents create a positive challenge from new ideas and activities. Maintenance activities during the day create the tedium of boredom and indifference but if done in collaboration with one’s peers, the activities become social events and potentially flow-eliciting activities. According to Dr. Csikszentmihalyi, experiences at work are more likely to elicit flow than at home due to maintenance activities, so the blurring of the boundary between work, active leisure, and maintenance issues increases the chances of flow during the day and establishes intimate relationships between residents to multiply this result. As an intersection of the possibilities of hobby and social active leisure activities, the artists, more likely to manipulate and appreciate (especially due to the duration of their stay) their environment, will explore and evaluate their concepts by employing their peers to test out their ideas.

5.1b Feasibility: For such a project to be undertaken, a number of relationships and organizations need to be involved. This thesis proposes a partnership between the New York City Housing Authority (NYCHA), residency non-profit New York Foundation for the Arts (NYFA), and the artist collaborative non-profit Elastic City. Donations, sponsorships from arts organizations such as Flux Factory (that is supporting Elastic City’s 2012 walks), admission fees for Elastic City’s exhibits and walks, residency fees, and an on-site flower store (due to the commune’s location
within Manhattan’s Flower District) will cover annual maintenance costs. The small site (3,800 square-feet) is advantageous toward the economic feasibility. Using flow and sound, the residents will become abstractly and subconsciously connected to their dwelling, requiring comfort and integration within their life. With comfort and integration comes appropriation in which the residents take ownership of the space and care for it with a sense of home (a goal evident by the New York City Housing Authority’s logo below), improving sociality, conditions, and safety of typical housing—all explicit goals of NYCHA. In the low-income residential tower’s current status as an empty backgrounded shell for users, instead of a strong integration within the life of the residents, there is a great deal of room for evolution and critique. This offers the opportunity to express flow in an implicit manner through manipulations in the daily use and interventions into the typical tower.

The New York City Housing Authority, as a client, would be interested in a project such as this, since logistically multiple housing project buildings are constructed every year; statistically crime continues to proliferate; and economically the building will last longer, require less upkeep, and require less security due to the increased comfort and pride in one’s residence. The current 334 and growing developments within the organization are essential to the city, housing a major number and class of its population at 6.7% of New York City. The budget for such a project would be low but publicly-funded and guaranteed annually. The NYCHA:

provides decent and affordable housing in a safe and secure living environment for low and moderate-income residents throughout the five boroughs. To fulfill this mission, NYCHA must preserve its aging housing stock through timely maintenance and modernization of its developments. NYCHA also administers a citywide Section 8 Leased Housing Program in rental apartments. Simultaneously, we work to enhance the quality of life at NYCHA by offering our residents opportunities to participate in a multitude of community, educational and recreational programs, as well as job readiness and training initiatives.205

The primary concerns of the organization are safety and to protect the existing building stock. Both problems can be completely affected by the residents’ respect for and comfort with their living space. Due to a desire for quality housing that can suit thousands of different people integrated within the neighborhood (by incorporating integral flexibility and personalization within the design), the NYCHA will see a benefit of this thesis’ proposal. These issues coupled with economy are significant drivers in the design of housing but do not have to rely on purely utopian dreams. NYCHA is seeking collaborations in this economic downturn to help alleviate budgeting problems, so there are financial and pragmatic benefits of this relationship. Coupled with the implicit need for flow in low-income housing will add to a rich project involving both sides of the argument for flow in architecture.

5.1c Precedents: Organization and Office Space: The New York Foundation for the Arts (NYFA) is a non-profit organization with a “mission is to empower artists at critical stages in their creative lives.”206 The organization provides grants of $7,000 to artists living in New York State within all fields, including photography, video, music composition, film, graphics, painting, architecture, sculpture, performance art, poetry, choreography, play- and screenwriting, writing, and multidisciplinary work to artists such as Andres Serrano, Spike Lee, Elizabeth Diller, and Ricardo Scofidio. “Since the Fellowship Program’s inception in 1984, NYFA has awarded over $25 million to 4,317 artists, with 123 working in collaboration.”207 Currently, there are a number of foundations in New York City that provide free or affordable studio space for low-income artists but do not offer low-income housing for them; this thesis offers both. The NYFA currently provides affordable workspace for artists and organizations, including:

- A private workstation within the NYFA space dedicated to you
- High-speed wireless Internet access
- Meeting space available by appointment (in NYFA’s small conference room and library)
- Free scanning (black and white)
- Free printing quota of 200 pages per month (discounted printing fee for larger printing projects)
- Discounted rate for copying
- Fully equipped kitchen with hot coffee, tea, and filtered water
- Individual phone service available for additional fee208

Other foundations in New York that provide comparable assets include the PS1 Art Center Studio Program in affiliation of the Museum of Modern Art (that offers one free year of studio space

207 Ibid, 5.
at the PS1 Museum in Long Island City and the Clocktower Gallery in Manhattan), Elizabeth Foundation for the Arts Studio Center (provides subsidized workspace for visual artists in Manhattan), and the Marie Walsh Sharpe Art Foundation (provides free studio space to visual artists). In order to be eligible for NYFA studio space, one must have been affected by the economy and have been forced to lose the office or studio space. The studio spaces are meant to be a gateway to another studio after one gets his or her feet and can renew them monthly.

Flux Factory is an official 501 (c)(3) nonprofit artist collective in Long Island City, Queens, New York. Their facility is “an 8,000 square-foot 3-story converted greeting card factory two blocks north of Queens Plaza.” Typically housing 16 artists-in-residence, the collective incorporates office and studio space for the artists that all involve creation and collaboration (hobbies and socializing are the two key active leisure activities that inhibit flow).

Joining the Flux Factory Co-working office will get you access to:
- wifi
- printer, scanner, and photocopier
- a locker/filing cabinet
- use of our mailing address to receive packages
- proximity to a multi-talented group of ambitious and creative people including coders, painters, and social changers
- access to a communal kitchen for when you need that fifth cup of coffee

Exterior analysis of Flux Factory facility (5-6)

211 Ibid.
Since there are no two identical residency programs, there is a significant range in requirements for their residents. Some artist residency programs require an exhibition of the residents’ work at the end of their stay, involving cooperation with the other residents and possibly the community, but many do not require any obligation to the public; this thesis’ artist commune will. Some programs have restrictions on the allowed media to be worked in; this thesis’ will not to allow the artists as much freedom as possible. Programs also vary in their method of application. Some programs use deadlines while others allow for year-long application and continual change; this thesis’ will use an open application process to encourage overlapping and changing artists in the building. Funding is another variable in programs. Many cannot afford to give free or reduced-rate housing and studio space; with the institutions involved in this thesis, this thesis’ artist commune will provide both to allow the artists the freedom from concentrating on additional jobs or funding to increase one’s time in the building and concentration on their work and peers through the partnership of NYCHA, NYFA, and Elastic City.

5.1d Precedent: Gallery: Flux Factory provides a public gallery, placed at the front of the building, accessible by a typical door and garage door. The location is convenient at street level for accessibility for all users and processes the gallery undergoes. The 1,550 square feet exhibition space can be rented for up to 1 month and can be rented on a daily or weekly basis. “It has an industrial, gritty charm, with wooden beam ceilings, concrete floor, and conveyor belt (which can be used for installations). Most of the walls have white drywall surfaces, except for one 11ft section, which is made of brick. There are adjustable track lights and fluorescent work lights. We can
provide a large white counter with a metal table top that can double as a bar.”

