

IES | **SF** Education

**2015 SPRING
SEMINARS**



Lighting & Urban Placemaking

Part 1- How Light Drives Urban Vitality



IES SF

Lighting & Urban Placemaking



Lighting & Placemaking in the Urban Environment

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Human Behavior

Human Behavior is the range of actions and mannerisms exhibited by humans in conjunction with their environment, responding to various stimuli or inputs, whether internal or external, conscious or subconscious, overt or covert, and voluntary or involuntary

Influential Work



William Whyte

American urbanist, organizational analyst, journalist and people-watcher.

Study of human behavior in urban settings.
New York City Planning Commission in the late 1960's.

The Social Life of Small Urban Spaces, 1980.



Jane Jacobs

Urban Environment Activist

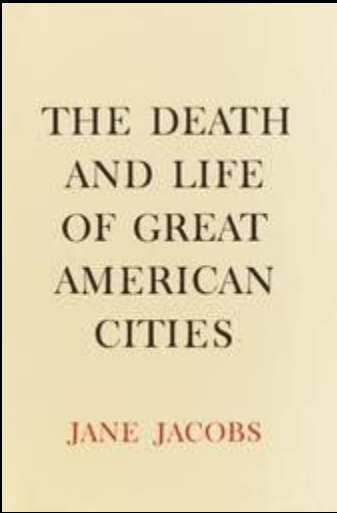
Editorial staff of Architectural Forum in 1952.
Activist against the movement to modernize urban areas by tearing down established neighborhoods.

The Death and Life of Great American Cities, 1961.

Influential Work

Jane Jacobs

The Death and Life of Great American Cities (1961)

The image shows the front cover of the book 'The Death and Life of Great American Cities' by Jane Jacobs. The cover is a solid light beige color. The title is printed in a dark, serif font, centered and arranged in five lines: 'THE DEATH', 'AND LIFE', 'OF GREAT', 'AMERICAN', and 'CITIES'. Below the title, the author's name 'JANE JACOBS' is printed in a smaller, red, serif font, also centered.

THE DEATH
AND LIFE
OF GREAT
AMERICAN
CITIES

JANE JACOBS

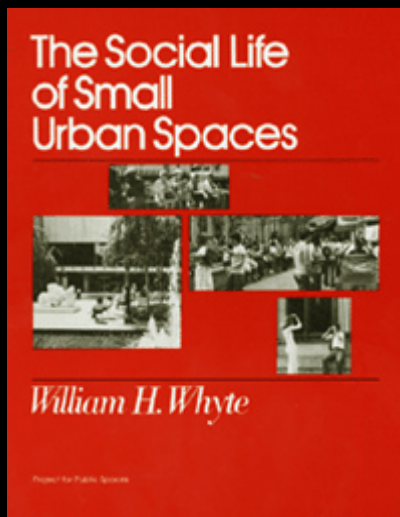
“Four principal generators of diversity that create effective economic pools of use...”

- Mixed primary uses, activating streets at different times of the day
- Short blocks, allowing high pedestrian permeability
- Buildings of various ages and states of repair
- Density

Influential Work

William Whyte

The Social Life of Small Urban Spaces (1980)



- The social life in public spaces contributes fundamentally to the quality of life of individuals and society
- Design should start with a thorough understanding of the way people use spaces, and the way they would like to use spaces.
- We can learn a great deal about what people want in public spaces by simply observing and putting this knowledge to work in creating places that shape livable communities.

Current Work

Jack Nasar, FAICP, PhD

Professor, Knowlton School of Architecture

Ohio State University

Relationship of Physical Form to Spatial Knowledge in Large-Scale Virtual Environments,

Environment and Behavior, 2005

Influence of physical characteristics of routes on distance cognition in virtual environments,

Environment and Planning, 2005

Landscapes of Fear and Stress

Environment and Behavior, 1997

Fear in the urban nighttime environment?

90% of fearful responses come from issues involving:

- Prospect (Low)
- Refuge (Concealment)
- Escape (Blocked or entrapped)

Low prospect: Lack of extensive, un-occluded view

Concealment: Situations that afford someone else visual access without exposure may arouse fear

Blocked escape / entrapped: Inability to safely flee or become secure from danger

Factors are accentuated among females and after dark

Does light impact behavior in the urban environment?



Processing visual cues in the nighttime environment?

The impacts of physical features and personal factors in urban public space;

Blobaum & Hunecke

Environment and Behavior, 2005

The development of urban night tourism based on nightscape lighting projects;

Guo, Lin, Meng & Zhao

Energy Procedia – A case study of Guangzhou, 2011

How movement pattern is affected with the concept of night city;

Zaki & Ngesan

Procedia - Social and Behavioral Sciences, 2011

Nighttime social behavior in urban outdoor spaces;

Ngesan & Karim

Procedia - Social and Behavioral Sciences, 2012

What about light's role in the nighttime environment?

- Complying with design practice standards for light quantity
- Enhancing visibility
- Constructing visual cues with luminance & chromatic contrast
- Creating appealing and inviting space
- Reinforcing spatial program
- **All of which impact human behavior!**

What aspects of human behavior might be influenced by lighting conditions in the urban nighttime environment?

- Wayfinding
- Orientation
- Preference
- Perceptions of safety and security (including fear)

Wayfinding in the nighttime environment?

Primary Physical Cues

- Vertical differentiation or contrast
- Horizontal differentiation or contrast
- Simplicity
- Order

Orientation in the nighttime environment?

