Design for Slow Living

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Acknowledgement

Your time is limited, so don’t waste it living someone else’s life. Don’t be trapped by dogma - which is living with the results of other people’s thinking. Don’t let the noise of others’ opinions drown out your own inner voice. And most important, have the courage to follow your heart and intuition.

Steve Jobs

I don’t want waste any single day of life because it’s such a marvelous gift. And it also gives me enormous pleasure to acknowledge the people who helped me complete a significant chapter in my career and life.

Foremost, I want to thank my dear parents for their endless love, support and encouragement. Their understanding and support allowed me to pursue my Industrial and Product Design degree in the USA.

Before I came to graduate school, I felt challenged because it is so difficult to find a balance between formalism and pragmatism. The MFA in Industrial and Product Design has guided me to think creatively and combine elegance and efficiency in everyday objects.

Thank you to my advisor and thesis committee member, Professor Stan Rickel, for continuing to believe in my project and guiding me with gentle but challenging nudges to push my design and thinking process deeper into the unknown.

Alan Reddig, thank you for exploring the problems and solutions regarding reality and for providing objective feedback.

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I also acknowledge all of my classmates who assisted in the process of developing my completed thesis. And a special acknowledgement to Rick Auburn, Shop Manager, for endless hours of helping in model making and for providing design ideas.
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Abstract
Abstract

"As speed is seemingly equated with efficiency and professionalism, however, slowness can become a way of signaling an alternative set of values or a refusal to privilege the workplace over other domains of life.” (Parkins, W., & Craig, G., 2006)

This thesis defines what slow living is, its background and why it is becoming important today. Slow living can be defined as a way to improve socialization. It is a lifestyle that helps people slow down their pace and spend more time with their families and friends doing meaningful things together. As a reward, they can feel more relaxed and experience more love.

Slow Living recognizes the role that time plays in shaping the quality of our lives. With products designed for slow living, people are more likely to get rid of hectic lifestyles or feel less emotionally out of kilter in their daily lives. At the same time, they are able to spend more quality time with family members. By investigating and understanding what causes high pressure in our fast-paced lives, we are able to design ways to embrace stress, ignore persistent thoughts, relax, and enjoy life more. Consequently, slow living design is likely to be a major trend in the future.
Design Statement
Design Statement

1. Background

Figure 1. Stressful Life

Figure 2. Hectic City

With advances in digital technology, our lives have become more and more interconnected with the rest of the world. At the same time, we are under more and more pressure resulting from
overbooked schedules, fast-food culture, and conference calls after regular hours, just to name a few elements.

Pressure is already eroding our daily lives. Stress is the number one workforce risk issue. Moreover, there seems to be a disconnect between what employees say stresses them out and what employers focus on when it comes to programs to alleviate stress. “A Catalyst work report shows that most employees feel stress in four main areas: workload levels, interpersonal issues, job security, and juggling work and personal life.” (Davis-Laack, P., 2013)

Also, less quality time results a stress-related loss. Instead of spending quality time engaged with friends and families, we tend to miss the great value of enjoying life (camping with family members, for example) and psychological well-being (reading a book, for example).

2. Problem Statement

Figure 3, Stress Survey
What is causing you the most stressful/hectic life?

![Pie chart showing the causes of stress and stress-related issues.](image)

Figure 4, What is causing you the most stressful/hectic life

Figure 5, Mental Problem

Figure 6, Family Relationship
In tallying the survey results (Figures 3 and 4), we found that the stress of jobs and the workplace, financial problems, personal relationships, children, and daily hassles are among the main causes of hectic and busy lives. An overly hectic lifestyle is likely to cause a lot of personal, family, and even social problems. Work-related stress can lead to sudden heart attacks, obesity, anxiety and depression, all of which cause added stress on families.

Marital and family relations can be jeopardized, given the lack of effective and timely communication between partners and kids. For example, lack of effective communication and not working together on problems causes stress cracks to form. As the gap within a couple grows wider, the stress increases even more. This is a vicious cycle.

Socially, texting and driving is an example of how "fast living" has become a dangerous burden to a society so obsessed with speed in terms of information dissemination/distribution.

3. Research

**Focus:**
- Product require to change lifestyle
- Create environment

**Purpose:**
- Reduce stress
- Encourage socialization

**Target Group:**
- No Stress
- Some Stress
- Very Stressful
3-1. Questionnaire

The questionnaire was written by Siyang Gong and 80 people answered this survey. The majority of them are students at RIT and people who work in downtown Rochester. They are all under the stress of work, studying and so on.