Also available for use in the gallery:

**ADDITIONAL SERVICES** (pending availability)
- Basic PA & 2 speakers - $20/per days used, $100/per week used
- BenQ MP525P XGA (1024 x 768) 2500 lumens projector - $75/per days used, $300/per week used
- 18” Magnavox TV - $5/per days used, $20/per week used
- 19” Panasonic TV - $5/per days used, $20/per week used
- DVD players - $5/day, $20/week
- Pedestals - free
- Gallery sitter - $10 hr

**5.1e Precedents: Studio-Home:** M + N Arquitectos designed *House For Two Artists*, a residence and studio for two artists in Puebla, Mexico. The site was chosen for its beautiful views to the city and surrounding landscape. The plan was separated by program with the studio space to the east and the living spaces to the west, furthered sensually by the material palette. The physical separation emphasizes the retreat-like space of the home and free space of the studio yet integration between the two held within the same building.

Barefaced board-formed concrete surrounds the interior and exterior of the only bedroom and study/office area in brick—the solid retreats. The materiality further differentiates the space through their sensory properties: “The idea evolved into highlighting an architectural plan while visually differentiating various modules made with like materials where each one has its own distinct goal or intention depending on options in relation to temperature, acoustics, or the distinctive qualities of any given living space.” The social living spaces of the house are clad in a light white skin to convey the welcoming nature within, while the studio space was clad in dark

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212 Ibid.
213 Ibid.
concrete to convey its private nature. Flow’s mental separation from the everyday is illustrated in the studio’s physical separation from the everyday semi-public dwelling. The bridge between the studio and living spaces is a transparent box that allows for framed views to the north and south, but the whole project is held together with a polished concrete floor. The transition from retreat to open space is treated as a point where one is most vulnerable to sensory input, therefore housing one within an echo-pervasive space connecting one with the exterior visual stimuli of the landscape.

With respect to the artists’ studio spaces, the studio (the term now applied to typical apartments) is a blank, uncommitted space for the inhabitant to shape to his or her liking. It is known as a place of solace and inspiration—something that applies to and means something completely different per person—hence the uncommitted space. This complements the minor goal of this thesis to create a sense of retreat and, therefore, deeper connection to the architecture through one’s physical and mental integration with his or her surroundings. The blank slate is conducive to allowing freedom with a space, but the impermeable materials only allow a surface treatment and introduction of ephemeral furniture. Many studio spaces are within former warehouses with bright interiors and high ceilings. These open spaces allow for flexibility with respect to the spaces necessary (typically left as one large, open room) and for the future artwork to be constructed/created within the space. For example, Sergison Bates architects’ renovation of the Wandsworth Workshops (shown below) from a paint factory of sixty light industrial workspaces into a mixed-use development, transforming the factory “to provide large shell studio-office spaces of between 85-200 m². Most of the internal walls are removed with some new walls added to form unit division and a service core of toilets and stairs.”

The same approach was applied to the living spaces that one furnishes to fill the open white space.

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Visible in Claude Monet’s studio is a large open space full of accessories he has personally chosen to facilitate inspiration. However following working in such a space, “shortly after Monet moved to Argenteuil, he bought a boat and converted it into a floating studio. He kept it moored near his home and used it to get a vista of the riverbank from the water.”  

Monet’s studios show the move to separate living from working space, different from the singular space implied in the apartment “studio” but similar to the required separation of the two spaces currently associated with artist residency programs, as all programs provide subsidized studio spaces yet no housing options. The move from a satellite studio to one near his home shows the importance of being near one’s home like that in an artist commune, but the physical separation of

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the studio from his home illustrates the everyday proximity yet retreat from the everyday needed like that in *House For Two Artists*. This project aims to combine the two within one building to increase the amount of interaction with the building and other artists within the residency yet separate the program vertically to increase the length of the transition between to allow for the passive triggering of flow and social connections along the way.

In conclusion, the everyday housing tower is a flexible platform to test the ideas of flow theory through a vertical artist commune that allows for an implied challenge with one’s hobbies, longer exposure to and more freedom to interact with the building, and more social connectivity. Due to the problems increasing annually with waning financial backing for the NYCHA (what they refer to as “a national assault” on housing), increasing maintenance on an aging building stock (many from the 1930s and 1940s), and increasing budget deficits, a partnership with the NYFA and the goals of this thesis will be advantageous for all parties. This project aims to help the NYCHA in its goal to find more affiliations to help defray the ever-increasing amount to continue and upkeep its program and increase the resources of the NYFA. This funding coupled with the privately-funded NYFA and the other aforementioned means of income can make the project feasible. While the program for this thesis is simply the platform, the artist residency housing tower thesis project will aim to assist the organizations in achieving their goals and this thesis’ argument that flow leads to an increased and deeper connection to one’s physical environment by enveloping and passively and actively triggering flow experiences.
5.2 Site: In New York City, it is rare to find a total architecture beyond a pure interior design application that relates to the human’s emotional needs and desires (power and oppression typically do not fit into these categories). Due to economic constraints of designing for these concerns and keeping spaces as flexible as possible, the typical space is hollow of any committed humanistic, emotional design tied back to the architecture itself. Historically the least human-scaled environment of the twentieth century, New York continues to encase those below in a stone, steel, and glass forest of overstimulation and ever-increasing density. The source of some of the least human-scaled architecture of the world with respect to height and disregard for human emotional interaction, New York has been the catalyst of building economically, modern, and without concern to its relation to the user. The typical tower’s base attempts to cater to the human scale with store displays, but this usually manifests as an ostentatious display of overstimulation in competition for the passerby’s attention. A smooth, hard exterior barrier separates itself from any potential emotional connection (one that usually occurs due to the objects displayed): “I see them,
yet they evoke no feelings. A glass pane of time and space separates me from them.”217 The stark interior horizontal plates of the skyscraper have the ability to host any use or desire, specifically in the typical office or housing tower pervasive in this area and the infamous Downtown Athletic Club:

Starrett & Van Vleck, Downtown Athletic Club, New York City, New York, 1930 (5-15, 5-16)

This thesis aims to create a deeper connection with its user by creating a sense of retreat and comfort (this thesis posits this is essential in New York) to then reach a flow experience using sound. Like the people of New York that are constantly surrounded by a lack of intimate spaces, the architecture should include a range of emotional idiosyncrasies in a related scale.

Set in Midtown of Manhattan with the constant visual and auditory sensual overload, this thesis’ building will cater to those in need of specific, unique, yet subtle sensual contact with their environment. “Martin Heidegger, Michel Foucault and Jacques Derrida have all argued that the thought and culture of modernity have not only continued the historical privileging of sight, but furthered its negative tendencies…The hegemony of vision has been reinforced in our time by a multitude of technological inventions and the endless multiplication and production of images.”218 Times Square, north of the selected site, is the epitome of this problem. Just north of the site include sites such as Pennsylvania Station, Madison Square Garden, 34th Street, the Empire State Building, Lincoln Tunnel, and the Theater District.

