Growing & Aging a new way of connecting generations

by Sara Lillegaard
Inspiration
Inspiration

Joy  Strength  Altruism

Patience  Growth  Respect
Problem Statement

How can architecture respond to the different needs of youth and elderly while improving their lives simultaneously?
Architecture can reduce the generation gap we face in our society between youth and the elderly by providing opportunities that create a sense of belonging and connection for both groups.
Conclusion

Conclusion/Unifying Idea:

Creating a small community that encourages a natural bond between young people in need of personal growth and aging adults in need of basic human interaction could be the key to resolve the issue of their disconnection. By reconnecting these two generations, a change of quality of life for both these groups is expected.

Project Justification:

As the number of senior citizens in need of long-term care increases due to the aging baby boomer generation, new ways of providing for their needs (physical, emotional and spiritual) will be necessary. Places where they can share their experiences and skills, giving them a sense of purpose should be essential. At the same time, young people that find themselves lacking the self-esteem necessary to succeed should not be ignored, but be understood and guided to a better future. Creating a place that encourages this connection in a natural, unintrusive way, can not only fill the needs of each group but create a better quality of life as these people grow and age.

Typology:

Senior and Youth Center/Residential
Seniors

Number of elders

<table>
<thead>
<tr>
<th>Year</th>
<th>Number (Actual/Projected)</th>
<th>Percentage of U.S. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>3.1 million</td>
<td>4.1%</td>
</tr>
<tr>
<td>2000</td>
<td>35.0 million</td>
<td>4.1%</td>
</tr>
<tr>
<td>2030</td>
<td>72.1 million (projected)</td>
<td>19.3%</td>
</tr>
</tbody>
</table>

Age

Centenarians

<table>
<thead>
<tr>
<th>Year</th>
<th>Number (Actual)</th>
<th>Increase since 1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>37,306</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>80,771</td>
<td>117% increase since 1990</td>
</tr>
</tbody>
</table>
“At the beginning of the 21st century the longevity of modern man and the younger population’s lack of time to take care of the elderly are leading to a profound analysis of new environments and the search for an appropriate habitat for the older population. Architecture and new construction technologies offer a large range of specific solutions that help to improve the conditions of life in old age...”

-Arian Mostaedi, 2003

Growing OLD is inevitable, growing UP is optional.

Physically, socially, psychologically and spiritually.
Walking
Biking
Gardening (connection with nature)
Creating Art
Sports/Games
Dancing
Studies has shown that elderly who have the opportunity for social interaction are at least three times as likely to report very good or excellent health compared to those who are least social. (Cacioppo, John T.)
“Internal integrity depends on the solidity of the foundation, on each brick being laid carefully in place.”

-Charles D. Applestein
rebellious youth whose actions strike out against a world that seems hostile or unjust
the empty child starving for love but unable to reach out, frightened of being hurt again
the lonely, insecure youngster whose spirit has been crippled by neglect or failure.
the conflicted young person desperately wanting something or someone to believe in, struggling for stability and identity in a world of confusing values.

(Brendtro & Ness, 1983)
20,000 kids “age out” of foster care every year

54% earn a high school diploma
2% obtain a bachelor’s degree or higher
84% become a parent right away (exposing their children to a repeated cycle of neglect and abuse)
51% are unemployed
25% experience homelessness
Approaching new experiences with an open mind;
Developing strong and stable relationship with others;
Seeing life experience clearly without an emotional charge;
Being compassionate and gaining self-esteem;
Feeling confident to pursue their dreams
Together

Transition
Opportunity
Collaboration
Appreciation
Transition

to a different home
to a new chapter in life
to new experiences
Opportunity

to learn new skills
to share stories and experiences
to have fun
to connect
to bring joy to each other’s life
Collaboration

helping each other

fighting and learning

feeling accomplished and purposeful
Appreciation

for life
for others
Northern Minnesota
Duluth, MN

Fourth largest city in Minnesota. In 1869 it was the fastest growing city in the United States. Rich history. Beautiful scenery. Home to Lake Superior, the largest body of fresh water in the world.
800 East Central Entrance
Duluth, MN 55811

Top of Hill
Views of city and Lake Superior
Centrally located in the city
Wooded areas around site
Bus stop by main entrance
Existing Structures
Nov. 16th, 2011 - Public meeting on the future land reuse of the Central High School site.

Different scenarios discussed by the community:
- Light Manufacturing
- **Nursing Home**
- Medical Facility
- Public Park - Active and Passive
- Office/Business Headquarters
- Higher or Secondary Education
- Big Box Retail
- Heavy Industry
- Casino
- Other

“This property is a jewel. Everything should be done to maintain the quiet and beauty. Your enjoyment by the maximum number of people should be the primary goal.”

“Community Services for the Youth...”

“We desperately need a safe place for our youth to gather. A Community Center/Nature Park would be a great asset to our city and to this park.”
Site Photography
Site Opportunities

Lots of nature

Open space

Bus Stop

Bike Path

Cross Country Ski Trail
Site Inventory/Analysis
Case Studies
1. Health Centre and Houses for Elderly People

Architects: IPOSTUDIO Architects
Location: Montemurlo Province of Prato, Italy
Project Year: 2010
2. Lar Casa de Magalhaes

Architects: Atelier Carvalho Araújo – José Manuel Carvalho Araújo
Location: Ponte de Lima, Portugal
Design Team: Joel Moniz, Alexandre Branco, Sandra Ferreira, Mónica Peixoto, Liliana Costa, Ana Vilar, Lília Costa, Nuno Vieira, Filipe Russell
Completion: 2010
What about the existing building?
Central High School

First Floor Plan

Central High School

total 219,194 sq ft
What to do with it?
Natural Ventilation

Make this operable to let hot air out and cool air through!

Look at this detail!
Midterm
Let’s try again!
Floor Plans
Main Building

Level 1

78,000 sq ft
Level 2

open to below

open to below

residential

N
Youth Studio Apartments

Ground Level
exposed structure
relaxation
**Infloor radiant Heating**

- Floor surface
- New concrete slab
- Concrete slab
- Metal decking
- Wide flange girders

**Geothermal**

- Cooling tower
- Air handling unit
- Chiller
- Mech.

- Solar water heaters
- Distribution
- Storage tank
- Boiler
- Geothermal loop
- Heat pump
HVAC
Variable Air Volume

- Air Supply
- Cold Water Supply
- VAV Boxes
- City Water Supply

cooling tower
air handling unit
chiller

heat pump and water storage tank in basement
Wall Before
- concrete foundation
- limestone
- face brick
- 2" rigid insulation
- 8" concrete block

Wall After
- concrete foundation
- 4" concrete slab
- new red brick
- 1" air cavity
- additional 2" rigid insulation

Rain Screen
- vent allows drainage and screens insects
- rain screen clip
- air flow allows moisture to rapidly dissipate
Sunlight
Operable windows
Air circulation
Shading from trees and structure
Questions/Comments?
Architecture can reduce the generation gap we face in our society between youth and the elderly by providing opportunities that create a sense of belonging and connection for both groups.