1. What’s the main course of high pressure life?
   - a. Stress from society. -- It is a function of a modern life style. If you're busy, others will think you are really good productive. So I'm trying to be busy.
   - b. Stress from hobby (lack of sleep, irregular meals, etc.)
   - c. Stress from work & studies (too many interests during work, too many things to do, etc.)
   - d. Stress from family (financial problems – buying a new car, new house, raising children, etc.)
   - e. Stress from relationships (friends, family members, neighbors, etc.)

2. What have you done to reduce stress?
   - a. Work out
   - b. Entertainment (listen to music, play music, watch movies, etc.)
   - c. Outdoor activities (getting close to nature)
   - d. Consume alcohol
   - e. Cleaning

Figure 7, Survey in Rochester
3-2. Online Survey Results

1. What's the main course of high pressure life?

- Daily hassles: 6%
- Self: 12%
- Children: 6%
- Finances: 6%
- Jobs: 39%

2. What have you done to reduce stress?

- Consume alcohol: 49%
- Entertainment: 28%
- Work out: 6%
- Outdoor activities: 13%
- Cleaning: 4%

Figure 8, Online Survey
A total of 170 people took part in the online survey, and 166 people completed the survey. Of these 166 participants, the male to female ratio is almost one-to-one, with 96 males and 80 females. The ages of the participants were separated into four groups, with most participants from 21 to 40 years old, accounting for 68%. The second largest percentage is 21%, which was from 41 to 50 years old. The other two were 5% under 21 years old and 6% 51-60 years old. Sixty-one percent of all participants are under self-reported high stress from life, studies and work.
4. Explanation of Slow Living

“Slow living” is a lifestyle that helps people slow down their pace and spend more time with their family and friends.

People spend more time with their families and friends doing meaningful things together. It is the choice to live consciously with the goal of enhancing personal, community, and environmental well-being.

It encourages face-to-face communication and it is intended to enhance personal, community, and environmental well-being.

Instead of cherishing the benefit of a modern lifestyle, such as instant blogging and messaging on mobile devices, and having food bought from the drive-through of a fast-food chain, “slow living” encourages face-to-face communication or conversation, tasting, and cooking local food with families and friends.

Slow living recognizes the role that time plays in shaping the quality of our lives.

“Slow living” includes “slow design”, “slow gardening”, “slow food”, and so on. One of the nicest side effects of slow living is that you get the chance to observe your surroundings in greater detail. When you’re cycling to work rather than flying past in a car, you can see all kinds of interesting wildlife in your environment. While emphasizing a different aspect of life, all share the same philosophy that by leading a “slow life”, our work and life can be more balanced, and socialization improved, and as a result the whole society benefits.
Elements of Slow Living
Elements of Slow Living

1. Reveal

“Slow design reveals experiences in everyday life that are often missed or forgotten, including the materials and processes that can be easily overlooked in an artifact’s existence or creation. It focuses on the user experience. Normally, the primary demand intention of products on the market is money instead of serving consumers, environment, or society. Slow design reveals materials and processes that are often missed or forgotten.” (Slow design, www.slowlab.net)

Figure 10, Tree

This interactive tree was designed by Dutch designer Simon Heijens. The tree becomes live at night, its branches and leaves move slightly depending on the actual wind. Throughout the evening and into the night, the tree reflects the local environment and reaction of the sound and wind, which renders a natural wonderful city. It encourages reflection upon the city itself as a natural system.

Indeed, as a natural world, visitors get a fluent urban environment while visitors providing full awareness of attentions to the tree. The beauty of the project lies in that delicate unfolding of the experience: inhabitants of the city must slow down to fully appreciate what “Tree” has to offer.
2. Expand

“Slow design considers the real and potential “expressions” of artifacts and environments beyond their perceived functionalities, physical attributes and lifespans.” (Slow design, www.slowlab.net)

Figure 11, Ooz

This project was designed by Natalie Jeremijenko and “Ooz”. Natalie Jeremijenko’s work is an experiment in “interspecies communication,” challenging human understanding of the quality of life of animal species in settings designed by humans. She experimented in the “distributed human interpretation” of goose communication. Human participants saddle up in a “goose chair” and contort their bodies to control a robotic goose out on the water in hopes of successfully communicating with live geese.

Like a traditional zoo, “Ooz” is a series of sites where animals and humans interact. Unlike the traditional zoo, this is place where the animals remain by choice: it is a zoo without cages. What’s more, the human-animal interactions at an “OOZ” site are significantly different from that of a zoo, and are comprised of two components: 1. an architecture of reciprocity, i.e. any
action the person can direct at the animal, they can in turn direct at the person; 2. an information architecture of collective observation and interpretation.