More specifically, it will be placed in the area unofficially named “NoMad” (North of Madison Square Park) due to its unique sensory environment ranging from lifeless blocks to the

217 Cooper Marcus, House as a Mirror of Self, 31
218 Pallasmaa, The Eyes of the Skin, 21.
block with the highest taxi use in the country three blocks north. The “neighborhood’s” approximate, yet blurred, boundaries are 7th Avenue and 29th Street to the northwest and Madison Avenue and 25th Street to the southeast. NoMad is unique due to its sense of a retreat in itself, as there is a great deal of activity and overstimulation directly north. The area lies just north and west of Madison Square Park, north of the Flatiron Building, south of Pennsylvania Station, and within the blurred eastern boundary of Chelsea. It is situated in a midrise area with intermixed low- and high-rise buildings, surrounded by high-rise to the north, east, and west and midrise to the south throughout the Flatiron District. NoMad is formerly residential, modernly industrial and commercial, and contemporarily growing residential with a majority of old and unattractive brick punched-opening buildings with a large number of 4-story tenements. This area is a majority commercial with an increasing amount of residential due to its proximity to Midtown, Madison Square Park, and Chelsea. It is situated in a severely underdeveloped zone—one that remains “a brown taxi-map rectangle” which drivers are unfamiliar with and rarely travel to—and one on the edge of becoming more developed with the introduction of The NoMad Hotel, views to the newly renovated park, and low land costs.

On a 79-foot-wide and 48-foot-deep site (3,792 square feet) at the corner of 6th Avenue and 28th Street, there is currently an open site with cancelled plans for a cantilevering steel-and-glass residential developer tower. The site is flat and, due to its stopped construction status, sits empty and exists as a dirt plane. It is completely open to eastern and southern daylight and has party walls to the north (5 stories) and west (4 stories). The area is accessed via personal automobile, taxi, bus, subway (the closest stop is the 1 train at the corner of 7th Avenue and 28th Street), PATH train from New Jersey (runs along 6th Avenue), commercial and regional train at Pennsylvania Station, bike, and sidewalks for pedestrian.

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Aerial view facing North (5-17, top) and figure-ground diagram (5-18, above) with thesis site (yellow) and Flower District (blue)
Street view on 28th Street in the Flower District facing east toward 6th Avenue and 28th Street (5-19)
The most significant aspect of the block of 28th Street between 6th and 7th Avenues is the unique experiential qualities created by the century-old Flower District. Much like the Diamond District—a concentrated block of diamond dealers—the Flower District groups a series of plant stores along each side of the aforementioned block, wares set out onto the sidewalk for pedestrians to walk by, through, and under: an urban forest within a concrete jungle. Bringing trees, shrubs, and plants out onto the sidewalk breaks the scale of the city down in collaboration with the shops’ named overhangs. Every sense’s scale is decreased due to the heightened concentration of sensory stimuli relative to this foreign human-scaled nature. “The sweet, wet smell of commingled flowers permeated everything, and splashes of color—yellow tulips, bales of pink magnolias—spilled from the storefronts.”220 An owner of one the shops reminisced of the 5:00 a.m. receiving time during the height of the district, “Chaos, the smell of chrysanthemums, that’s all I remember. You could smell the chrysanthemums from a block away.”221 “It would seem that our nose, no less than our eyes, seeks to enlarge and comprehend the world.”222 A scent typically associated with high concentration and low scale is reversed, signifying a place within the cacophony of New York and tying a typically isolated sense into one’s sense of place using the sense most associated with memory. In the district on the site of the former Tin Pan Alley, whether quickly reflected or absorbed due to the proximity of the overhangs, people, and vast number of plants, sound assures one this is a unique environment, heightened by its contrast to the looming 6th and 7th Avenues just feet away. The same effect is created by the restrained visual scope and amplified olfactory stimuli,

221 Ibid.
222 Yi-Fu Tuan, Space and Place: The Perspective of Experience (Minneapolis: University of Minnesota Press, 1977), 11.
both reducing the experienced scale. The approach to the proposed building through this district creates the desired effect of decreasing the scale physically and ethereally—while the project itself aims to decrease the scale metaphorically through ecological psychology and flow—and heightening the sense of retreat with respect to scale and comfort.

5.2a Site and flow: As the initial goal of this thesis is to create a dependency between inhabitant and environment, New York City multiplies the chance of this phenomenon due to the high contrast of activity between the exterior and interior: between the tedious and flow. The constant overstimulation of exterior city life creates a deep desire for a retreat from the noise of the everyday. One is not allowed the time or space to appreciate any one of the stimuli, as each sense competes for attention, pushing and pulling the passerby from bright display to preacher on the subway. Typically, the ocular sense dominates, most evident in Times Square; the other senses follow in magnitude and importance. In order to free oneself from the oppressive ocularcentric society, one needs to be allowed to concentrate on the other sensory input, as opposed to being forced to focus on a specific sense. Deep concentration leads to flow experiences, bringing one’s focus internal to escape the everyday and blur the boundary between one and the environment.

The turning of one’s focus internal results ironically from a unique external experience, causing one to internally reflect; unique sensory experiences bring about unique emotional experiences. Reputable and well-followed blogger and movie location scout Nick Carr of Scouting New York reflected on his experience in the Flower District: “Few of Manhattan’s numbered streets have the ability to so transport a pedestrian to what feels like a different world, and it’s always a welcome detour in my scouting travels.”223 Pedestrians, like Scouting New York’s “Scout,” reroute their path through this area due to the pleasant and unique environment, further concentrated by the subway stop, Megabus stop, Fashion Institute of Technology, Starbucks, and CVS all at the corner of 7th Avenue and 28th Street; the food carts at the same corner denote it as one of high traffic and lucre—that from which those who approach this thesis’ site will most likely come. Aligning with the mission of Elastic City (itself based out of New York), the “Scout” explains, “What always amazes me about New York is how much there is to see if you take the time to look. Every street has a hidden gem or two, and yet they go largely ignored by thousands of passersby daily who simply don’t have the time to pay attention. As it happens, my entire job consists of paying attention, and I’ve started this blog to keep a record of what I see.”224 The sensory walks of Elastic City and flow experiences in general exist as “a different world” to create the attention necessary to appreciate

224 Ibid.
and concurrently escape the everyday simply through the concentration on one’s senses and resulting emotions; the Flower District is home to an orchestrated sensory load of sight, smell, touch, smell, and taste. The Flower District’s unique olfactory stimuli are heightened by the contrast to one’s typical reaction to a smell in New York City to be of a sewer and negative. Furthering the importance of this unique and concentrated multi-sensory stimulation, florist Seth Cohen describes, “I come here and look at these flowers. They speak to me emotionally. I would hate to give that up.”

Elastic City and flow experiences also exhibit a sense of challenge in order to transcend the everyday experience, bringing one out of the typical stupor one experiences while traveling through an overstimulated environment. “We may not even notice the material qualities of spatial orderings incorporated into daily life because we adhere to unexamined routines.” Flow, Elastic City sensory walks, and the Flower District break people out of their everyday routines: “We only notice when something appears radically out of place. It is, I want to suggest, the dialectical relation between the categories that really counts, even though it is useful for purposes of understanding to crystallize each element out as distinctive moments to the experience of space and time.” Flow experiences are “out of place” within the everyday experience; Elastic City’s sensory walks aim to create this “out of place” awareness; the Flower District is “out of place” within the context of New York. Once the stupor of the everyday transition is broken down by an Elastic City sensory walk to that of an attentive sensory experience, the challenge of concentrating on the experience will be of a comfortable level due to the underlying security from the grid and one’s location with respect to it, much like walking in a new place as a child while holding the hand of a parent.

Clare Cooper Marcus, in House as Mirror of Self, argues that a sense of exploration and overcoming fear can create these “out of place” places. New York, a place of fear, can only be overcome not by ignoring the cacophony of stimuli but facing each sense singularly through one’s concentration and later appreciation with respect to its relationship with the other sensory stimuli. The challenge, requiring focus necessary for flow experiences and inherent in the lifestyle and society of New York, exists within the ability to cope with the everyday chaos and separate one sensory stimulus from the next to appreciate it. To challenge the everyday routine, Elastic City sensory walks, flow experiences, and the Flower District change daily and react to the environment around them. The challenge leads to exploration and excitement in an ever-changing environment that requires constant attention and adaptation. Where the sensory walks adapt in their flexible

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225 Kinetz, “War of the Roses.”
227 Ibid.
route to different stimuli, the Flower District adapts to different weather, seasons, tastes, and time of
day—subverting the everyday routine and sensory experience through irregularity and uniqueness
and celebrating the ebb and flow of the city.