Primary Physical Cues

- Identifying spatial boundaries
- Visual hierarchy
- Reinforcement of visual cues
- Simplicity
- Order

Preference in the nighttime environment?

Primary Cues

- Coherence
- Complexity
- Comprehension order
- Visual legibility
- Mystery

Perceptions of safety and security (including fear) in the nighttime environment?

Primary Physical Cues

- Lack of extensive, un-occluded view
- Excessive contrast, especially in peripheral vision
- Lack of defined egress or path



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Saint Louis Missouri**



**The Gateway Foundation, Client
Nelson Byrd Woltz Landscape Architects
Studio Durham Architects**

**Lighting Design:
Randy Burkett Lighting Design, Inc.
Fisher Marantz Stone, Inc**

**Urban Land Institute's
2011 Urban Open Space Award Winner**



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It is unlike anything else in the United States. The combination of world-class public art with magnificent landscaping in a completely open, accessible downtown setting is simply unique among cultural attractions throughout the country

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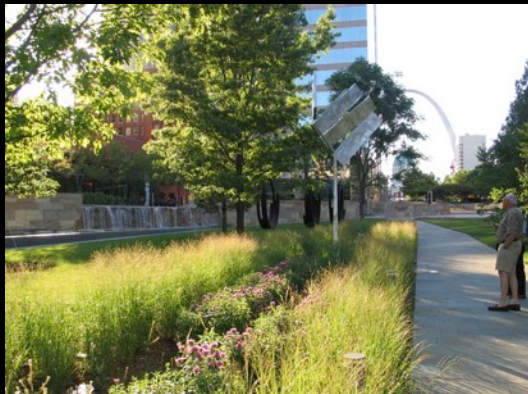
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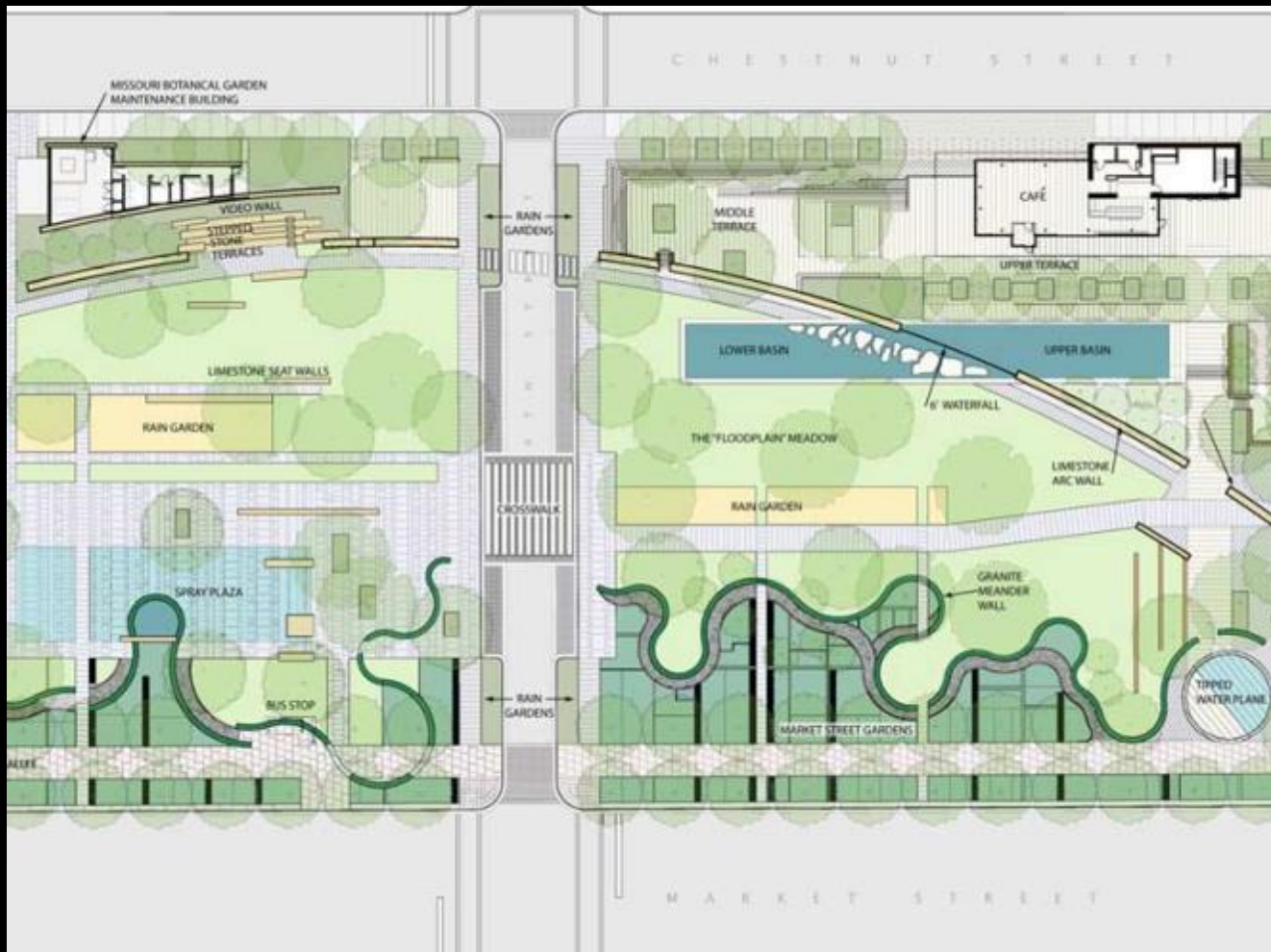
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Wayfinding

Orientation

Preference

Perception of safety and security



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Pondering light's role in enhancing human behavior





















CityGarden - making a difference?

