Principles for Measuring and Achieving Livability in Planning and Design Decisions
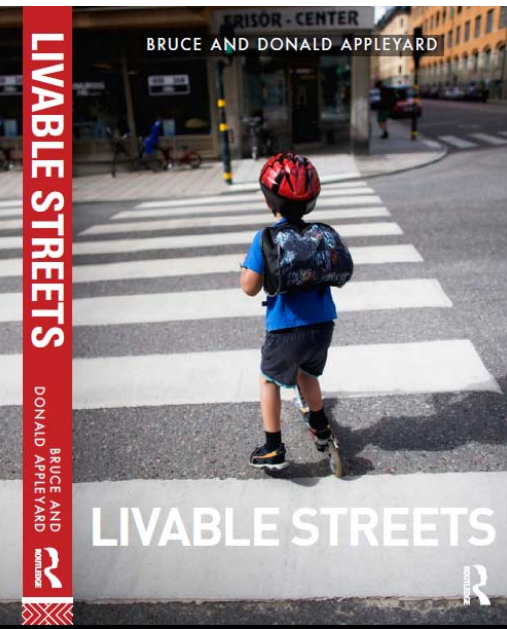
Bruce Appleyard, PhD
University of Utah
appleyard1@gmail.com

Austin, TX
September 7, 2011
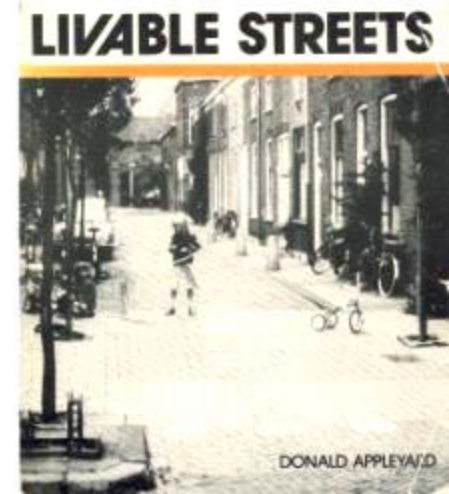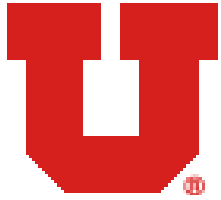
Wasatch Choice 2040

5 + Million Dollar Hud Grant
To Understand How to
Implement Regional Visions

Metropolitan Research Center – University of Utah

Envision Utah

Salt Lake County

Wasatch Front Regional Council

Fregonese Associates

ET+ Scenario Builder:

Buildings

- Quickly paint scenarios using financially feasible building blocks
- Compare multiple scenarios across variety of indicators
- Track progress in real-time
- Developing 18 "Apps"
  - Complete and Livable Streets

- Solving Transportation Problems With non-transportation solutions
- **"It's The Housing, My Friend"**

Scenarios

Indicators

Built Environment

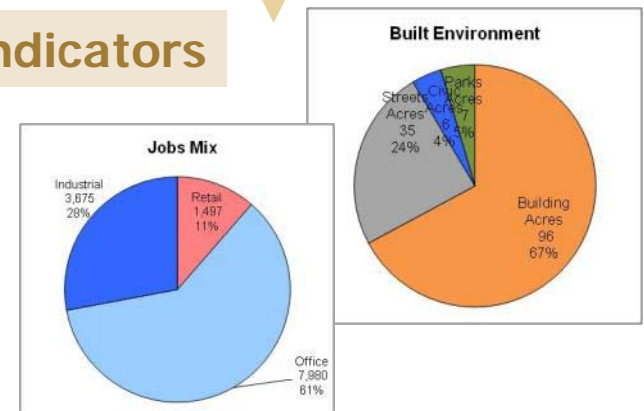Jobs Mix

Session Overview

- *Livability Discourse Overview*

- *Livable Streets Primer*

- Issues

- Principles for Measuring and Achieving Livability

- Toward a Definition of Livability to Guide Planning Decisions

Bruce Appleyard, AICP
appleyard@berkeley.edu

HUD/EPA USDOT Livability Principles/Objectives

- **Provide more transportation choices**

- **Promote equitable, affordable housing**

- **Enhance economic competitiveness**

- **Support existing communities**

- **Coordinate and leverage federal policies and investment**

- **Value communities and neighborhoods**

The Honorable Ray Lahood, Secretary Of Transportation
Before The Committee On Banking, Housing, And Urban Affairs, U.S. Senate
June 16, 2009

Bruce Appleyard, AICP
appleyard@berkeley.edu

Livable Streets Primer
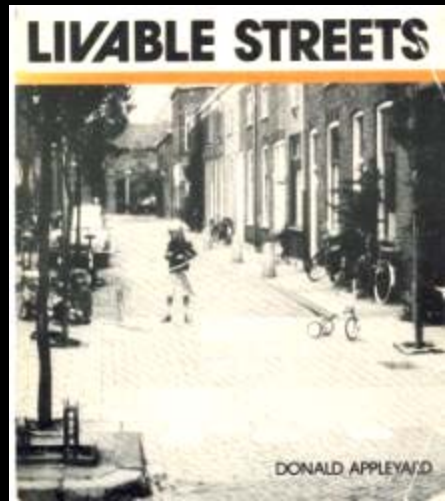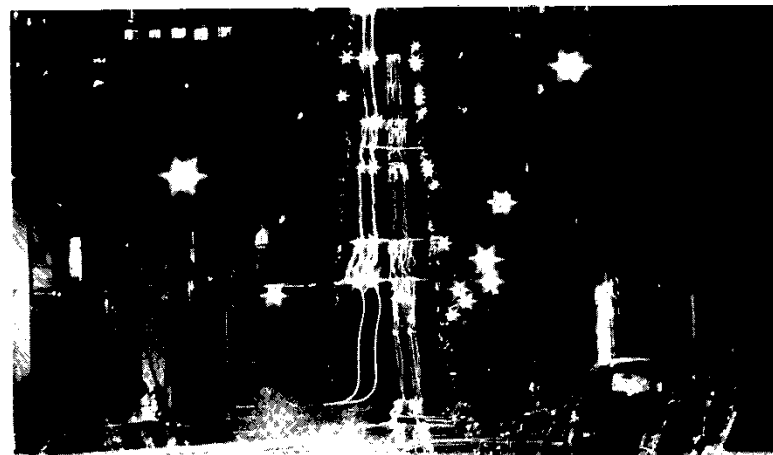
Night-time views of three streets. Ted Barnes

"I feel it's home. There are warm people on this street. I don't feel alone."