The first phase of the project, sited in Zeewolde (the Netherlands) is an experiment in the “distributed human interpretation" of goose communication.

3. Participate

“Slow Design encourages users to become active participants in the design process, embracing ideas of conviviality and exchange to foster social accountability and enhance communities.“ (Slow design, www.slowlab.net)

Figure 12, Sensory Deprivation Map

“The Sensory Deprivation Map (in London) was designed by Christian Nold who is a creative technologist. He builds socially constructive, bottom-up tools that shift the way we perceive and experience our everyday world. Nold is best known for his compelling Emotion Mapping in cities, where every participant is outfitted with a device that measures her/his galvanic skin
response (GSR), an indicator of emotional arousal, while a GPS unit maps that data to his/her unique geographical location. The resulting maps indicate how individuals respond to and interact with their immediate surroundings, while encouraging personal reflection on the complex relationship between us, our environment and our fellow citizens. By sharing this information we can construct maps that visualize where we as a community feel stressed and excited.” (Slow design, www.slowlab.net)
Design Application:
Slow living at a bus stop
Design Application: Slow living at a bus stop

1. Why a Bus Stop?

A bus stop is a specific area within the transportation system that provides an opportunity to apply principles of slow living. A bus stop is a designated place where buses stop for passengers to embark or disembark. It is bus destination, people destination or the beginning of the journey.

Every slice of your daily life could be thought of as an opportunity to practice slow living versus fast living. Every day, getting to the bus stop on time is fast living. When you are waiting for the bus, travelers can become anxious. There is nothing at the bus stop to help you relax. So the bus stop could be an opportunity to provide slow living while people are waiting for the bus.

2. Brainstorm

Below is the brainstorm created by several friends who reported being under work stress and myself. The brainstorm is a product for slow living that focuses on benefits, user experience, savoring daily life and being environmentally friendly.
3. User Survey

I asked the question "What do you normally do at the bus stop?" at several bus stops in Rochester and on the internet. All the answers can be organized into five main categories: Chatting with others, Listening to music, Nothing, Reading a newspaper, and Using the phone. Afterwards, I provided those five possible answers for people to answer the question I asked.
online (See online survey below). As shown on the graph, the majority of the people are doing nothing while waiting for the bus stop. It is followed by working on their phones and listening to music. Just 6% of people chat with others in the bus stop.

**Questionnaire**

<table>
<thead>
<tr>
<th>What do you normally do in the bus stop?</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chat with others</td>
<td>6%</td>
<td>3</td>
</tr>
<tr>
<td>Listen to music</td>
<td>18%</td>
<td>9</td>
</tr>
<tr>
<td>Nothing</td>
<td>46%</td>
<td>23</td>
</tr>
<tr>
<td>Read a newspaper</td>
<td>10%</td>
<td>5</td>
</tr>
<tr>
<td>Use my phone</td>
<td>20%</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What's the biggest barrier to you getting help for your stress?</th>
<th>Response Percent</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too embarrassed</td>
<td>20%</td>
<td>10</td>
</tr>
<tr>
<td>Can’t find a common topic</td>
<td>32%</td>
<td>16</td>
</tr>
<tr>
<td>Surroundings of bus stop make me feel isolated</td>
<td>18%</td>
<td>9</td>
</tr>
<tr>
<td>Boring Bus Stop Facilities</td>
<td>30%</td>
<td>15</td>
</tr>
</tbody>
</table>

Figure 15, Questionnaire 2

**4. Problem Definition**
What have I learned from the survey? One of the problems at the traditional bus stops is that “Unoccupied time” feels longer than “Occupied time.” There is a lack of opportunities for socialization. There is a lack of appropriate seating that provides freedom of choice. Sustainability was not a factor when current bus stops were designed.

5. Inspirations

Figure 16, The recycled soundscape project, designed by Karmen Franinovic, Designing Interactive Systems, test at Boston, and Resonances 2004, Ircam, Paris.

Figure 17, Diana Memorial Fountain, The Diana, Princess of Wales Memorial Fountain is a memorial in London dedicated to Diana, Princess of Wales, who died in a car crash in 1997. It was designed to express Diana's spirit and love of children. The fountain is located in the southwest corner of Hyde Park, just south of the Serpentine lake and east of the Serpentine Gallery.
The recycled soundscape project (Figure 16) was designed as a system through which to explore the auditory aspects of the city, while offering relief through sound and relaxation design. The other design is Diana Memorial Fountain (Figure 17). This design aims to reflect the life of Diana, Princess of Wales, with water flowing from the highest point in two directions as it cascades, swirls, and bubbles before meeting in a calm pool at the bottom. The water is constantly being refreshed and is drawn from London’s water table. The Memorial also symbolizes Diana’s quality and openness. There are three bridges where pedestrians can cross the water and go right to the heart of the fountain. The builder hope visitors will find an inviting environment when they visit this special place.