More specific to the site, just as the result of flow experiences with respect to blurring these
boundaries, the loosely-associated neighborhood NoMad exists as a blurred boundary itself (also
considered East Chelsea and Midtown South). On the edge condition of upper and lower Midtown,
it is a neighborhood that still has yet to materialize and features a unique environment of low
density, income, building height, and general activity level within Midtown—a form of retreat from
Midtown, potentially increasing the chances of one bonding with a building in this area due to the
mental connection and idea of shelter from the hostile environment. The blur is detectable with
respect to every sense, from the sight of commercial steel-and-glass skyscraper to the four-story
brick tenements in the middle of NoMad blocks; the monumental noise and traffic on the avenues
and side streets from the bustling north to the quieter side streets; and the generic city smells,
touches, and tastes to the concentrated floral tones, caresses, and flavors in the Flower District.
NoMad (translucent cyan rectangle) and this thesis' site (black dot) as blurred boundary both north-south and east-west with respect to density (5-22, top), transportation activity (5-23), landmark density and resulting activity (5-24), building height (5-25), zoning (5-26), and income (5-27, bottom)
Historically, the neighborhood has decreased in density by three-quarters within the past two centuries due to the moving of the infamous crime-ridden red-light district Old Tenderloin district to the north (it has been estimated that half of the buildings were connected with vice during the district’s height), the largest African American population relocation within Manhattan’s history to Harlem around 1914, rezoning to commercial status, and the general opinion of the quality of the area. This area also saw the emergence of the Flower District in the mid-1890’s, its height in the 1970’s as the second largest handler of flowers in the world, second to Amsterdam, and its predicted demise due to the Internet and suburbs, a 1995 rezoning to allow for housing, and low land prices, enticing developers to buy existing buildings, demolish them, and build a tower typically 200-300 feet tall (specifically along 6th Avenue). It becomes quite obvious why the area has yet to materialize, constantly in a state of transition.

This blurred condition implies a transition from one condition to another; not only is NoMad in a constant state of transition itself but the experience of it is as well—the phenomenon equivalent of Elastic City’s sensory walks and flow experiences. Traversing through Manhattan is a series of transitions between social and retreat spaces, much like that of the process of flow activities and experiences. As the area is a blurred condition, there is an added layer of challenge to interpret a space as a retreat or social place. Related to NoMad lending itself to the concept of procession is that Madison Square Park is the former military parade ground and is the current start of the Veterans Day Parade—again in a constant state of transition. The New York Times named an article about the Flower District “Midtown’s Lush Passage,” implying the importance of moving through the space from the active social spaces of upper Midtown to the reactive retreat spaces of lower Midtown. This transition is most apparent within the Flower District while incorporating both hobby and social flow activities.

The relationships start the day at 5:00 a.m. for a wide variety of social interactions throughout the day within the intimate environment, increasing the chances for a flow experience due to them. The 5:00 a.m. crowd is purely florists looking for business supplies, leading to a consistent relationship of personal and business between owner and buyer (as prices are not listed on the countless shelves of flowers inside) at a time that lacks distractions, as most off-the-street customers come around 8:00 a.m. One cannot rule out the social interaction of traffic, from pedestrians to bikers to drivers of cars, taxis, buses, and trucks of all kinds. There is little to no animal presence in the area with the exception of a few resting pigeons and potentially some of the

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228 Kinetz, “War of the Roses.”
only bees in Manhattan, but the interaction between human and plant cannot be understated. The limited sidewalk space due to the encroaching plants help to create the intimate environment, first out of creating awareness of one’s surroundings to notice others in the space and second to envelop the conversation with a sensual environment. Edward T. Hall speaks to scale and one’s comfort: man’s “perception of space is dynamic because it is related to action—what can be done in a given space—rather than what is seen by passive viewing.” These relationships are maintained through the flower business, transportation through the block, and the undoubtedly unique walking experience due to the former relationships. On this thesis’ site, the forced proximity due to the small site will encourage more crossed paths and social interactions.

One of the most important aspects of both the Flower District and flow experiences is the sense of internalized retreat within them that create social and personalized spaces. In collaboration with and contrast to the site as a refuge from the excitement in a neighborhood that lacks the density of the majority of Manhattan, adding to the desired effect of a deepened connection to the architecture due to its safety. Even National Geographic’s Stress: Portrait of a Killer features everyday scenes in New York City, ordering for an environment of control, dissolved social rank, and empowerment: retreat spaces. The contrast between the bustling upper Midtown and quieter (for New York) lower Midtown reinforce the blur, occurring around 28th Street.

![Hugh Ferriss, The Womb of Manhattan (5-28)](image)

Like Hugh Ferriss’ voids within New York, NoMad’s uniquely low density and income yet central location within Manhattan make it a desirable area. The area is mostly commercially-zoned, exacerbating the effect of the business during the day (increased by the 5:00 a.m. to noon working

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230 Hall, The Hidden Dimension, 115.

231 Stress: Portrait of a Killer, Netflix, National Geographic Television and Stanford University, NGHT, INC., 2008.
hours—and closed on Sundays—of the flower stores) and lessening after the business day, increasing the effect of a retreat. The fact that the area was recently rezoned to allow for residential and close-following explosion of condominiums and hotels proves its appeal as one’s home.

German art historian Wilhelm Worringer wrote “Abstraction and Empathy,” in which he posits that the cultural shifts between abstract and realistic art related to the context of the society, yearning for the values their current lives were lacking—the argument Alain de Botton makes in The Architecture of Happiness. In relation to the overstimulation of New York, inhabitants would experience what Worringer called “an immense need for tranquility”: a retreat. An 1883 book instructing Victorian society about the importance of the home as a source of stability, peace, and inspiration notes, “In the furnishing of home, the leading principle should be that it is a place of repose, a refuge from the excitements and distractions of life outside…It was to be private, contrasting with the frenzied activity of the skyscraper, which now symbolized the business environment.” As a source of refuge from the surrounding cacophony, the home responds to one’s own needs opposed to the masses out one’s door. This thesis’ small site lends itself to a heightened sense of retreat, pushing one to find a personal spot within a dense building. The ability to let one’s guard down is central to the Elastic City process of concentrating and opening one to the environment to make environment and inhabitant one. The sense of retreat, even within an open street during the sensory walks, creates flow experiences: “There ensues an almost agonizing conflict between security and movement, between feelings of comfort and the yearning need for expansion and change.”

The Flower District only heightens this experience and sensory flow experiences: “Imagine walking down the narrow city sidewalks where even at 6:45 a.m. one senses a certain urgency to people’s movements. Then…the calming influence of flowers.” Catering to the senses usually deprived and while the ocular sense is moderately suppressed (being 6:45 a.m. due to the slight darkness) again leads to the unique existential qualities of the Flower District. “We need a refuge to shore up our states of mind, because so much of the world is opposed to our allegiances.”