Space Use

- +615% Daytime Weekday Pedestrian Traffic (users)
- +225% Daytime Weekend Pedestrian Traffic (users)
- +380% Nighttime Weekday Pedestrian Traffic (users)
- +165% Nighttime Weekend Pedestrian Traffic (users)

Retail Engagement/Sales

Prior to CityGarden: (1) Food Truck and (0) restaurants
After CityGarden: (4 to 7) Food Trucks and (3) restaurants

Minimal crime; the Foundation employs a security guard

Has it been a catalyst for further development?

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Spurring Development



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Spurring Development



Peabody Plaza



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Peabody Plaza



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Spurring Development



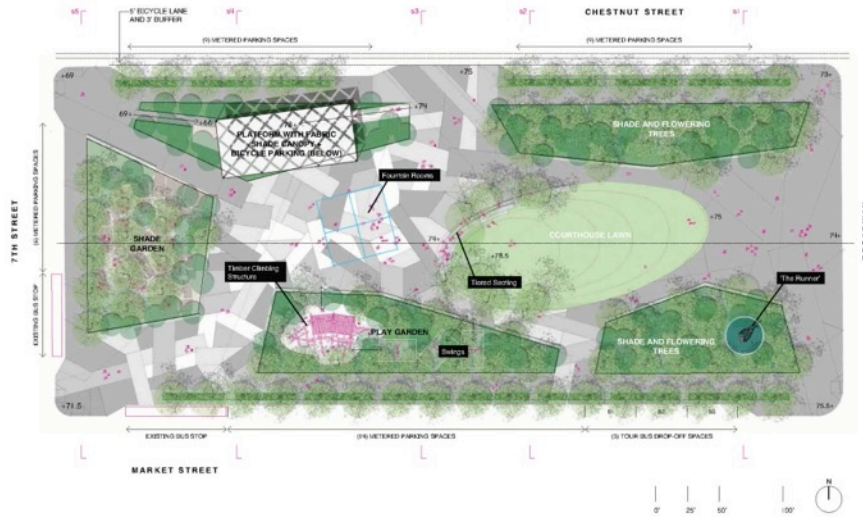
Old Courthouse Plaza

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Old Courthouse Plaza

OLD COURTHOUSE PLAZA



MICHAEL VAN VALKENBURGH ASSOCIATES + CAR 2015
APRIL 2014

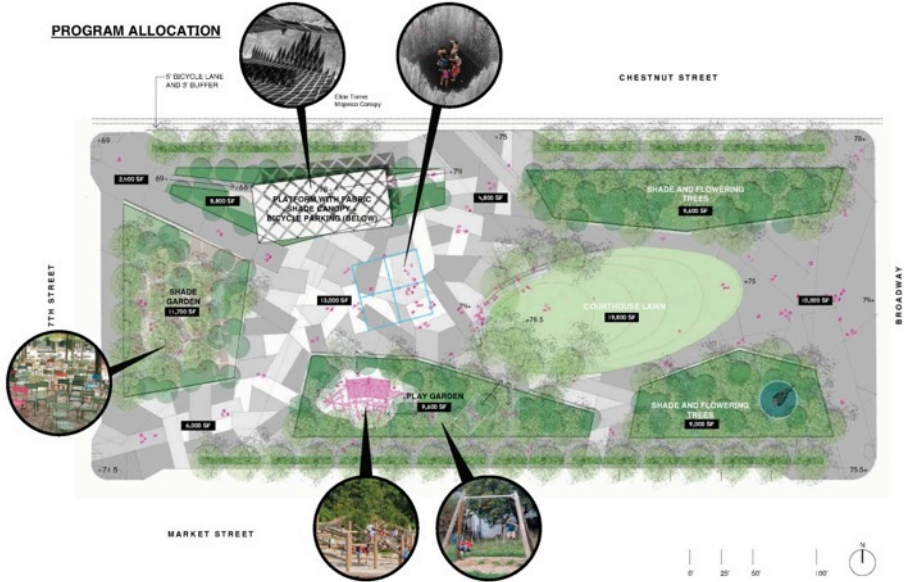
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Old Courthouse Plaza