LIGHT TRAFFIC
2000 vehicles per day
200 vehicles per peak hour

3.0 friends per person
6.3 acquaintances ··

"Definitely a friendly street."

"Everybody knows each other."

"A friendly street. People chatting washing their cars, people on their way somewhere always drop in."

"Used to be nice. People were friendly."

"You see the neighbors, but they aren't close friends."

MODERATE TRAFFIC
8000 vehicles per day
550 vehicles per peak hour

1.3 friends per person
4.1 acquaintances ··

"A friendly street. Some families here a long time, many people related."

"Don't feel there is any community any more, but people say hello."

HEAVY TRAFFIC
16,000 vehicles per day
1900 vehicles per peak hour

0.9 friends per person
3.1 acquaintances ··

"It's not a friendly street -- no one offers help."

"It's not a friendly street, but it's not hostile."

"It's used by pedestrians on their way to somewhere."

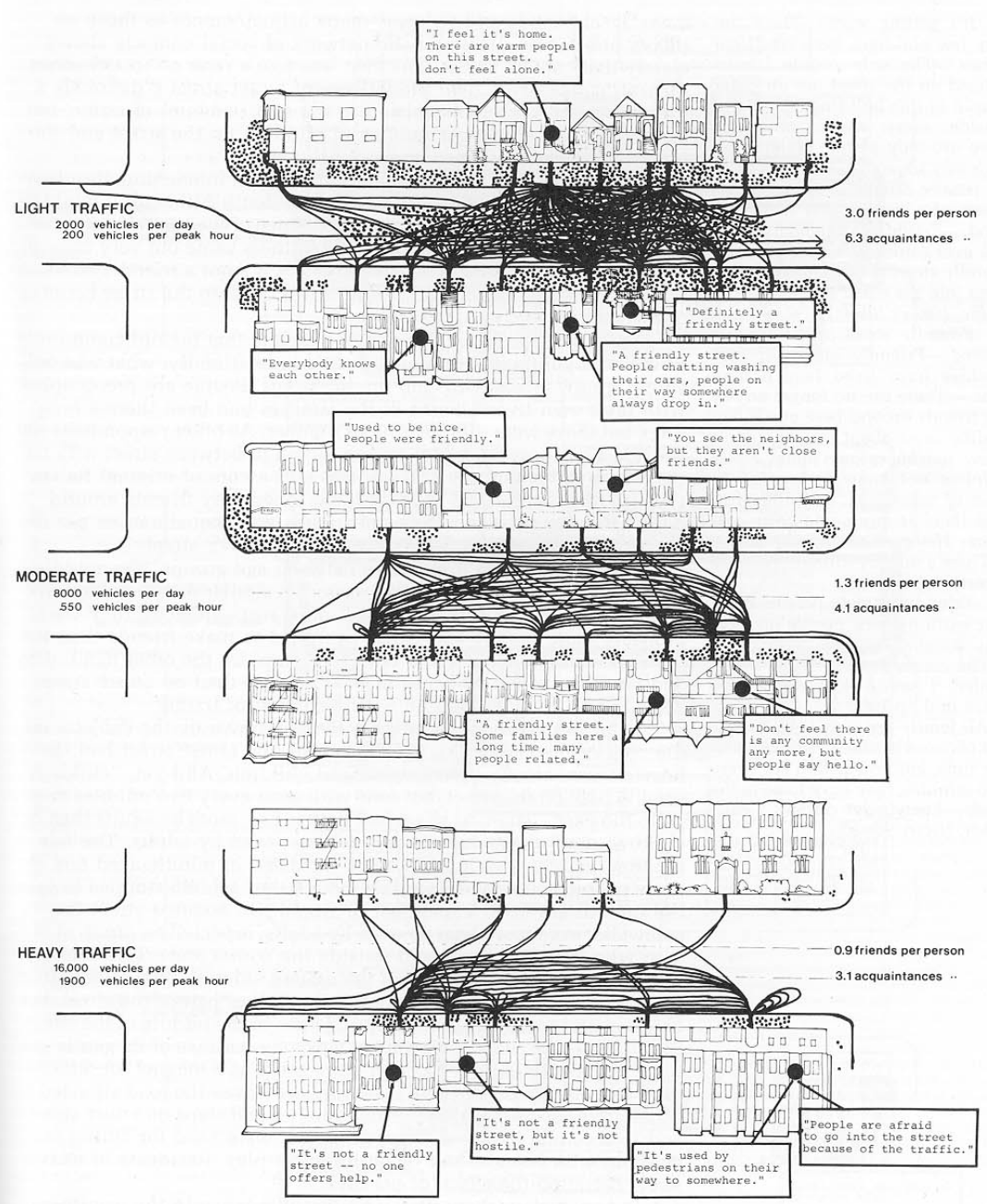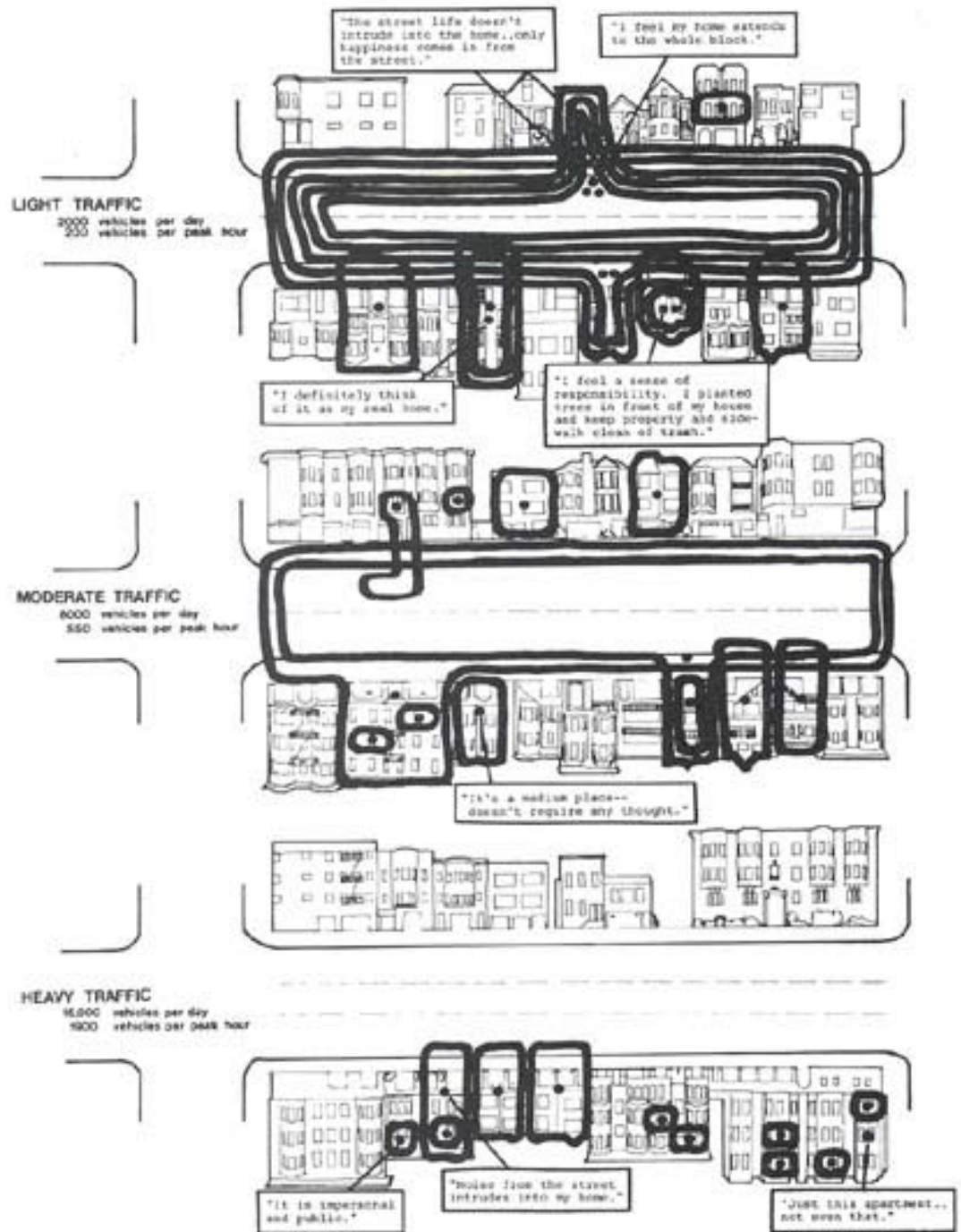"People are afraid to go into the street because of the traffic."