The sense of retreat is created due to one’s perception of scale; the scale of New York is significantly decreased, almost erased, due to the concentration of the sensory stimuli. The small site further concentrates the proximity of one to stimuli. There is a sense of compression due to the

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234 Cooper Marcus, House as a Mirror of Self, 113.
enveloping plants that works with the overhangs to block out the extremely tall buildings that swallow the neighborhood. Pulled out into the public realm, the plants allow one to touch, smell, and interact with a potential purchase—quite the opposite of a 5th Avenue glass store display.

Smell, noise, touch, and scale (both physical and ethereal) help to create a more humanistic environment with this focus on sensory experiences. The views and experience of this block can be manipulated with respect to the relationship to flow and concentration, specifically one’s contact with nature and its relationship to modern society: “The tasks of the modern world can engender mental fatigue, whereas looking out at a natural setting is relatively effortless and can give the mind a much needed rest.”237 In *Psychological Science*, Stephen Kaplan posited that urban settings’ overstimulation requires more cognitive work than gazing at a grove of trees does.238 Coupled with the effects of an open yet intimate scale on concentration and creativity, the views of natural elements such as trees and flowers within the Flower District will only improve the likelihood of experiencing flow. *The New York Times* notes, “A stroll through New York City’s flower district, where plants and trees line the sidewalks, offers a dose of green amid the city’s grit.”239

![](image)

27th Street, Georgetown, Washington, DC (5-29, 5-30)

The environment in the Flower District is not unlike that of Georgetown, Washington, D.C. From an initial reaction, one has to ask if Georgetown is “human-scaled” just because the buildings are one to three-and-a-half stories tall; taking a closer look reveals many refined layers of architecture, infrastructure, and landscaping. Spatially, one of the most defining characters is vegetation of the street level. The trees, bushes, and vines prove essential to decreasing the scale of

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237 Anthes, “Building around the Mind,” 56.
238 Ibid.
the sidewalk, joined with the adjacent fence or house. Varying in species, planning, and setbacks, the vegetation expands and contracts the scale within which one senses his or her surroundings and place within it. Forty-foot-tall oak trees hover over and spindly vines that reach out just above the heads of pedestrians vertically constrain and release those sheltered. This concept reminds one of his or her presence within something formed for their experience.

It is the goal of enveloping flow to lead the inhabitant to a “spot where he can discover a something for himself.”\(^{240}\) The retreat niches created by the varying scale at the sidewalk level allow for these spot for personal introspection or social extrospection. Much like Victorian homes that preached retreat, “the lines of the house—the deeply sloping irregular roof, with overhanging eaves and decorative shingle patterns, together with the horizontal emphasis from different materials being used for each story—were meant to bring it closer to the ground plane.”\(^{241}\) The sensual interaction creates an extremely unique experience for Midtown. The humble area creates an everyday context with a very unassuming building context housing normative programs and facades in a uniquely-located neighborhood on the physical edge of the everyday Midtown’s “hustle and bustle.”

5.2b Site and program: A significant relationship exists between this thesis’ site and program. Based in New York, Elastic City has an integral tie to and knowledge of the city. The proposed sensory walk has an intimate dependency on its context through the ambient sensory stimuli. New York’s verticality lends itself to the significance of the transition: the typical elevator shaft that creates a sense of boredom and the typical Elastic City sensory walk that is limited to the horizontal plane. The separation provided by verticality only increases the chance of experiencing flow. Verticality also lends itself to the challenge necessary for flow, challenging one’s ability to comprehend the human scale, constantly belittled throughout the city. The group is currently headquartered in Brooklyn, and a move to Manhattan will give them more exposure.

In general, artist performance space and housing is a very appropriate program for the site. In addition to the corner site being beneficial for exposure, there is increased access to people and sound. Considered East Chelsea (one of its many neighborhood claims), the program speaks to continuing the gallery and studio spaces east; its location one block from the Fashion Institute of Technology and in the place of the former Tin Pan Alley speak to the area’s present and historical relationships to design and sound. Historically, this area was the center of American theater and film in the 19th century; it was home to the world’s first kinetoscope located at the intersection of Broadway Avenue and 27th Street, one block east and one block south from this thesis’ site. As

\(^{240}\) Hall, *The Hidden Dimension*, 154.

\(^{241}\) Wright, *Building the Dream*, 106.
shown earlier, the growing residential lure of NoMad, specifically on 6th Avenue proves not only the feasibility but desirability of the area. Under the blurred conditions of NoMad, it is appropriate to merge the programs of artistic (Elastic City facility), industrial (historically, as a place of creation), commercial (flower store), and residential (living spaces for artists) into a hybrid of live-work spaces, multiplying the chances of reaching a flow experience through the program.

In conclusion, the site at 101 W 28th Street, New York, NY, is a dynamic yet restrained environment that withdraws from the hectic activity surrounding it in all directions, lending itself to the goal of a deeper connection to the architecture through a dependency, interaction, and sense of sensually-interactive retreat, specifically in the Flower District. People are starting to realize the potential of NoMad, and this shows in its continuing development. With a wide variety of sensorial environments in the area, there is a rich layering that can help to create a sense of flow directly from one’s perception of the environment. The unique qualities of NoMad will be explored and exploited to further the goals of this thesis to create a metaphysical connection using Dr. Mihaly Csikszentmihalyi’s concept of flow between inhabitant and surroundings.
6. Design of:

6.1 Elastic City sound and scale sensory walk: The program for this thesis consists of a vertical artist commune for the performative artist group Elastic City and a sensory walk through the same organization. The goals of this thesis and Elastic City are one in the same, passively and actively creating flow experiences; the building aims to also envelop flow experiences. The sensory walk follows a cyclical process of that prescribed for designing for flow in Chapter 4: Flow in architecture by as a series of transitions between retreat and social spaces. Like the downtime of Dr. Csikszentmihalyi’s maintenance activities for one to appreciate flow activities, the retreat and social spaces allow for one to appreciate the sensory transitions that created the recent flow experiences, increasing attention to make these “maintenance activities” more likely to inhibit flow. In general, the sensory walk draws attention to one’s interpretation of the surrounding sound level and associated scale, most noticeable at the designated stops.
Sound and activity analysis of New York City (6-2)
Designated stops

1. Elastic City vertical artist commune at 6th Avenue and 28th Street *(intervention: building)*

2. Public exterior retreat space pulled away from 6th Avenue between 29th and 30th Streets

3. Pennsylvania Station entrance canopy, entering into and passing through the underground terminal *(intervention: pavilion)*

4. Public exterior retreat space pulled away from 7th Avenue between 33rd and 34th Streets

5. Herald Square

6. Empire State Building Starbucks and lobby

   *Transition: 5th Avenue for independent attention*

7. The Church of the Transfiguration, a one-story building pulled away from the street using a threshold of 160-year-old trees with an almost-silent interior *(intervention: pavilion)*

8. Madison Square Park in a gathering space around a fountain, combining natural and manmade stimuli

9. Madison Square Park, Jemmy’s Dog Run as a different type of intimate social yet retreat space within the dog park

10. Flatiron Building piazza, an open-air highly-public gathering space north of the Flatiron Building at the busy intersection of 5th Avenue and 23rd Street with Subway vents leaking sound into it as well *(intervention: pavilion)*

11. Small-scale long-term scaffolding at the busy intersection of 5th Avenue, Broadway, and 24th Street

12. Large open-air surface parking lot on 25th Street

13. High-activity 23rd Street passing by the Visions Services for the Blind

   *Transition: from high- to low-activity zone for independent attention on 24th Street with an audible connection to 23rd Street, passing over Subway vents on 8th Avenue turning north*

14. Narrow exterior concrete-walled service corridor in a quiet area that allows echoes to carry through

15. Separated green space between Modernist towers just in earshot of 8th Avenue *(intervention: pavilion)*

16. Cramped space under scaffolding at 8th Avenue and 27th Street that bridges a high- and low-activity zone

17. Unique street scale under ceilinged outdoor street space of the 27th Street-spanning Fashion Institute of Technology

18. Subway station at 7th Avenue and 28th Street emerging *(intervention: pavilion)*

19. Masonry-enclosed surface parking lot, creating echoes from the contained cars and from the 28th Street noise *(intervention: pavilion)*

20. Flower District, as described in Section 5.1: Site

21. Elastic City vertical artist commune at 6th Avenue and 28th Street *(intervention: building)*
Referring to Image 6-1, during these designated moments (cyan circles) at the minimum (white gradient) and maximum (black gradient) of sensory activity, the walk leader will point out what to concentrate on and engage the participants in stimulating conversation between each other. A series of interventions (yellow-outlined cyan circles), as experiential pavilions, are located at the extreme minimum and maximum sensory activity stops. Using the language and materials of the Elastic City artist commune, they create a distorted sense of sound custom to that location and tie the contextual walk to the building.

