

# Healthy Design: *Setting the Course*

By

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# A Framework for Today

## *The Big 3*

Successful processes  
are characterized by:

- **Sense of Urgency**
- **Shared Vision**
- **Empowered Team**



From the work of John Keller



## Urgency: Can we agree?

### *The U.S. healthcare system:*

- Rank 37<sup>th</sup> overall among nations (1)
- Rank 49<sup>th</sup> in life expectancy (2)
- Rank 47<sup>th</sup> in infant mortality (2)
- Rank 1<sup>st</sup> in spending/ person (3)

1 World Health Organization, World Health Report, 2000

2 <https://www.cia.gov/library/publications/the-world-factbook/rankorder>

3 National Geographic Magazine online, December 18, 2009

# Urgency: Can we agree?

## *US personal health:*

- Most obese nation in the developed world <sup>(1)</sup>
- Most sedentary nation (with Poland) <sup>(1)</sup>
- #2 most smoking to Japan (recent from #1) <sup>(1)</sup>
- Adult life expectancy 4-9 months shorter <sup>(2)</sup>
- Children shorter life expectancy than parents:  
1<sup>st</sup> in 200 years <sup>(2)</sup>

1 Nathan Seppa, US Lags in Life Expectancy Gains, ScienceNews, January 26, 2011

2 Pam Belluck, Children's Life Expectancy Being Cut Short by Obesity, New York Times, March 17, 2005

# Urgency: Can we agree?

## Daily Medical Expenditures in the US:

1. Heart Disease \$501,000,000
2. Cancer \$430,000,000
3. Digestive Disorders \$337,000,000
4. Obesity \$320,000,000
5. Diabetes \$273,000,000

*RAND corp./ US NIH 2000*

From the work of Mark Haynes, DC, Norfolk, VA, 2011.

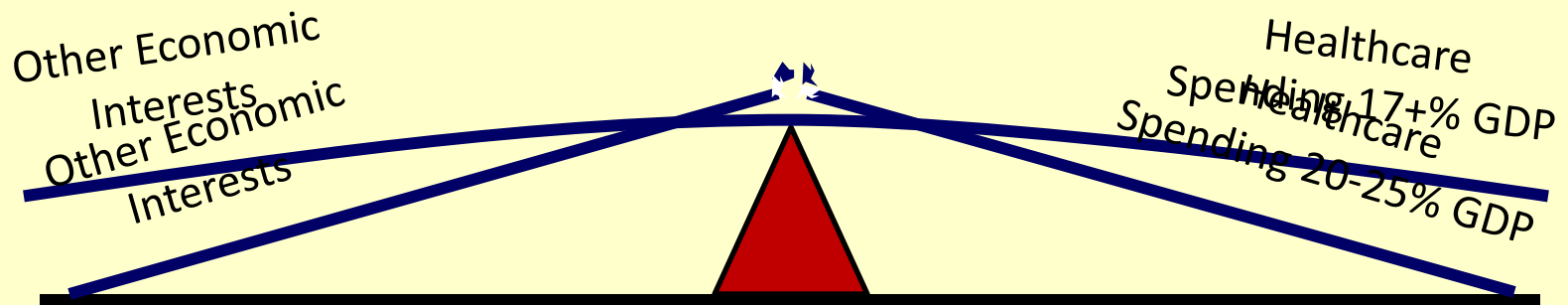
And DEMENTIA: \$1,000,000,000

Ruth Bettelheim, America can't afford to neglect dementia care, USA Today, March 16, 2011

# Urgency: Can we agree?

*This situation is time sensitive:*

## Economics lesson from the Cold War



The U.S. has a window of time to act.

From the work James Orlikoff, Orlikoff & Associates, Inc. and National Advisor on Governance and Leadership to the American Hospital Association