PROGRAM ALLOCATION



MICHAEL VAN VALKENBURGH ASSOCIATES • CAR 2015
APRIL 2014

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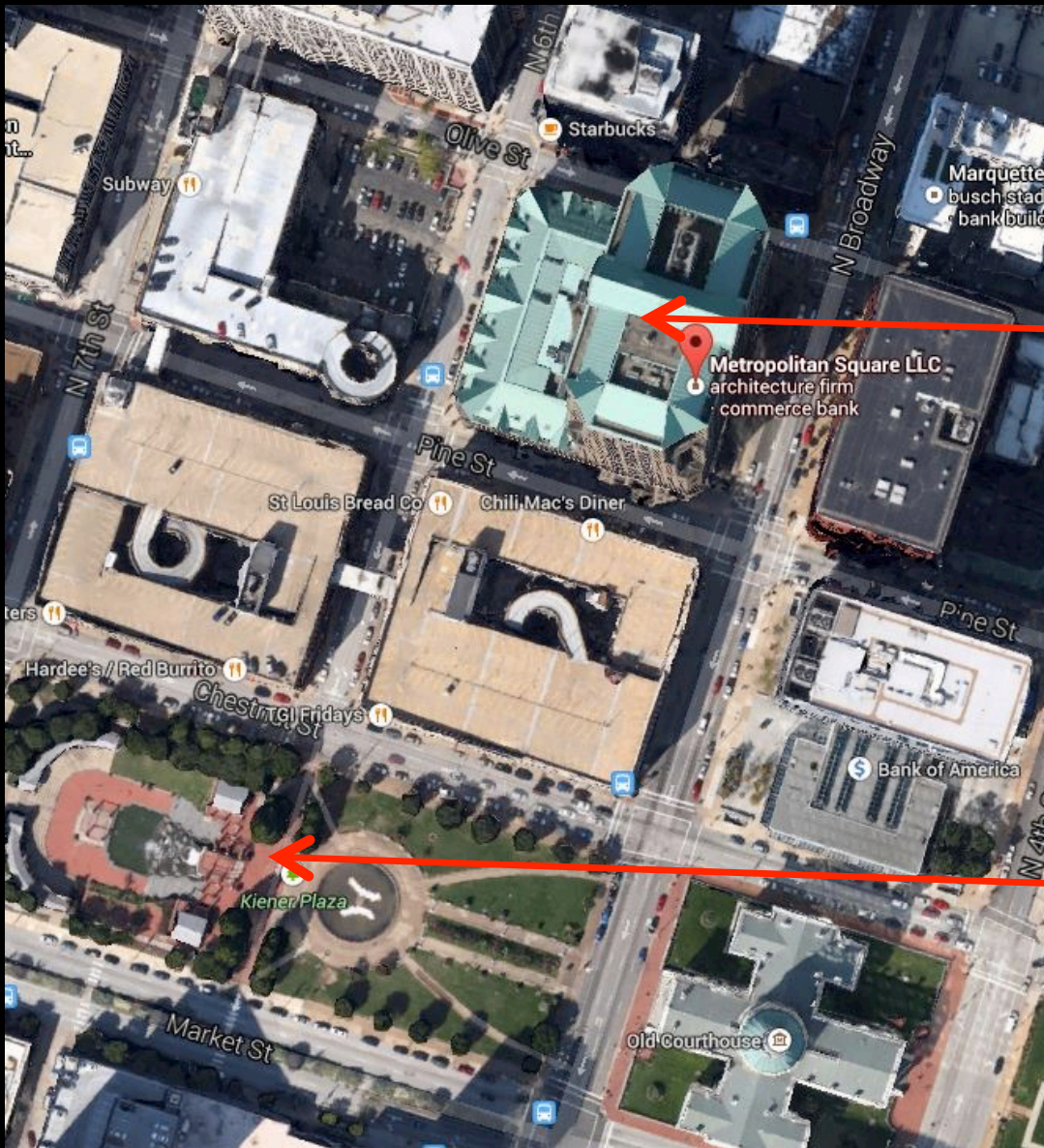
Old Courthouse Plaza



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Old Courthouse Plaza: Lighting “Moonlighting”



Metropolitan Square Building Roof

Old Courthouse Plaza
Development

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Old Courthouse Plaza: Lighting “Moonlighting”



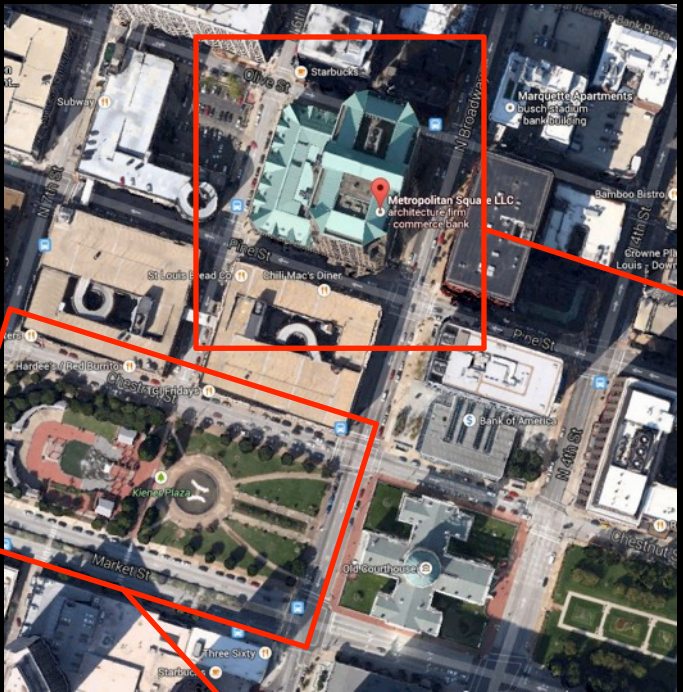
Location of adjustable precision area floodlighting equipment