The distance between each stop was influenced by the leaning- and comfort-curve associated with sensory walks and general attention span with a series of shorter stops in the first twenty minutes to give the participants examples for what to attend. This is followed by a longer span between stops during the high sensory activity of 34th Street and the Empire State Building for which to more independently attend; a series of shorter stops in a high sensory activity area to regain a sense of challenge and lost attention around Madison Square Park and the Flatiron Building; and another longer stretch for independent attention as a transition between the aforementioned high activity area and low activity area three blocks west. The walk’s final stops consist of a series of engaging, unique locations close to the final destination of the artist commune to, again, increase challenge and attention.

In general, the walk aims to decrease one’s scale within the city to make one appreciate the immediacy, transitioning from the everyday oppressive ocularcentric sensory overload to one full of unique smaller-scale sensory opportunities. Akin to the goal to instill a sense of exploration that Elastic City plants in each participant, this sound and scale walk aims to create an awareness of personal spaces within New York’s skyscraper scale. Carried into the Elastic City artist commune and ending in a human-scaled environment of such sensory deprivation at the top of the building, each participant is offered the option to rethink his or her everyday sensory experience.
6.2 Elastic City vertical artist commune: The proposed vertical artist commune will embody Elastic City’s goals architecturally to extend the exterior horizontal sensory walk into the interior vertical architectural experience. The Elastic City vertical artist commune fully integrates the concepts of flow theory within its form, approach and circulation, spatial organization, introduction and manipulation of sound, and construction.

The vertical artist commune consists of working (both studio and office), living (private live-work for hobbies and communal service), and exhibition spaces used by the public and private to present the artists’ interactive work. As the site is within the Flower District, the proposed building features a flower shop to continue the city block’s traditional program with mixed-use space above. The building is set up with a simple regular-form brick base, related to the everyday world, housing the lobby where the sound and scale sensory walk starts (Image 6-3). The lobby also leads to a central circulation concrete core that manipulates the typical transition to one of an idiosyncratic sensory experience as a resonator, distorting and amplifying everyday ambient noise. Personal retreat live-work studios branch off of the resonator core, auditorily- and physically-separated vertically from the distractions of the city by a semi-public communal area to house intimate social occurrences. The final destination of the interior sensory walk is an anechoic chamber (Image 6-8) that aims to accomplish the same goals of Robert Irwin and James Turrell in their Los Angeles County Museum of Art sensory chamber. The entire project is enveloped by a reactive metal skin with the basic premise of distorting the overstimulated ocularcentric city and manipulating the ambient sound per the inhabitants’ comfort levels.
6.1a Understanding flow: Interaction, necessary for flow, is pervasive, allowing for minimal inhabitant indifference; physical and ethereal internal and external sensory stimuli integrated throughout the building create a continuously changing environment. Within proximity of the inhabitant, the stimuli reach a decreased scale to manipulate the everyday sensory experience. From the entry door lever to the echoes within the vertical transition core, interaction requires the inhabitant to acknowledge, appreciate, and experience flow either due to a personal activity or the interpretation of the surrounding phenomena. Through physical and mental interaction, the building aims to blur the boundary between itself and its inhabitants.

Raw, inexpensive everyday materials, as Dr. Csikszentmihalyi prescribes, such as drywall and cardboard (also due to its acoustic qualities) invite one to manipulate them; an idiosyncratic application of these materials creates a unique and meaningful experience. With regard to concentration, the building aims to not necessarily eliminate external distractions but celebrate them as a part of one’s surroundings. More specifically, external sound penetrates the central transition core and is manipulated using a resonator to both passively and actively trigger flow; during the typical transition period of indifference, one attends to the unique stimuli. Singular distractions within the exterior noise are distorted to the point of incomprehension to increase concentration throughout the building; attention increases as the challenge to distinguish the source
does. Interaction removes the chance of indifference through one’s duration in the artist commune through a sense of both comfort and challenge.

Beyond the physical separation from the ground plane and other personal retreat units, a sense of environmental control is given to the inhabitants. The reactive metal skin can be personalized per unit with respect to its apertures and openness to the outside. Directly related to flexible and reactive boundaries, offering differing views, light penetration, and levels of sound heightens inhabitant comfort through the stimuli personalization. Views to the outdoors and controlled “nature” of the Flower District also aid in increasing inhabitant concentration. Plants can be grown on the terrace of each unit, multiplying this effect and connecting the units to their context. The building code-required fire stair exists in its location due to its access to the least access to and variety of stimuli including views of nature, and therefore, the least control over one’s environment.

6.1b Enveloping flow: A sense of the everyday addresses the street level with the typical material brick base that matches its neighbor’s height, incorporating everyday repetitive sensory stimuli with subtle manipulations to announce the transition into a phenomenological realm. Like Deborah Berke’s “Thoughts on the Everyday,” the artist commune’s brick base is common and functional; the whole commune is crude in materiality, sensual in experience, acknowledges domestic life, and takes on a collective meaning to blur the boundary between inhabitant and surroundings. Related to Rem Koolhaus’ analysis in Delirious New York, the brick plinth blends into the context while supporting multiple functions above. The enveloped live-work program supports this conceptual project’s separation of the world above and the street level (not unlike that of the flow experience above that of the everyday experience).
Frank Gehry’s 8 Spruce Street residential tower, with an elementary school in its brick base, follows the same configuration and illustrates a separate program from that in the body above. The architect notes the goal of grounding the undulating stainless steel tower with a brick podium to relate to the everyday context: “I wanted to make the base part of the neighborhood.”

Brick has favorable audio qualities as an insulator (both reflective and absorptive) due to its dense yet porous nature. The artist commune plinth’s additionally-porous bricks (complemented by open joints and fiberboard beyond) embody the form of the typically reflective material (on average 0.04 sound absorption coefficient across all frequencies where 0 is completely reflective), but the idiosyncratic sensory qualities (including touch as well) create a unique experience for those in proximity to it. While a subtle difference from the typical application, it will help to reduce the surrounding overstimulation of New York’s streets. On the building’s interior, this brick allows for a separated awareness, or connection, blocking out the majority of the exterior ambient noise but allowing a trace to enter as well; using a permeable material allows for complete concentration with an awareness of those around, eliminating any paranoia and anti-sociality due to the less productive isolation.