# Urgency: Can we agree?

## *The Path Forward*

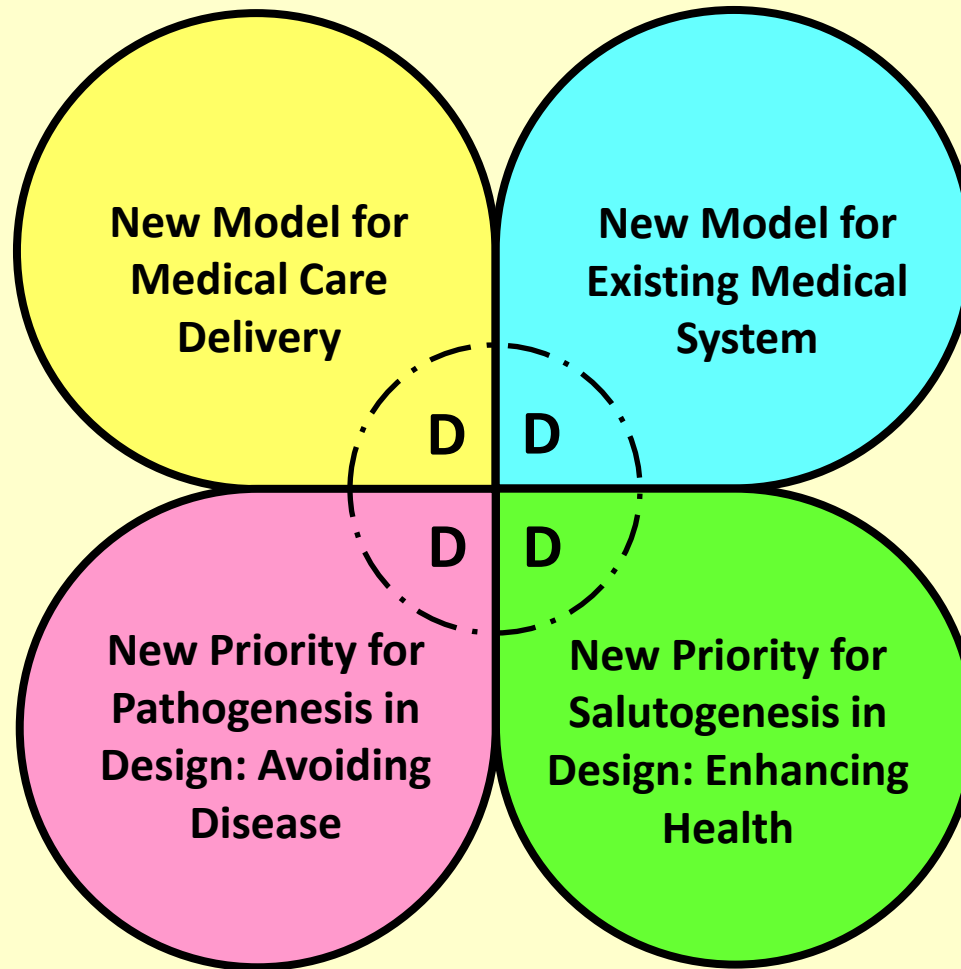
*We can't continue the way we are now. The sooner we get at it, the better off we will be.* <sup>1</sup>

David Tilton  
President, AtlantiCare  
H&HN, June 2010

<sup>1</sup> Mr. Ken Kaufman, Kaufman Hall, presentation to 2010 AIA-AAH/ ACHA Summer Leadership Summit



# Shared Vision: Design's Role



# Shared Vision: Design's Role - salutogenic

*The function of protecting and developing health must rank even above that of restoring it when it is impaired. <sup>1</sup>*

Hippocrates

1 The Power of Prevention: Chronic disease...the public health challenge of the 21<sup>st</sup> century, national Center for Chronic Disease Prevention and Health \_Promotion, Centers for Disease Control and Prevention, 2009

# Shared Vision: Design's Role

## Healthy Design

### Pathogenic Approach

Cause - Effect

Designing to block the influence of a pathogen on an individual in an environment to avoid disease

Single patient rooms used to help reduce/ eliminate hospital-acquired infections

### Salutogenic Approach

Continuum

Designing to enable the influence of a salutogenic element on an individual in an environment to enhance health