Old Courthouse Plaza Development

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Downtown St. Louis Ariel

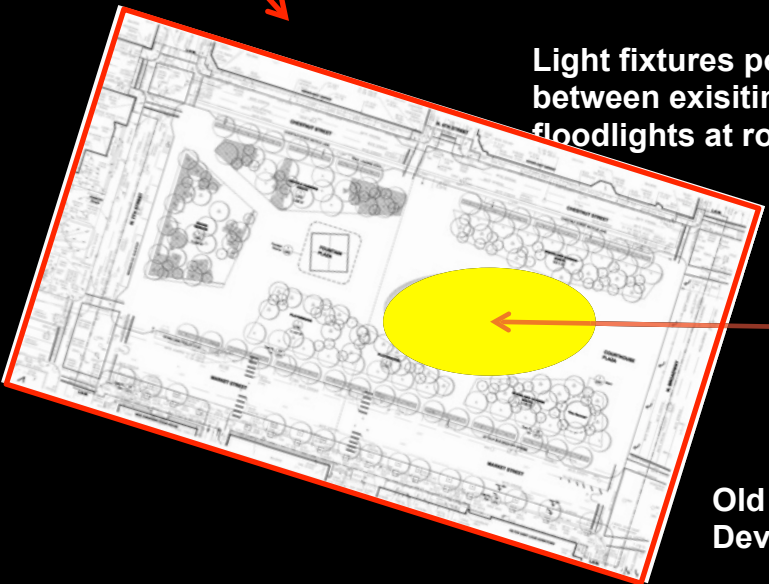


Old Courthouse Plaza: Lighting "Moonlighting"

Metropolitan Square Building Roof



Light fixtures positioned between existing floodlights at roof



Target area

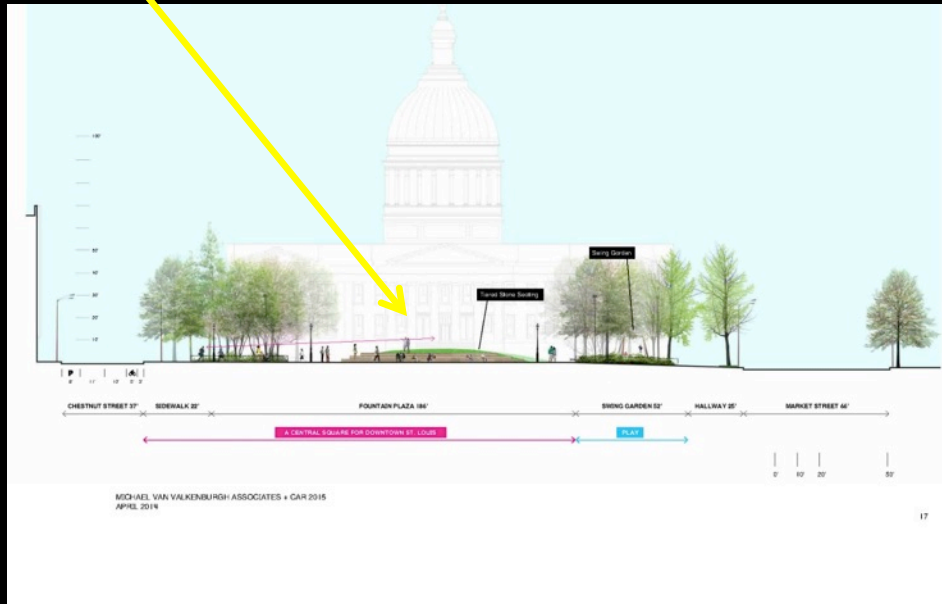
Old Courthouse Plaza Development

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Old Courthouse Plaza: Lighting “Moonlighting”

Moonlighting
distribution from
roof of Met
Square



Bryant Park, NYC

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Spurring Development



Luther Ely Smith Plaza

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Luther Ely Smith Plaza



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Luther Ely Smith Plaza



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Luther Ely Smith Plaza



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How can we come to understand the impact and relative importance of the lighted environment's component elements?





Clock Tower Beach
Montreal
Gilles Arpin, Eclairage Public



Clock Tower Beach
Montreal
Gilles Arpin, Eclairage Public



Clock Tower Beach
Montreal
Gilles Arpin, Eclairage Public



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Montreal
Gilles Arpin, Eclairage Public



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Montreal
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Clock Tower Beach
Montreal
Gilles Arpin, Eclairage Public