The concept of separated awareness is necessary for the treatment of the living retreat spaces, incorporating an auditory experience determined by the inhabitant. Separation, important to flow, manifests in the physical arrangement of program based on a public to private gradient; the epitome of separation is reached in the anechoic chamber, both physically and ethereally. Like Gehry’s 8 Spruce Street, the artist commune uses verticality, setbacks, and a shift in materiality to denote the move into another realm—a realm of flow. With regard to New York and the opportunity to evaluate the typically horizontal Elastic City sensory walk, the separation manifests vertically. The semi-semi-private social communal program block acts as a screen of sound from below and acts in the same manner as the aforementioned permeable material, creating a sense of privacy and separated awareness. Unwanted direct sound waves can be controlled through two methods: the use of distance and noise barriers; the energy density of sound dissipates as distance increases, so the prescribed physical separation lends itself to the mental separation from the everyday and manifests as one’s own perceptible space from the interior and exterior.

The building itself further emphasizes a sense of retreat due to its pull back from the street and references its site with the required New York City code setbacks. Like Ateliers Jean Nouvel’s 100 11th Avenue, a residential tower in Chelsea, New York City, the artist commune addresses yet pulls back from the street to create a void space between façade and building. The transition space acts as a mediation between interior and exterior as an enjoyable experience within the gritty steel and floating trees placed throughout the trusses.
The apartment building at 777 6th Avenue, along with a number of buildings throughout the city, pulls its front door back from the street to create a gradient space that is exterior yet falls between semi-public and semi-private. 777 6th Avenue, with the entrance actually on 27th Street due to the decreased noise and activity, features a stone garden and wall fountain, creating a separate white noise that relates to the exterior yet separates one auditorily from the chaos beyond the fifteen-foot tall street wall. This thesis creates a similar effect not by drowning out exterior noise but bringing it into the building and distorting it to bring about a similar calmness, reinforcing the sense of retreat with an ethereal connection to one’s context.

As physically separated modules vertically and from each other, the private living studios give off a strong sense of a personal retreat; this manifests in its construction (also due to the economy with the aforementioned non-profit organizations) as a series of separate prefabricated units. These personally reactive spaces are lined with everyday malleable materials that differ in each unit and orientation, allowing each inhabitant the ability to experience his or her own place within the building. The recognition of one’s own space sets the stage for an emotional connection. Among these retreats are a series of intimate spaces that also penetrate the core and can be found strewn about within more public spaces for the affordance of separated awareness. As a series of different forms, fenestrations, and interior materials in varying configurations, each inhabitant can choose his or her space and alter it further if desired. Nouvel’s 100 11th Avenue attempts to create personal spaces through its curtain wall system, claiming to frame specific views of New York; the goal is praiseworthy, but its manifestation architecturally is nothing more than a repeated module of mullions and random layout of punched openings on the opposite facade.
Through the simple rotation and shift of residential units in relation to the former below, Herzog & de Meuron addressed the same concern for adding a personal aspect to one’s place within a building of repetitive units:

The high-rise tower is an important ingredient within the contemporary city. However, towers have come to be defined solely by their height and, as a type, they have become anonymous. Typical residential towers, while successful in aggregating the living unit, often fail to improve upon the living environment. The multiplication of units within simple extruded shapes produces repetitive and anonymous structures with no extra benefits or architectural qualities despite the incredible densities they achieve. For those who live in these structures, this experience of sameness and repetition can be relatively unpleasant. 56 Leonard Street acts against this anonymity and repetitiveness, emanating from so many towers of the recent past. Its ambition is to achieve, despite its size, a character that is individual and personal, perhaps even intimate. The project is conceived as a stack of individual houses, where each house is unique and identifiable within the overall stack.243

The Elastic City vertical artist commune pursues the identical issue with a similar solution. 56 Leonard Street creates a “vertical neighbourhood, somewhat akin to New York’s specific neighbourhoods with their distinctive mix of proximity and privacy in equal measure”244—separated awareness.

244 Ibid.
Like Sculpture in the Environment (SITE)'s *Highrise of Homes*, the varying private retreats remain the inhabitant’s own through personalization even though intermixed with numerous others, forming a “vertical community.” The group’s exploration aims to “supplant generic urban skyscrapers with a collage of styles contingent upon the collective will of its inhabitants.”

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246 Ibid.
Plan diagram of retreat arrangement according to immediate site analysis of concentrated sound (cyan lines), smell (yellow lines), views (magenta lines), and resulting sensory exposure (cyan boxes) with complete isolation where the emergency stair is located (6-20)

Building vertical community diagram as the neighborhood of retreats (cyan) and communal space (magenta) (6-21, left) and construction diagram (6-22, right)
Responding to New York’s verticality as well, Morphosis Architects’ 41 Cooper Square for Cooper Union in New York is described as: “A stacked vertical piazza, organized around a central atrium to encourage social exchange.” The central atrium attempts the exact goal of the central concrete resonator core. Simultaneously activated by social interaction and penetrating exterior white noise, the resonator becomes a hub of social sensory phenomena and flow experiences. As distance decreases the intensity of sound, the more private conversations between artist residents will be able to focus on their conversations due to the distance from the resonator source. The narrow staircase requires an intimate physical proximity, increasing the chances of eliciting an intimate social conversation or relationship.

41 Cooper Square also features skip-stop elevators to increase socialization: “Sky bridges span the atrium to create connections between these informal spaces. Further reinforcement of the strategy to create a vibrant intellectual space is provided by the ‘skip-stop’ circulation strategy which allows for both increased physical activity and for more impromptu meeting opportunities. The primary skip-stop elevators, which make stops at the first, fifth and eighth floors, encourage occupants to use the grand stairs and sky bridges.” As there is only room for one elevator due to the size of the site, the Elastic City vertical artist commune will incorporate a skip-stop (and service) elevator system with regular stopping at every third level with access to every level for ADA compliance.

248 Ibid.
The required use of stairs ends the indifference created during the typical elevator ride. An additional level of challenge for those in the elevator comes from its rotation to meet each landing.

In general, social spaces are used to incorporate active leisure activities with everyday activities to increase the chance of flow experiences. Design elements increasing socialization focus on the communal area of the building for the residents, grouped together for increased exposure to fellow residents. The communal program consists of the only kitchen and bathrooms for the residents, adjacent to a semi-private lounge overlooking a communal gathering space. Locating the kitchen adjacent to the lounge to increases social interaction; in a space typically associated with Dr. Csikszentmihalyi’s maintenance activities, increased socialization in the kitchen allows for the potential personal growth between residents teaching each other techniques, improving enjoyment and making the process a hobby. Inherent in the live-work program, as there is more exposure to the building, is increased exposure to those within it as well.
6.1c Passively and actively triggering flow: The vertical circulation core, as the center of movement within any New York building, is the focus with respect to a sensory transition by incorporating a sensually-haptic handrail (as the only place that requires sustained touch other than the floor in the typical building) and sound manipulation. The approach and circulation are focused on the associated Elastic City sound and scale sensory walk to be led through the building. The proposed sensory walk starts and ends in the building, beginning in the lobby and finishing after the city walk in the anechoic chamber at the top of the building offering complete separation.

Like Gehry’s brick base continuing the feel of the everyday to by-passers below, the simple materials of the Elastic City artist commune, such as concrete in the core illicit a sense of everyday materiality, but its use as a resonator of ambient noise creates a very unique sensory transition experience. While the building’s brick base tries to absorb a subtle amount of noise for pedestrians to create a unique experience using a typical raw material, the concrete core turns the typical quiet fire stair that breathes life with a seldom echo into a space of auditory phenomena. Ambient white noise becomes a raw spatial material, reflects one’s connection to the exterior while the distortion forces one to focus internally one’s own interpretation.