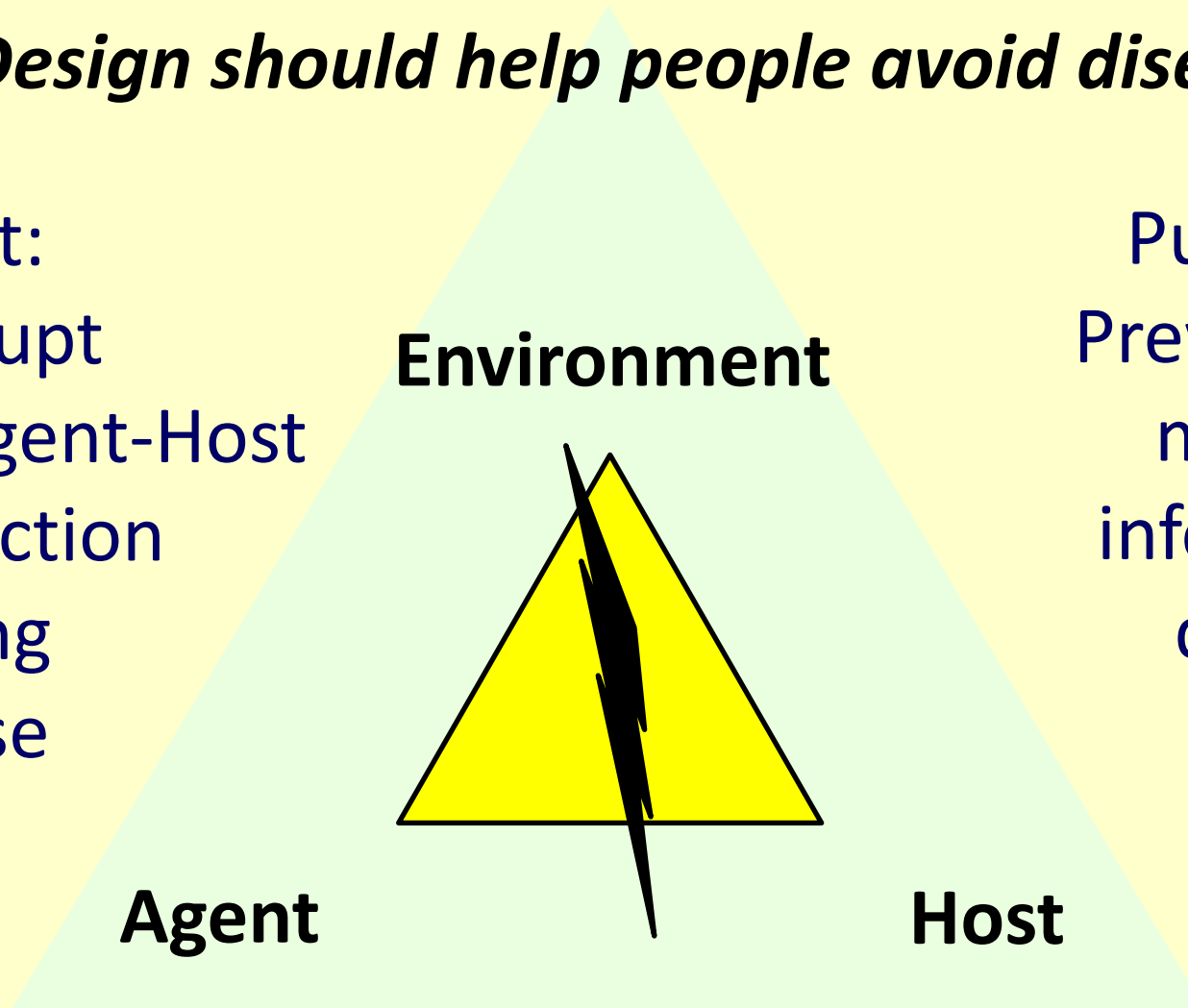
Views of nature used to enhance healing with reduced inpatient LOS and fewer pain medications