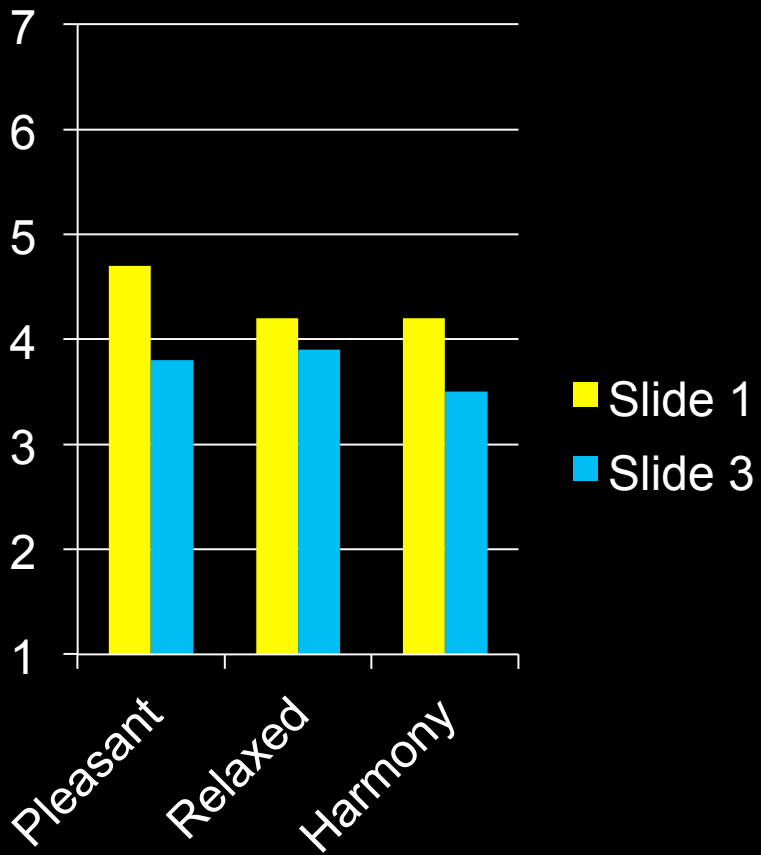


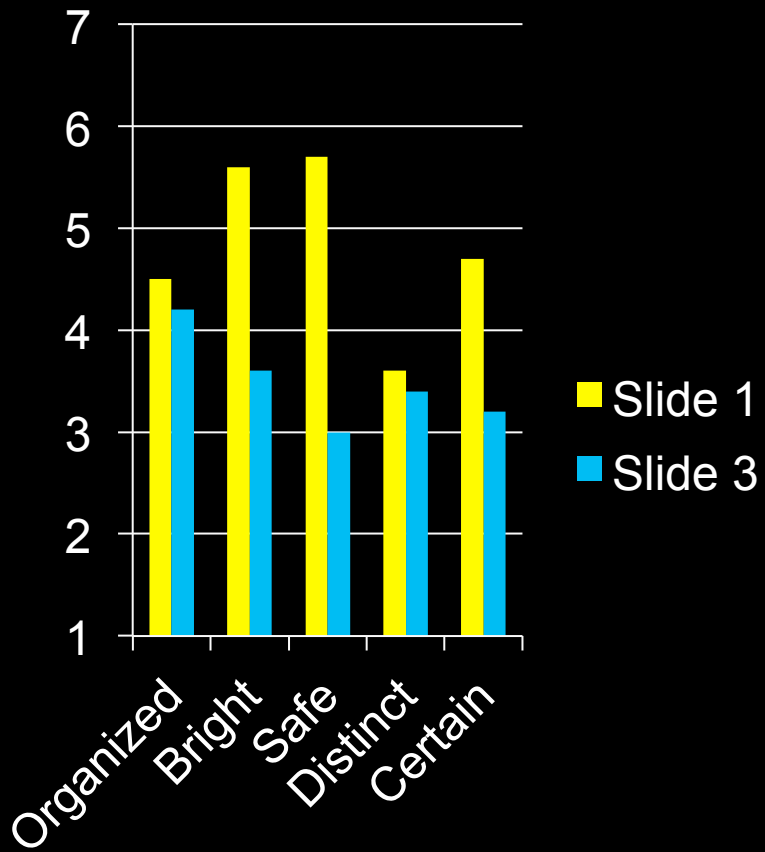


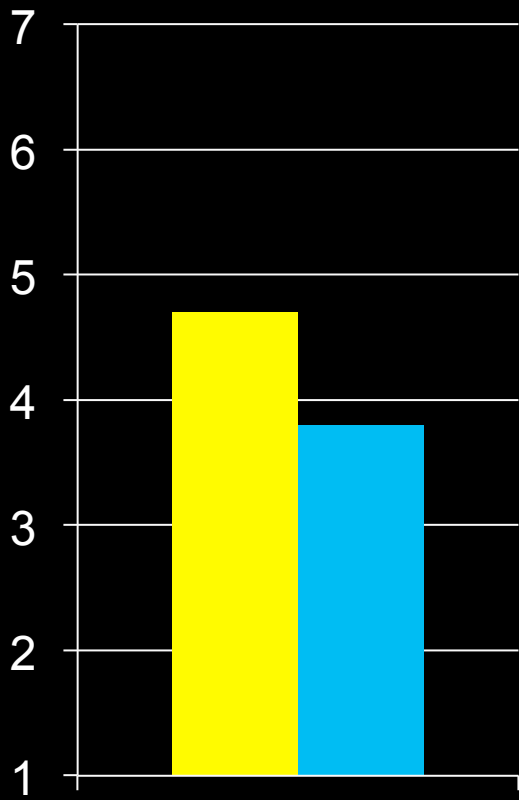








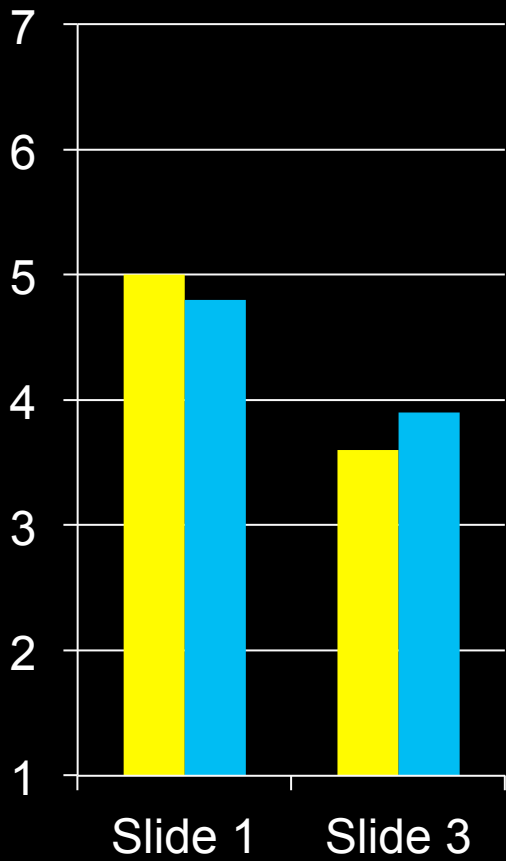