FIGURE 3.
San Francisco. Neighboring and visiting on three streets: lines show where people said they had friends or acquaintances. Dots show where people are said to gather
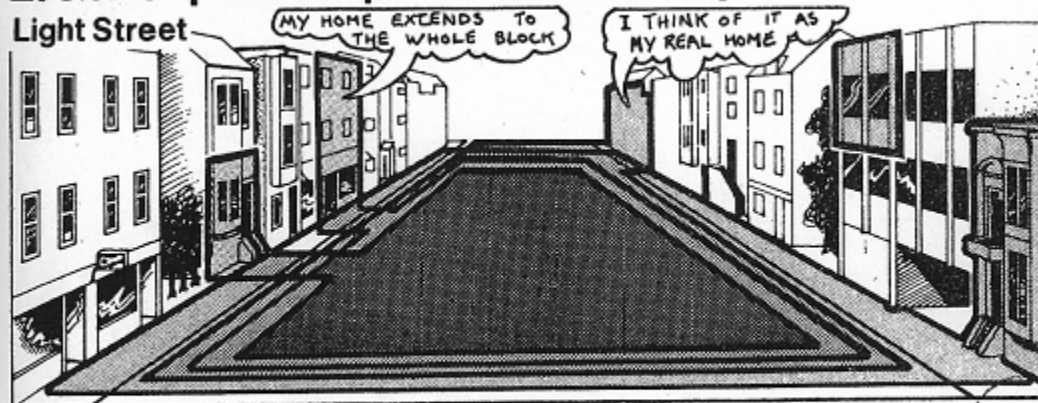
What is the extent of your home territory?

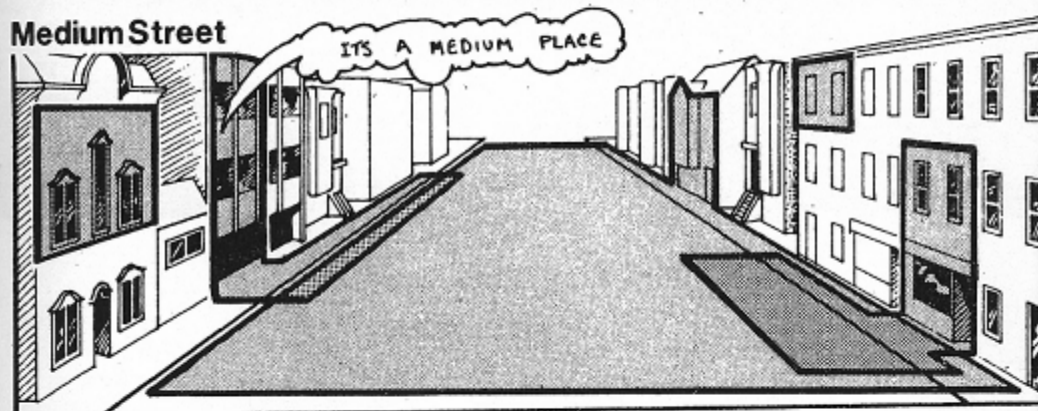# What is the extent of your home territory?