# Shared Vision: Design's Role - pathogenic

*Design should help people avoid disease*

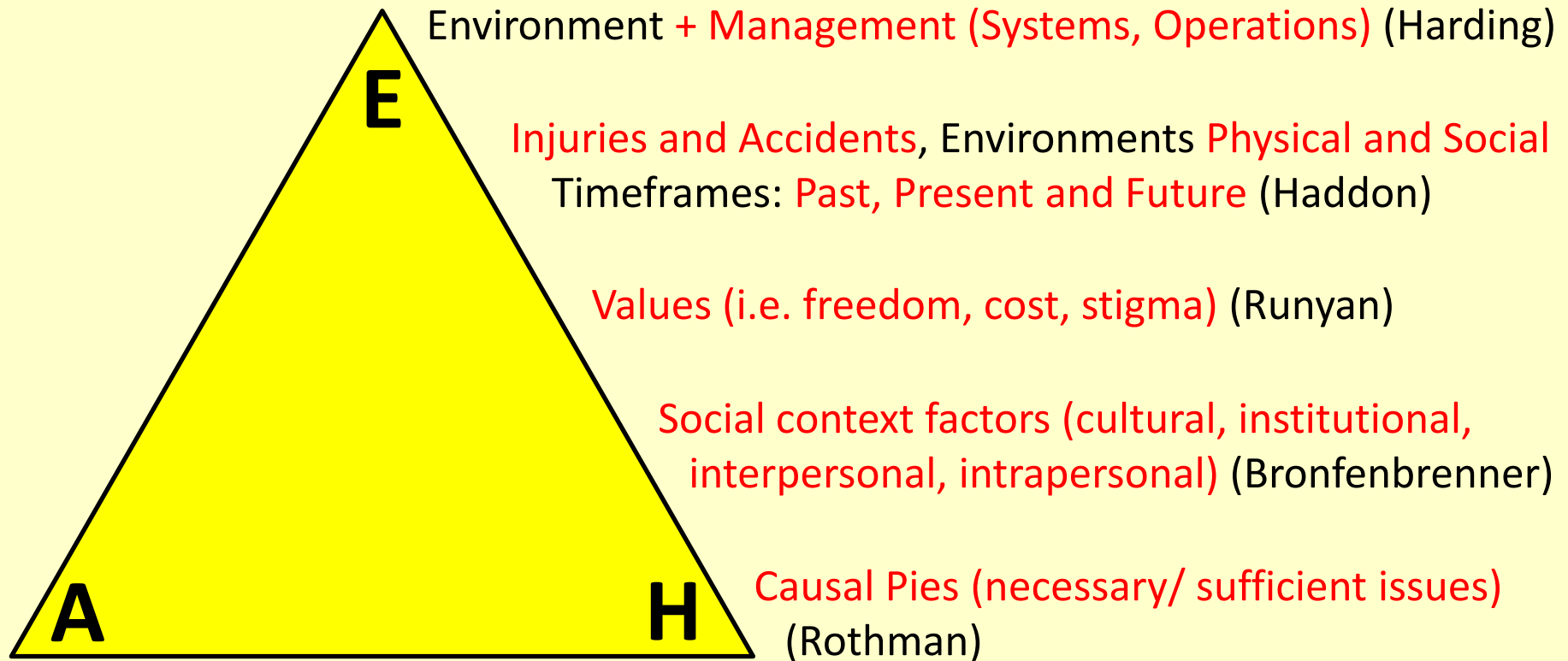
At first:  
Interrupt  
the Agent-Host  
interaction  
causing  
disease

Purpose:  
Prevent or  
manage  
infectious  
disease



# Shared Vision: Design's Role - pathogenic

***Design should help people avoid disease***  
(and injuries and accidents)



# Shared Vision: Design's Role - pathogenic

## *Design Tools for Avoiding Disease/ Injury*

### For **Agents:**

Modify, substitute, remove

### For **Hosts:**

Isolate, relocate, strengthen, adjust

### For **Environments:**

Filter, dilute, adsorb, clean, restructure

## Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

...From Rothman's work on necessary/  
sufficient elements causing illness:

What is the constellation of elements that  
contributes to good/ better health?

Can we design expectantly for health?

# Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

1 Antonovsky's central questions:

Chaos and stress are normal in life

.

How do we survive and avoid disease?

How do we achieve good health?

# Shared Vision: Design's Role - salutogenic

## *Salutogenesis*

A proactive approach to health promotion and prevention (1)

Sense of Coherence: the battle against stress (2):

- Comprehensibility: world is understandable
- Manageability: resources to meet situations
- Meaningfulness: life makes sense

**Is there a design component to this theory?**

1 Viravong, Khamphira, "Salutogenic community building," International Journal of Web Based Communities, Vol. 3, No. 1, May 2007, p 32-43.