Le Cylindre Sonore, an intervention by Bernhard Leitner in Paris’ Parc de la Villette, is a double cylinder as an intimate sensory retreat embedded into the landscape. An inhabitable resonator, the sound space “unfolds, transforms, or superimposes the experience of sound.”249 The cylinders are made of precast concrete panels, and the void between them is the access to the control room; it is in fact the void that acts as a column of sound:

“Emanating sounds attract the curious, inviting them to stop, to listen attentively, and to linger; sonorously and spatially, thought and senses are bound within and liberated from this place.²⁵⁰

Using the same technology and approach within the Elastic City commune vertical circulation core, the inhabitable center cylinder becomes the elevator shaft, and the actual resonator space becomes the inhabitable stairway, reflecting sound off of the inhabitants akin to Tommi Grönlund and Petteri Nisunen’s Off-Sonic installation. The constant feedback from the audio reflections reminds one of the intimate scale even in such a tall space. The introduction of noise funnels creates nuances that increase intrigue and attentional-challenge. The resonator space is informed simultaneously by the immediate exterior context, the inhabitants within it creating sound, the building’s manipulation of this provided noise, the physical movements of the inhabitants within affecting the physical sound waves, and the internal mental interpretation of the phenomena.

Le Cylindre Sonore is a psychologically-engaging experience and successful immersion of the inhabitant into a new realm of sensory phenomena. However, it falls short of including the inhabitant within the sound’s manifestation; the resonator’s output is predetermined by Leitner as four sound experiences:

²⁵⁰ Ibid.
In a park as a one-time or rare destination, it is successful in creating a unique sensory experience, but long-term exposure reveals its repetitive cycle, creating indifference toward the project. The piece’s isolated placement within the park deters the introduction of any foreign sounds that could have created the constant change and challenge necessary for flow. Like Norman’s analysis of Classical music in Section 4.3c Sound speaking to the many detectable layers within the composition, ambient noise has an infinite number of layers; the distortion and constant change add this challenge in one’s perception and analysis. “Sound’s ability to merge with other sounds and its lack of borders represent a phenomenal equivalent to the artistic concepts of interpenetration, nonobjectiveness, and nonobstruction. Active processes that use sound’s invisibility and temporality interpret sound as having a characteristic of nonbeing.”

Sound is the gateway and transition between inhabitant and surroundings. This thesis will exploit its location at 6th Avenue and 28th Street, bringing in external noise to feed the resonator and allow the inhabitant's movement within to affect the sound enveloping him or her. This way, “there is no longer a question of the reproduction of an experience—each visit to the cylinder produces the work for the first time.”

Further sensory intervention, related to Section 4.3b Sensuality, exploits every sense to increase the chances of eliciting flow passively. Scents from the flower store are carried throughout the building, smells from the Flower District penetrate along with sound. The vegetation growing on the terrace of each living retreat adds to this effect, heightened by the concentration within the enveloping metal skin. Not including the Elastic City exhibitions within the commune walls, the following sensory matrix describes the focused senses in each space according to the inhabitant:

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251 Ibid, 30.
252 Ibid.
Relating back to Nouvel’s 100 11th Avenue and Herzog & de Meuron’s 56 Leonard Street, the location of the living spaces offers a personal choice that can lead to a feeling of ownership, but the retreats do not become reactive until a manipulable design element is introduced. The entire building is wrapped in a perforated aluminum shroud that, again, offers choice based on the predetermined perforation but also can be controlled to a varying degree of openness. Fulfilling many of Deborah Berke’s “Thoughts on the Everyday,” the aluminum skin will be made of a series of functional generic panels using a crude and common material, yet it is sensual and takes on a collective meaning as a social event having an effect on the stimuli of others when completely enclosed by the skin.

The choice of metal also responds to the building’s immediate context. There is grit yet beauty to New York, and this thesis’ site illustrates it perfectly. The street, after store hours, becomes a one- to two-level metal facade—a consistency and tie between each building. Building code-required fire stairs off of the front and back of the brick buildings, typically black steel, hang
above the storefronts, continuing the gesture vertically. Concrete, brick, and steel pervade during these times. The following day, the sidewalks are littered with beautiful (both real and fake) plants from small potted flowers to eight-foot-tall trees. The plant stores create a manufactured ecosystem that is completely controlled by the store owner, illustrating the reactivity of the area. The artist commune’s vegetation planted in each of the living studios continues this vertically.

Morphosis’ 41 Cooper Square incorporates a perforated metal façade system for the same reason: “It helps integrate the building, known as 41 Cooper Square, into its urban surroundings, says Mayne, who argues that it is ‘highly contextual’…[exuding] ‘a kind of toughness that is New York.’”253 The use of metal with a board-formed concrete plinth shows its appreciation for New York’s everyday industrial, yet beautiful, palette.

However, by using a stainless steel panel, 41 Cooper Square does not allow for a patina to occur, remaining an object building already reinforced by its sole existence on a rare city block with four sides of exposure. The Elastic City building uses a metal system that earns both a physical patina, further blending into the context even with a unique sound-driven resultant form, and ephemeral patina from inhabitant interaction as a reactive boundary that blurs the line between inhabitant, building, and context.

Ateliers Jean Nouvel’s Arab World Institute in Paris illustrates an example of a technologically-reactive enclosure. The building’s south façade is covered in a series of camera-like diaphragms in the exploration of Arab cultural references and in light. Each frame of diaphragm is controlled by the inhabitant, able to inform both the interior and exterior condition of the building—making a connection to the entire environment through the singular manipulation of one frame.

Control, a necessary component of flow, allows the inhabitant to create a personal space within a mass-produced façade, making one’s claim of their own territory and adjusting his or her environment for comfort. The Elastic City commune’s skin uses the raw, free panels react to each inhabitant’s desired environmental and stimuli level. The interaction, directly affecting one’s connection to the surroundings and stimuli, creates a level of comfort from the synthesis of comfort, concentration, boundary, and separation; this leads to an increased chance of reaching a flow experience and relationship with the space that allowed it to occur.
Concept sketches of perforated metal skin to control sound and views (6-39, top) and metal panel perforation detail to redirect incoming sound (6-40, bottom)
7. Conclusion:

The bridge between scaleless form-based architecture of indifference to a human-centered architecture of emotional connection is that of ecological psychology, stressing the importance of the relationship between inhabitant and surroundings. Dr. Mihaly Csikszentmihalyi’s flow creates a concentrated integral connection between one and his or her immediate surroundings, psychologically-fused with one’s environment. The physiological mind—the contemporary human scale—is the gateway to flow; coupled with phenomenology, the medial prefrontal cortex becomes the center of stimulation during flow experiences, synthesizing sound, emotion, and memory. A focus on sound sets the stage for an emotional sensory experience that creates a memory of a place. With repetition, personalization, and meaningful interaction from active leisure and productive activities between two bodies plants an intimate relationship. Elastic City and the proposed sensory walk and vertical artist commune aim to manipulating one’s everyday sensory experience to allow the indifferent to re-interpret their daily lives. As the focus on one’s personal interpretation of external stimuli creates a flow experience, tying interior to exterior, the ability to concentrate becomes essential to an architecture of flow. Increased comfort due to unique, personal surroundings and interpretations allow one to mentally separate from the everyday world in lieu of the optimal flow experience; the environment that supports this behavior becomes subconsciously incorporeal to one’s life. Flow architecture—immersive environments that blur the boundary between inhabitant and surroundings—reinterprets the focus of contemporary architecture and that of the inhabitants within.
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