Additional Findings:
- ⬆ Traffic
- ⬇ Neighborhood pride
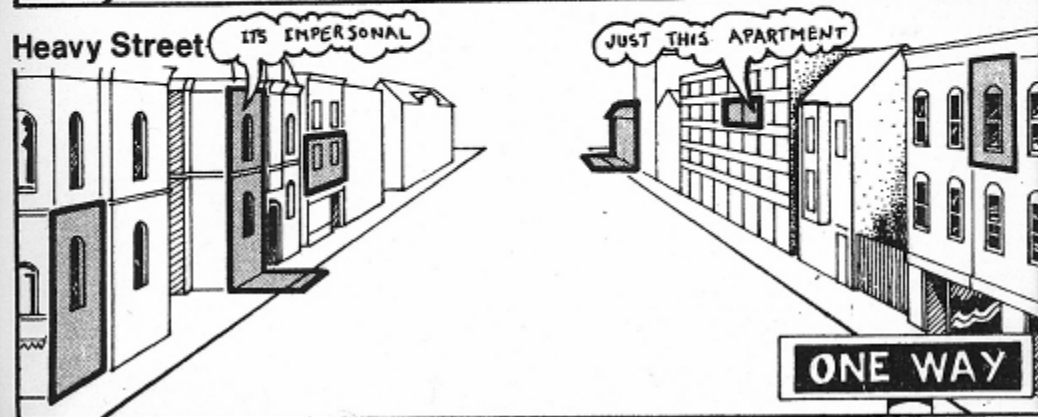- ⬇ Property values

2: Conception of personal territory

Light Street — "MY HOME EXTENDS TO THE WHOLE BLOCK" "I THINK OF IT AS MY REAL HOME"

Medium Street — "ITS A MEDIUM PLACE"

Heavy Street — "ITS IMPERSONAL" "JUST THIS APARTMENT" ONE WAY
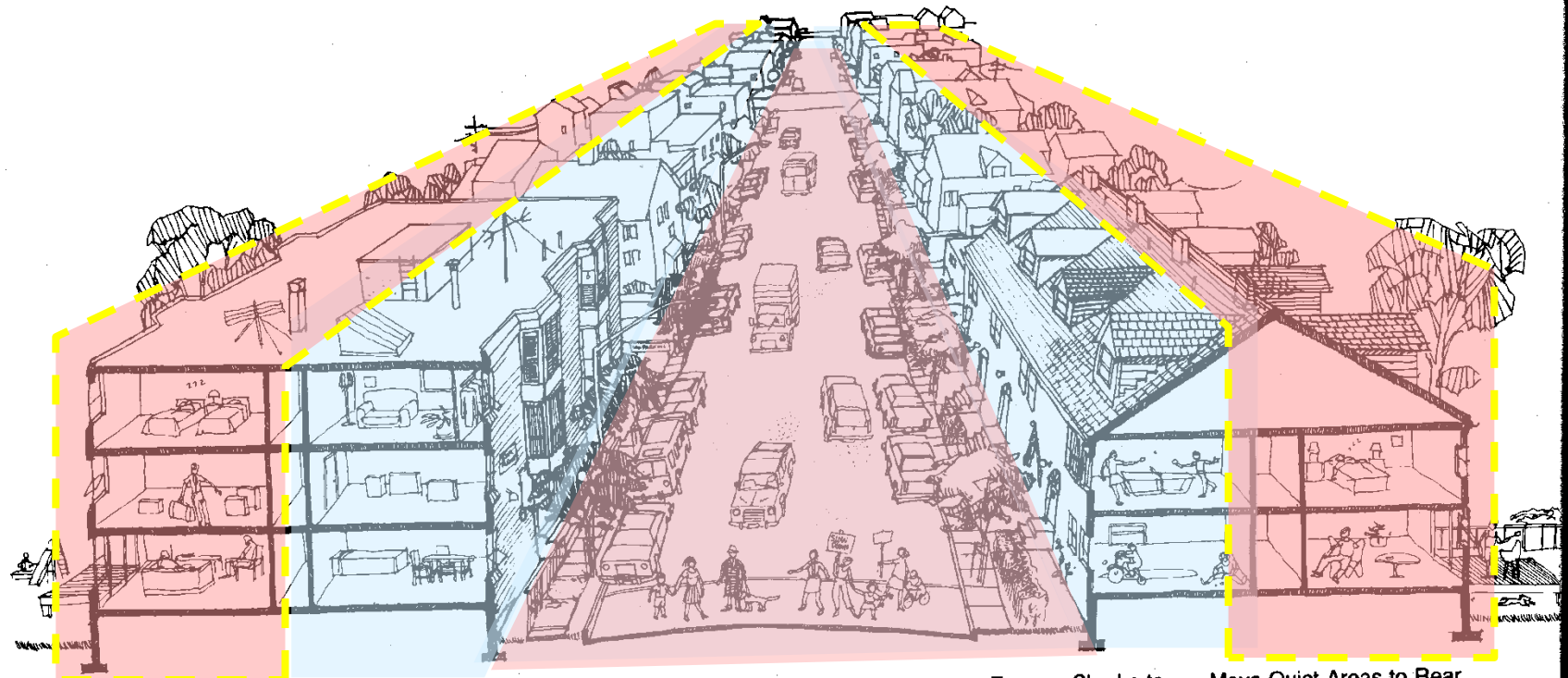
Bruce Appleyard, AICP
appleyard@berkeley.edu

Ecology of the Street
Street: At Peace In Conflict In Retreat

30 LIVING WITH TRAFFIC IN SAN FRANCISCO

Adapt Interior Space
Migrating
Unused Front Room Space

Grilles or Shutters
Security Lights, Burglar Alarms
Debris
No Parking Signs
More Street Trees for Buffer

Walking or Supervising
Childrens' Activities
Group Protest Against
Congestion

Fences, Shrubs to
Block Noise
Children Play Inside

Move Quiet Areas to Rear
Backyard Leisure Orientation

ADAPTIVE RESPONSES

Source: Livable Streets

Bruce Appleyard, AICP
appleyard@berkeley.edu

- "It was perhaps the most influential urban design books of its time.