Both of these examples are creating slow living environments in the public areas. They use sound, wind lights and water to draw visitors’ attention which stimulates interaction. Visitors also feel more immersed in the environment.

6. Design Goals

1. Create slow living environment.

2. Enable socialization.

3. Enjoy the time spent in the bus stop.

4. Provide seating variety.

5. Divide crowds into manageable queues.


7. Easy maintenance.
7. Concept development

7-1. Design a product that can be used at a bus stop

My first idea was to design a product that can be used at every bus stop, in different countries and regardless of their size.

This is a modular interaction box (Figure 11). The top surface is like a drum or a disk so that you can create music on your own. And the side of the box can recycle the bus ticket while they inserting their used cards in the box. This design is a combination of interaction and sustainability.

But I thought this idea was forcing people to be involved in the interaction. It was not enough to present the slow living environment. And I realizes that the relationship between people and the bus stop facilities is very important (Figure 12). Slow living design should be involved integrated into daily activities. So I decided to design the whole bus stop.

This is the initial concept for the bus stop design (Figure 13). It was inspired by a game I played during my childhood called “paper cup phone”. People can talk through cups hanging on two side walls and the sound transforms to sound waves through the glass. People can experience it in both visual and auditory forms. But I found that this design offered only a limited choice to people and isolating people which is not I wanted.
7-2. Relationship between people and the bus stop

Figure 19, Relationship between people and bus stop

7-3. Initial concept for bus stop design
Figure 20. Initial concept for bus stop design

7-4. Developed concept for bus stop design

In order to get a better solution, I went back to the research section to think deeply. I reviewed my research, problem definition and design goals again. What would work better to encourage people to socialize naturally instead of forcing them? Then I came up with this idea -- an arched wall and bench (Figure 14). Why an arch shape? In the traditional bus stop, the bench is straight. People sit next to each other, making no eye contact, making no connections. The arch shape
provides opportunities for indirect eye contact which might stimulate conversation without people becoming/feeling embarrassed.

Figure 21, Arch shape sketches

7-5. Spatial Relationships for Seating

I tried to figure out what the full -size dimension would be for the bus stop and what is the proper distance between two seats. So I did an experiment using classroom chairs and asked people what the distance they prefer is (Figure 15).
Figure 22, Spatial test

7-6. Concepts: Seat Concepts
The bus stop seat concept is to make it a flippable seat (Figure 16), which can save space at the bus stop. But people would be isolated again because the amount of seats is limited.

Figure 23, Filppable Seat

I also considered the relationships between seats and walls. Below (Figure 17) is the test of the proportion between seats and walls. But after I made the mock up, I still believed that the
concept was not meeting one of the design goals (improve socialization) and the flippable function is not that necessary.

Figure 24, Seat Proportion

My mind was refreshed by this design which is called the Come a Little Bit Closer Bench (Figure 25). When you sit down on the Come a Little Bit Closer Bench, your seat begins to slide
around and you soon realize from the sounds of tinkling glass beneath you, that you are sitting on a bed of moving marbles. If someone else takes another seat on this bench, you will, without a doubt, be pushed together. The Come a Little Bit Closer Bench is a clever and creative interactive furniture design, and I like the way it can bring strangers together for a bit of common experience. Why couldn’t the seats at a bus stop be movable?

Figure 25, Come A Little Bit Closer bench

This sliding seat encourages you to interact with the bus stop as well as urge you to sit closer to others. When you are sitting on the seat, you can change the distance between yourself and another. If you want your personal space, you can slide the seat away from others. The seat surface was divided by several grooves which is beneficial to drain rain water. The groove presents like bow, the center point being higher than two sides. So it is easy to clean as well as fits to the weather.
Figure 26, Sliding Seat
Model making material: Wood, Foam, copper wire.

Figure 27, Sliding Seat Processing
Model making material: Wood, Foam, copper wire

![Image of model making material: Wood, Foam, copper wire]

Figure 28, Proportion Test

7-7. Roof Concepts

This is a concept of a water-collecting roof. The roof can collect rain-water and direct it into the storm sewer. The first idea was an umbrella roof, but the design dialogue is complex compared with the seat and wall design and also I was thinking of how people can interact with the water while it is being collected. So, the final idea is having an angled two-piece roof. The rain will be recycled by draining it from two sides of the roof to grates on the ground.
Figure 29, Roof Concept Development
Model-making materials: wood, cotton thread, cloth

Figure 30, Roof Model Processing
Final design
1. Model-Making Process

Model-making materials: wood, cotton thread, cloth, foam, clear acrylic, white acrylic, plastic rod.