Pleasant

■ Slide 1
■ Slide 3

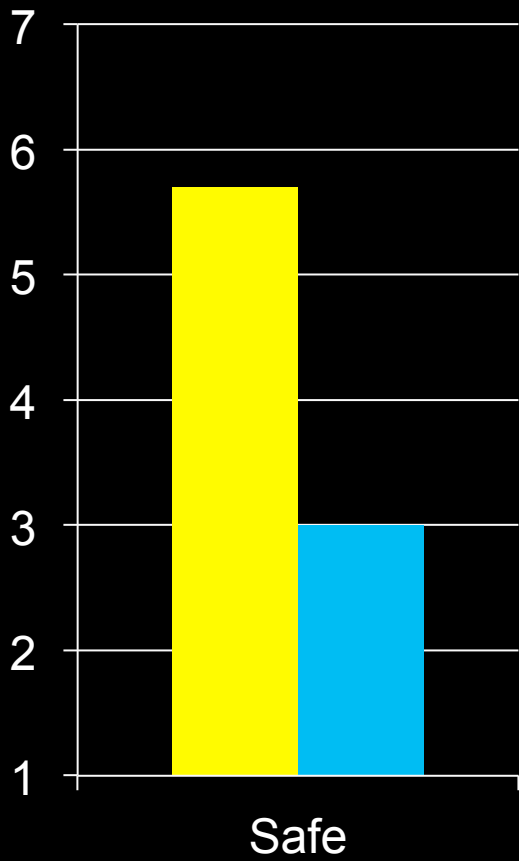




■ Female
■ Male

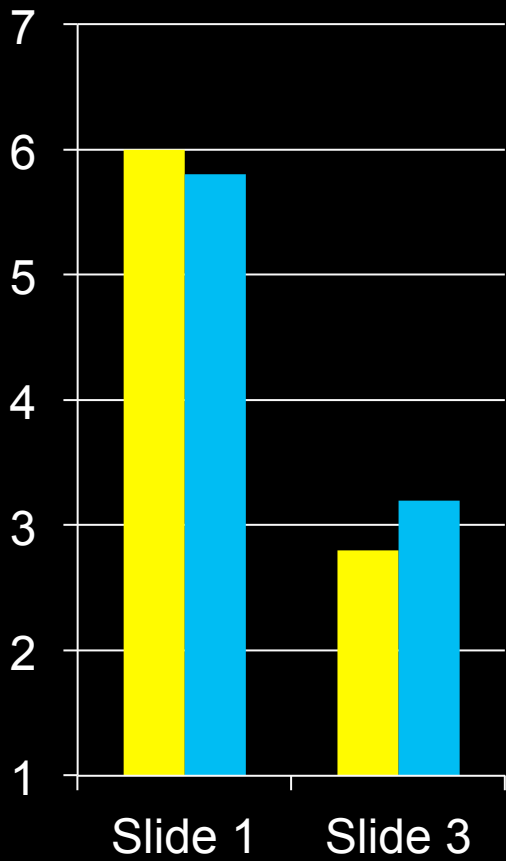
Pleasant?