     Prior to *Livable Streets*, streets were looked upon as 'Sewers for cars' and traffic was not yet seen to have broader impacts on our psychology, our socializing, or our sense of comfort around streets. After *Livable Streets,* streets were appreciated more fully: as places where people lived; as potential places to build important social ties; and as places for children to play."

- UC Professor Randolph Hester

Bruce Appleyard, AICP
appleyard@berkeley.edu

Issues: Current Political Discourse

- "Livability should be defined by each individual community"
  - People like to drive fast without congestion— *Economic Competiveness*
  - Many would consider this "Livable"
- By extension then, should people from one community be empowered to drive fast through other communities to avoid congestion?

Bruce Appleyard, AICP
appleyard@berkeley.edu

■ How do we prioritize between competing principles/objectives?

Economic Competitiveness– Free Flow Auto-mobility

Vs.

Supporting existing communities

Bruce Appleyard, AICP
appleyard@berkeley.edu

- **Support existing communities**
- What happens when a community has been disenfranchised, sometimes by the transportation system itself?

Bruce Appleyard, AICP
appleyard@berkeley.edu

Powers of Observation:
Striving to Overcome the Alienating Forces of Auto-Domination

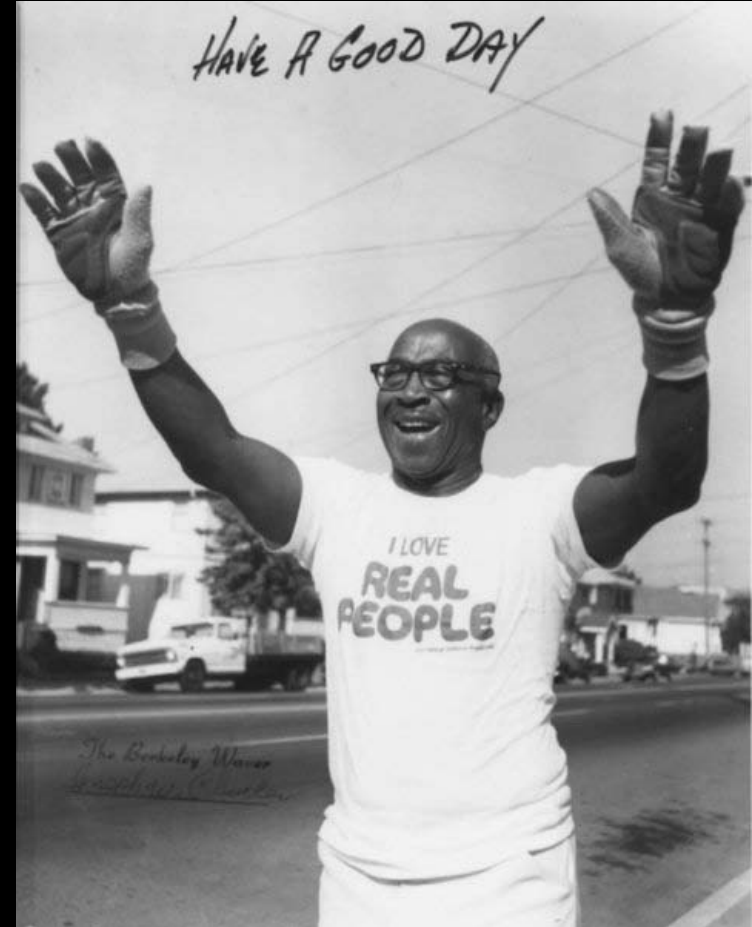we need to recognize that we are sometime trying to measure the "unmeasurable".

Striving to Overcome the Alienating Forces of Auto-Domination

Striving to Overcome the Alienating Forces of Auto-Domination

Bruce Appleyard, AICP
appleyard@berkeley.edu

Striving to Overcome the Alienating Forces of Auto-Domination

Bruce Appleyard, AICP
appleyard@berkeley.edu

we need to recognize that we are sometime trying to measure the unmeasurable.

go get WATER NOW

CONGRATS!
YOU Finished
the world's best
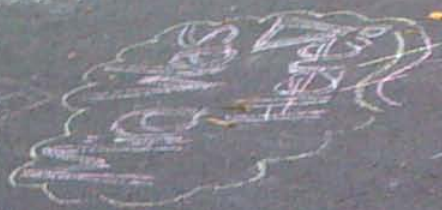hop scotch!

99 | 100

98

97

96

eated.
books

Jenry
+Naomi

AHEAD

END

DEAD

NOT
A
THROUGH
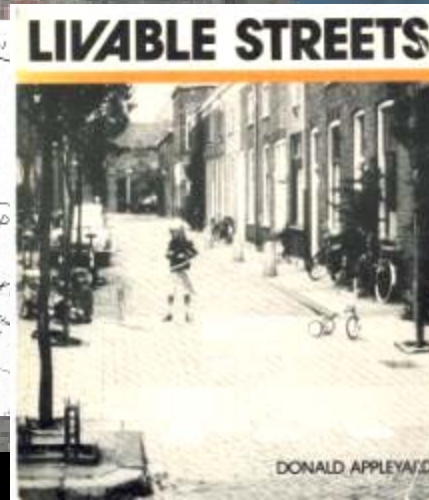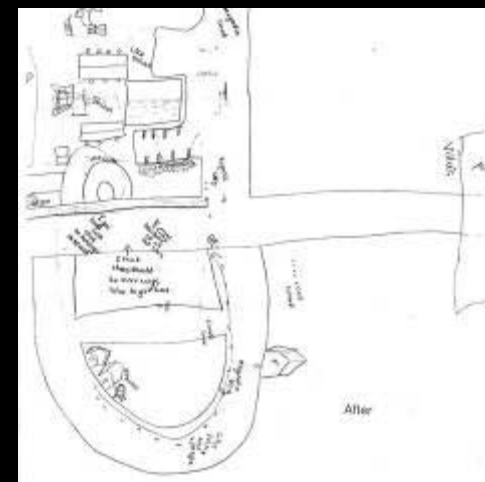STREET