2 Antonovsky, Aaron, Health, Stress and Coping, Jossey-Bass, San Francisco, 1982, p 14.

# Shared Vision: Design's Role - salutogenic

## *Comprehensibility in Design*

- Ease of spatial orientation
- Simple circulation patterns
- Building massing that communicates
- Functional transparency where possible
- Predictability and order in design

# Shared Vision: Design's Role - salutogenic

## *Manageability in Design*

- Empowering individuals through signage
- Vertical circulation clearly visible
- Accessible design standards applied
- Graphics with words where appropriate
- Assistance readily seen and available

# Shared Vision: Design's Role - salutogenic

## *Meaningfulness in Design*

- Furniture that suggests value of person
- Entrance that shows visitor importance
- Finishes and art that telegraph respect
- Wall of honor for visitors and regulars
- Purpose cues, suggesting value

# Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

2 Kaplan & Kaplan studied mental fatigue <sup>1</sup>:

- Advances in technology
- A knowledge explosion
- A growing world population

Getting  
Worse

1 Stephen Kaplan, Chapter 22: The Restorative Environment: Nature and Human Experience. Relf, Diane (editor) 1992. *The Role of Horticulture in Human-Being and Social Development*. Portland, OR: Timber Press

# Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

Kaplan & Kaplan asked <sup>1</sup>:

What is the difference between  
**directed** attention and **involuntary**  
attention?

1 Stephen Kaplan, Chapter 22: The Restorative Environment: Nature and Human Experience. Relf, Diane (editor) 1992. *The Role of Horticulture in Human-Being and Social Development*. Portland, OR: Timber Press

# Shared Vision: Design's Role - salutogenic

***Design should help people achieve health***

Elements of a restorative experience <sup>1</sup>:

- Being away: another setting
- Extent: a substantially different world
- Fascination: elicits involuntary attention
- Compatibility: supportive of the other <sup>3</sup>

1 Stephen Kaplan, Chapter 22: The Restorative Environment: Nature and Human Experience. Relf, Diane (editor) 1992. *The Role of Horticulture in Human-Being and Social Development*. Portland, OR: Timber Press

# Shared Vision: Design's Role - salutogenic

***Design should help people achieve health***

Keys to a restorative experience <sup>1</sup>:

- Views/ access to nature (gardens)
- Views of natural phenomena (aquaria)
- Discovered in wilderness (*NOT uniquely*)

1 Stephen Kaplan, Chapter 22: The Restorative Environment: Nature and Human Experience. Relf, Diane (editor) 1992. *The Role of Horticulture in Human-Being and Social Development*. Portland, OR: Timber Press

# Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

3 What about urban planning for exercise?

- Prevent 91% of cases, type 2 diabetes
- Prevent 50% of all cases, heart disease
- Prevent 50% of all stroke deaths
- Reduce site specific cancers by 50-72%

Journal of Applied Physiology 2005

# Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

More good news about exercise?

- Decrease all cause mortality by 67%
- Prevent up to 47% of cognitive impairment
- Decrease depression by 20%
- All accomplished with 30 minutes/day of moderate activity

Journal of Applied Physiology 2005

# Shared Vision: Design's Role - salutogenic

*Design should help people achieve health*

Design's central questions:

Can design enhance people's health?

How does research empower us?

What will be the measure of success?



## Empowering the Team

*Design should help people achieve health*

Design must embrace a health focus.

Salutogenics can move a person toward wellness.

Pathogenics interrupts disease, illness, or injury.

# Empowering the Team

*Design should help people achieve health*

Design must embrace a health focus.

Design must be integrative.

We are no longer an industry of vendors.

Architecture + medicine, public health, neuroscience, immunology, environmental psychology, exercise physiology, operations research, organizational development, and...

# Empowering the Team

***Design should help people achieve health***

Design must embrace a health focus.

Design must be integrative.

Design must show its value to health.

Fable 2: blended payback in around 3 years <sup>1</sup>

<sup>1</sup> Sadler, Blair et al, Fable Hospital 2.0: The business case for building better healthcare facilities, *The Hastings Center Report*, Vol. 41, No. 1, January-February, 2011.

# Empowering the Team

*Design should help people achieve health*

Design must embrace a health focus.

Design must be integrative.

Design must show its value to health.

Design must be knowledge driven.

AIA's America's Design and Health Initiative

AIA's Knowledge Strategy

Facilities Guidelines Institute: research informed codes

# Empowering the Team

*Design should help people achieve health*

Design must embrace a health focus.

Design must be integrative.

Design must show its value to health.

Design must be knowledge driven.

Design must be held accountable.

What would post occupancy evaluations tell us?

Will we offer when clients ask us for healthy design?

# A Framework for Today

## *The Big 3*

Sense of Urgency: ***Acute***

Shared Vision: ***Emerging Agenda***

*Blend: value, pathogenic/ salutogenic design*

Empowered Team: ***Emerging Agenda***

*Thriving in a knowledge driven profession*



# Urgency, Vision, and Empowerment

Thank you.

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