■ Slide 1
■ Slide 3



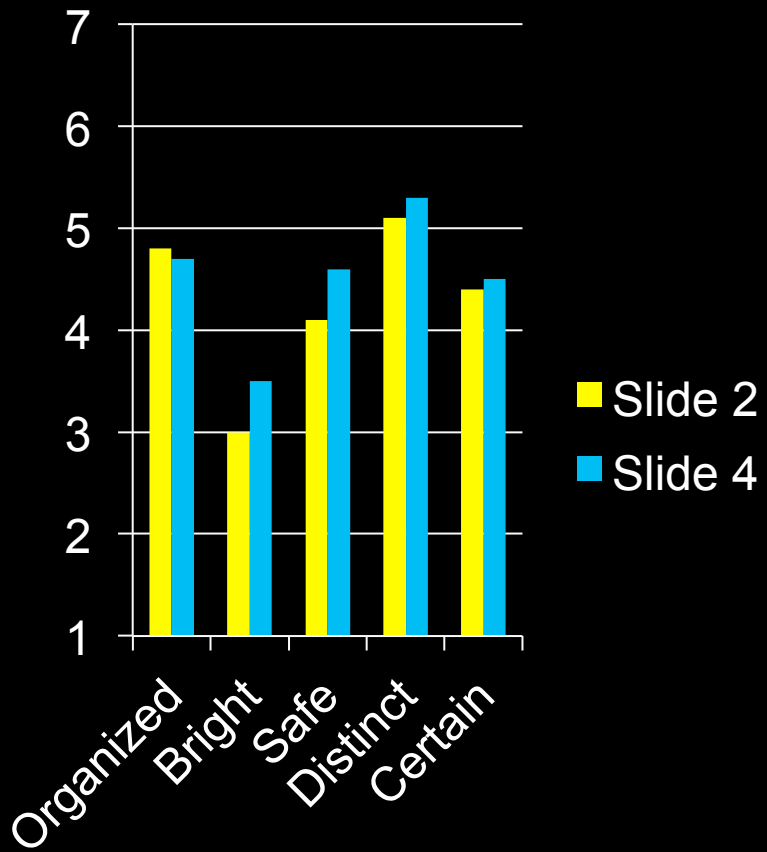


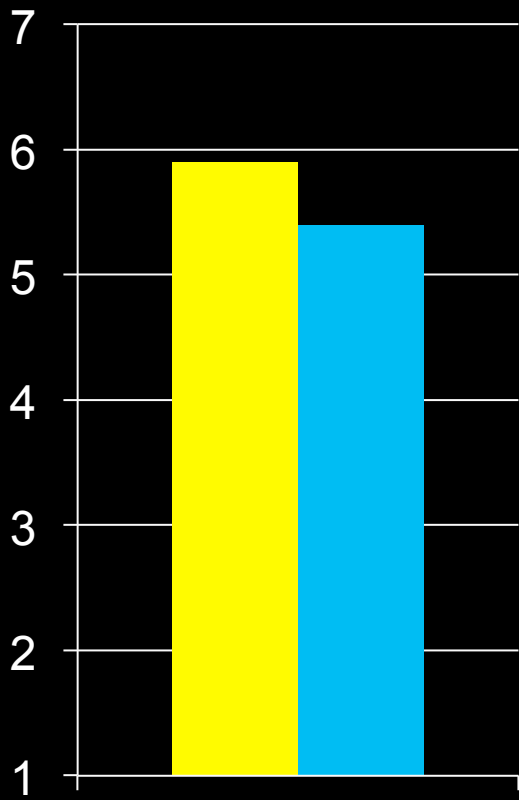
Safe?







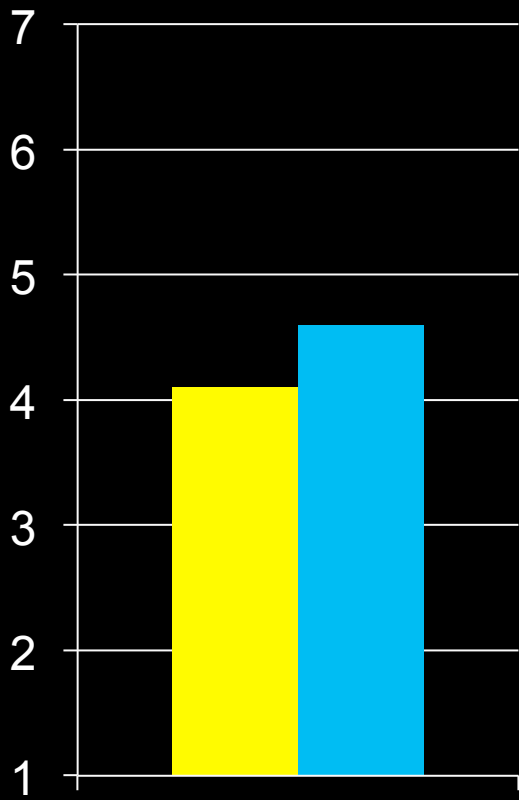




Pleasant

■ Slide 2
■ Slide 4

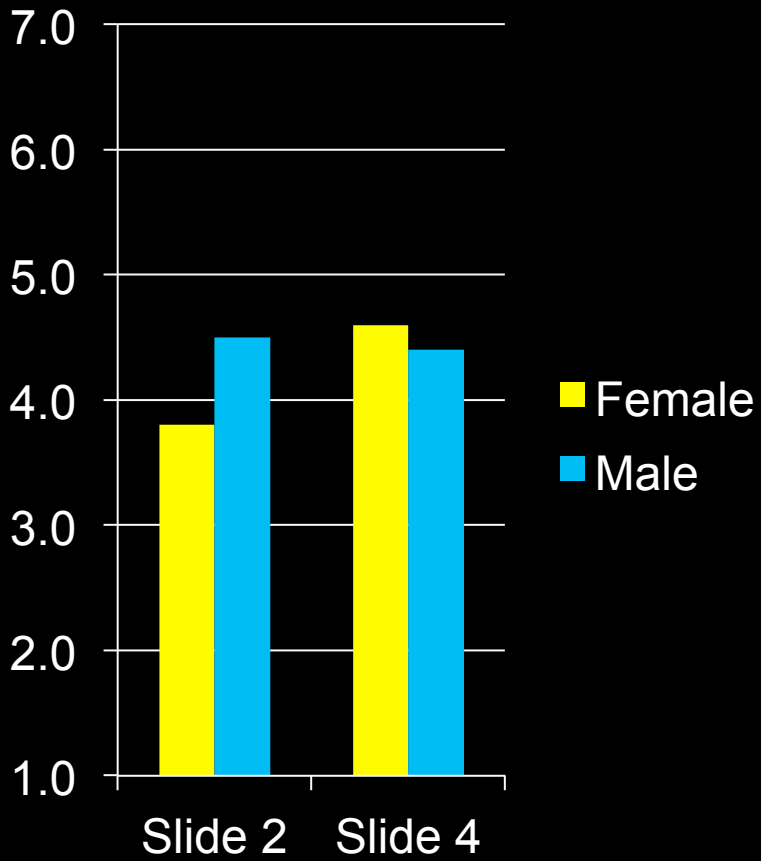




■ Slide 2
■ Slide 4

Safe





Safe?



Thank you



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