Marvelous
Intelligent
Awesome

Papas
Cap

Bruce Appleyard, AICP
ppleyard@berkeley.edu

Illustrations of How People Traveling by Different Modes Experience The Environment Differently

- *Retrofitting Auto-Suburbia: A Community Guide to Overcoming Auto-Domination*
- *Livable Streets for Schoolchildren*

LIVABLE STREETS

DONALD APPLEYARD

Kevin Lynch:
THE IMAGE OF THE CITY

Bruce Appleyard, AICP
appleyard@berkeley.edu
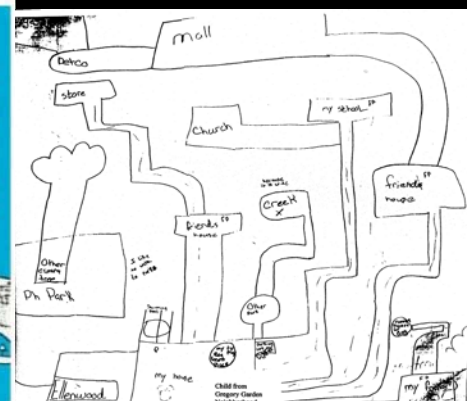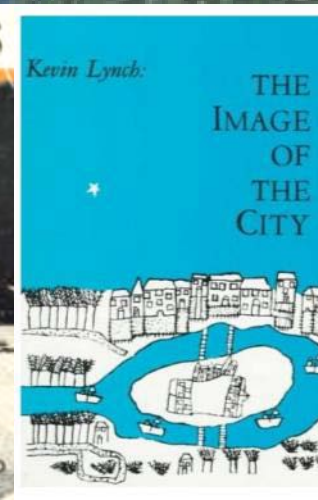
When driven everywhere, children become cognitively disconnected from their environment
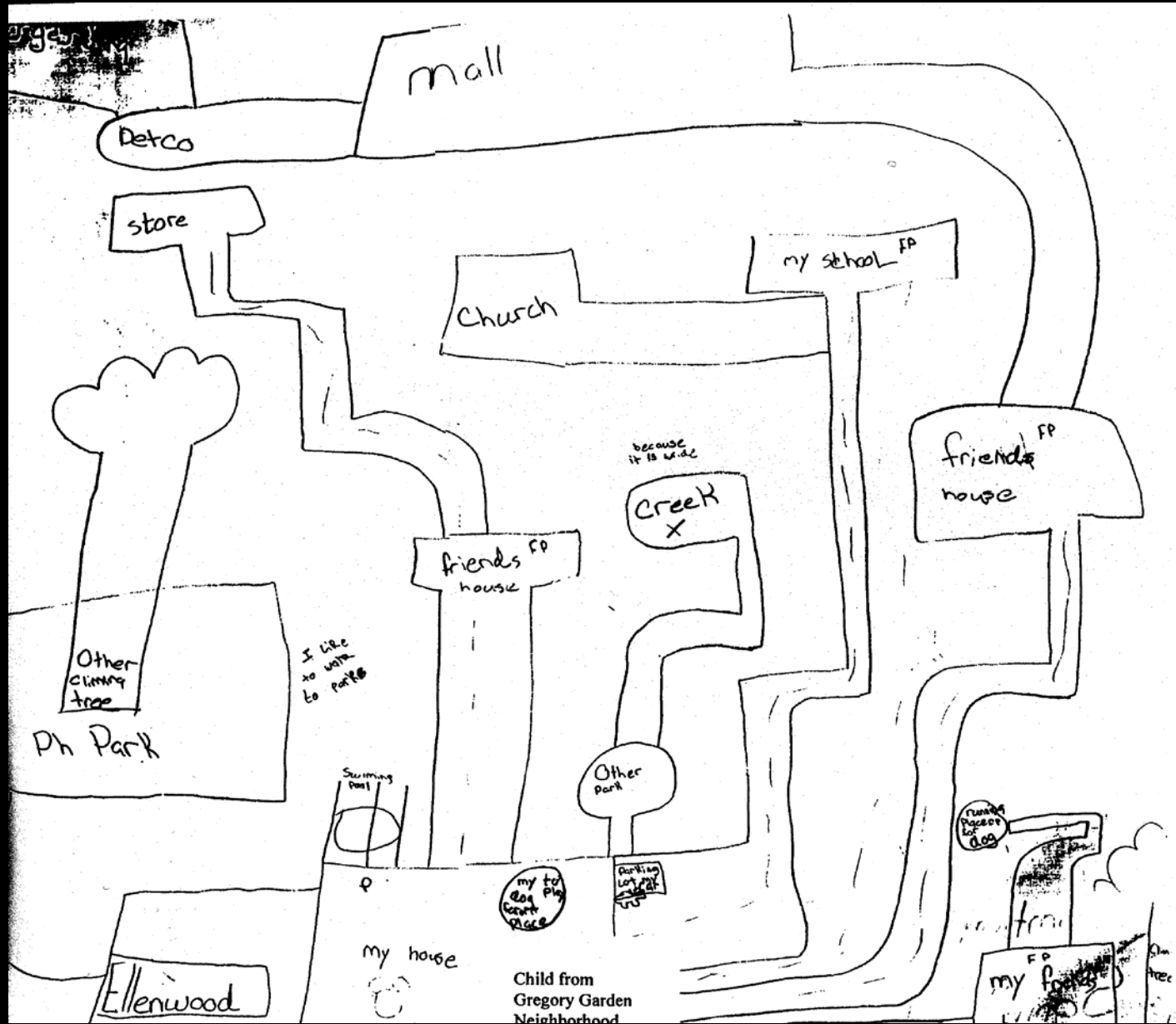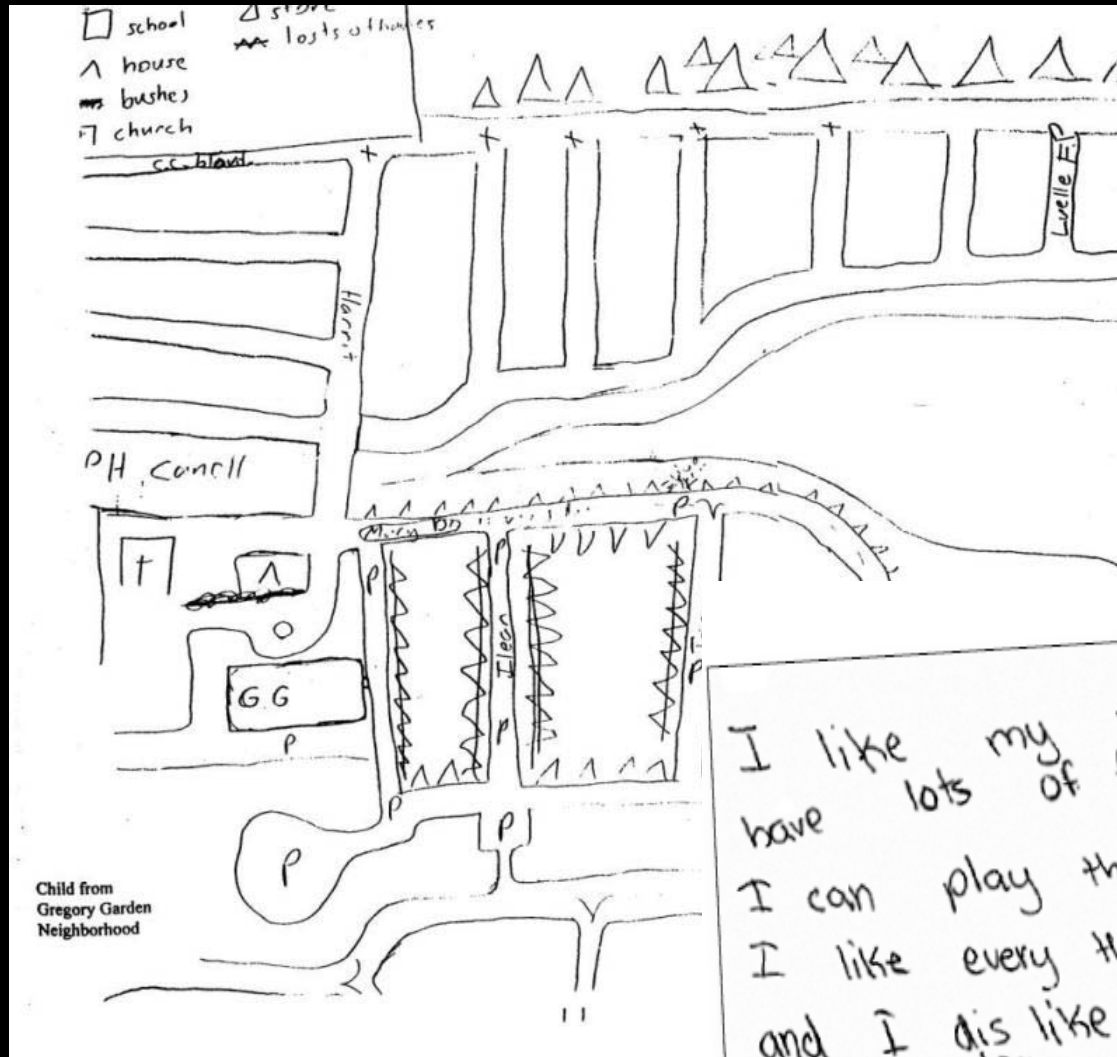