Figure 31, Model-Making Process 1
Figure 32, Model-Making Process 2
Figure 33, Model-Making Process 3
Figure 34, Model-Making Process 4
Figure 35, Model-Making Process 5
2. Scale Model (1:10)
3. Features

3-1. Seat Variety (Encourages Socialization)

**Sliding Seat:** When you are sitting on the seat, you can change the distance between yourself and another, and the arch-shaped wall provides opportunities for indirect eye contact which might stimulate conversation.

**Core Seat:** This is a round-shaped cylinder with different levels, which provides a range of seat heights.

**Formed Tube:** It provides an area for leaning.

3-2. Water-collecting roof (Environmentally Friendly)
Water-collecting roof: When it is raining, the water can be collected by the roof. The rain will be recycled by draining it from two sides of the roof to grates on the ground. Meanwhile, you can clearly see how the water is collected, and can interact with water.

Screen (besides roof): It helps to get rid of leaves or dead birds, while collecting the water.

Screen (on the ground): It prevents the collected water from garbage or other debris.

3-3. 360-Degree Bus Schedule Sign
This bus schedule sign is three dimensional, which presents the information better, because people can still see the information from different direction when the sign is surrounded by crowds of people. Moreover, the volume of the bus schedule is flexible by increasing the heights to add more bus schedule information.

3-4. Bike Rack

Bike racks provide parking for travelers who take a bicycle to the bus stop.

3-5. Neon Light and Nature Sound (Close to Nature)

Smooth-color changing neon light and nature sound, like birds singing, wind, and a waterfall, create a peaceful and enjoyable environment. Additionally, the arched wall divides crowds into manageable queues to get on the bus efficiently.
4. 3D Rendering
Below are the websites of the videos for slow living concept promotion.
5. Thesis Show

http://vimeo.com/61765677
http://vimeo.com/65229456
http://vimeo.com/65229457

http://vimeo.com/65229455
http://vimeo.com/65229458
Materials & Technology Involved
Materials & Technology Involved

**Wall** Concrete  Acrylic

**Seat** Polypropylene  Rotational Molding

**Roof** Teflon-coated fiberglass  Powder-coated steel tube
Design opportunity & scalability
**Design opportunity & scalability**

**Color, size, and composition**

“Slow living at a bus stop” can still have a variety of design opportunities and scalability. It can be customized in different colors depending on the surroundings and culture. The arch-shaped wall can be a modular design, so it can be configured in different compositions according to the space limitations and it can also be a closed space during the cold weather.
Conclusion
Conclusion

The biggest challenge of design is that design for slow living focuses more on psychological experience. It’s hard to force people to change their behaviors and lifestyles. So I tried to provide a potential slowing living experience for them.

Because of the time and the space, I didn’t have the opportunity to build the full size mock up to test the bus stop and determine any actual problems while people are using it.

By design, my bus stop demonstrates that the principles and the advantages of slow living can be incorporated in something as mundane or ordinary as a bus stop.

Slow living at a bus stop is introducing and letting people experience a slow-living lifestyle instead of forcing people to change their lifestyles.

Slow living and fast living could be compatible. In my bus stop, for example, you can experience slow living while waiting for the bus before you go to work, after you get yourself to the bus stop on time.

This bus stop is just one slow-living application. The benefits of slow living could be applied to any number of environmental or situational designs.

Time goes by faster if you are doing something. “Occupied time” just feels shorter than “unoccupied time.” Savoring our time and enjoying our lives by slow living, our work and lives can be more balanced and socialization improved.
References
References


Image Citation
Image Citation

created by the author unless otherwise noted below.

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http://www.npr.org/blogs

Figure 2, Hectic City,
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Figure 5, Mental Problem,
http://thinkprogress.org/health/

Figure 6, Family Relationship,

Figure 10, Tree,
http://www.slowlab.net/

Figure 11, Ooz,
http://www.slowlab.net/

Figure 12, Sensory Deprivation Map,
http://www.slowlab.net/

Figure 8, Bus Stop,
http://www.transit.org/

Figure 13, The recycled soundscape project,
http://www.slowlab.net/

Figure 16, Diana Memorial Fountain,

Figure 25, Come A Little Bit Closer bench,