"Livable Streets for Schoolchildren"
By Bruce Appleyard
www.bikewalk.org

Bruce Appleyard, AICP
appleyard@berkeley.edu

The View From Outside a Car

school
store
house
lots of homes
bushes
church

s.c. blavd

Harrit

Luelle Ed

PH Concll

t

G.G

P

P

P

P

P

P

Child from
Gregory Garden
Neighborhood

I like my nabarhod becaus I
have lots of friends, and because
I can play there when ever I want,
I like every thing in my nabar hod
and I dis like nothing in my naborhod
and I also ride my bike every where
or I walk.

Bruce Appleyard, AICP
appleyard@berkeley.edu
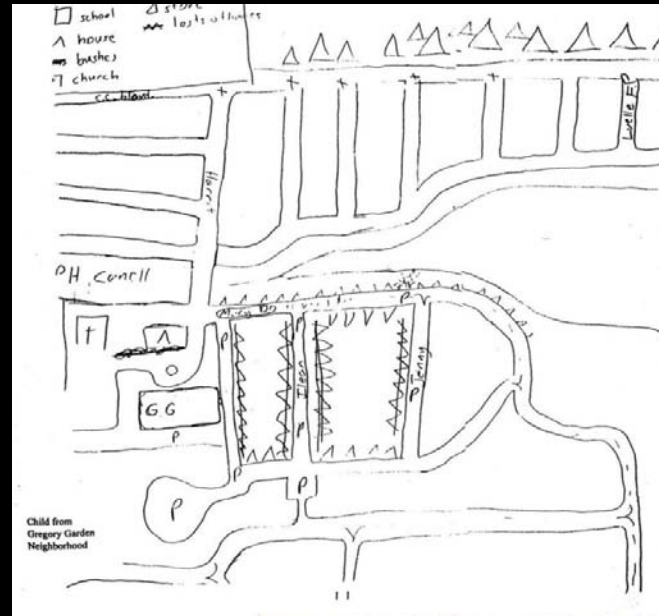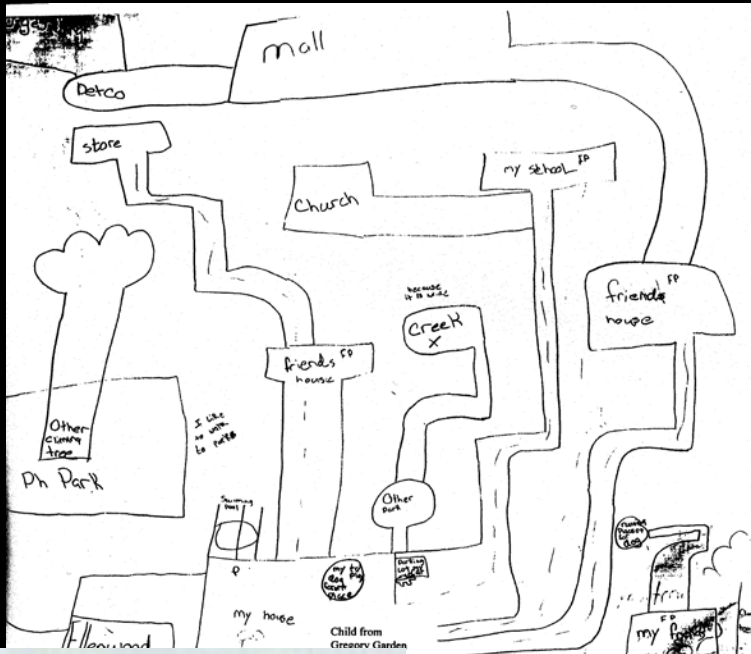
Satisfaction: Values, Expectations, Adaptation

ppleyard, AICP
@berkeley.edu
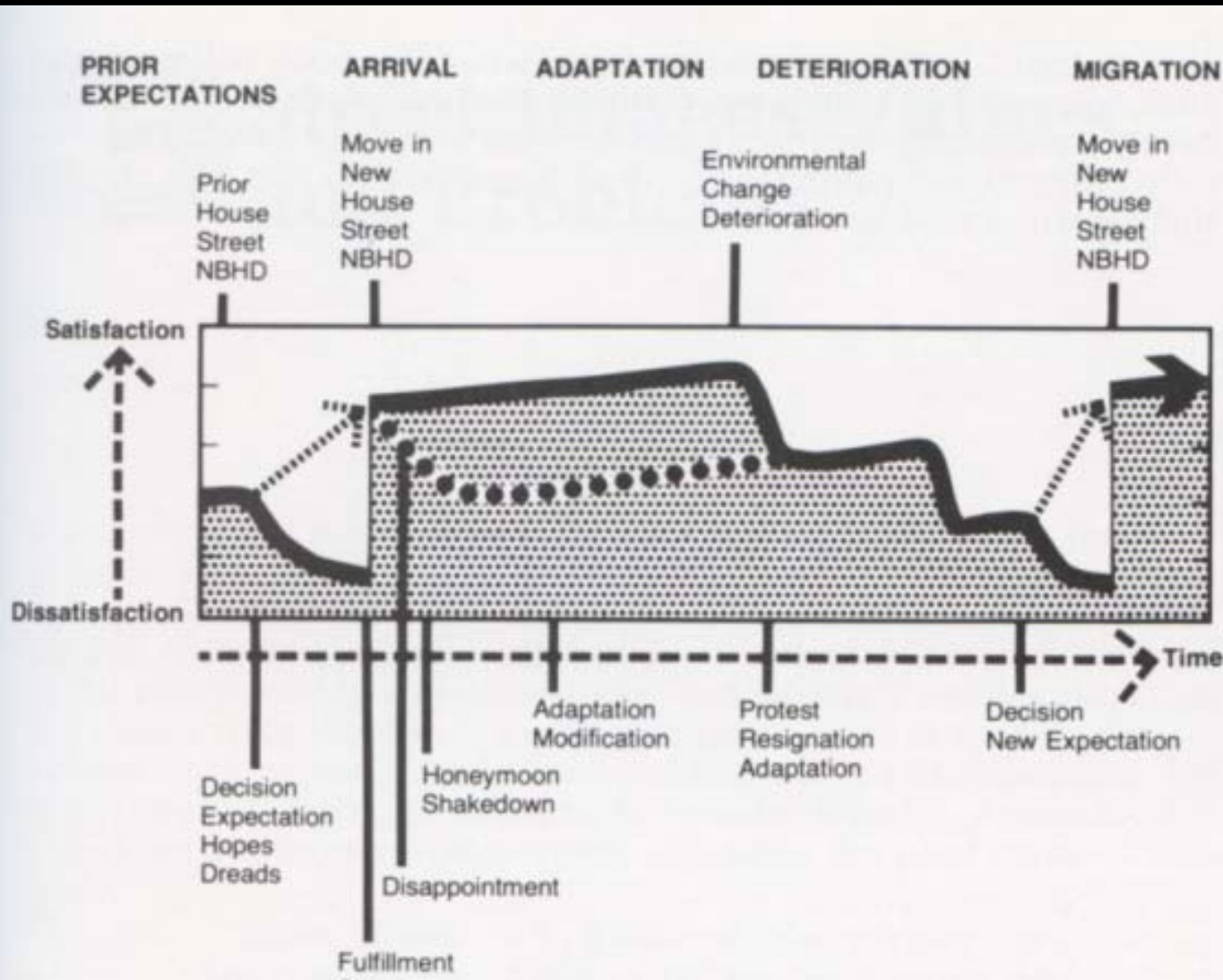
Livable Streets Findings: What people want on their streets

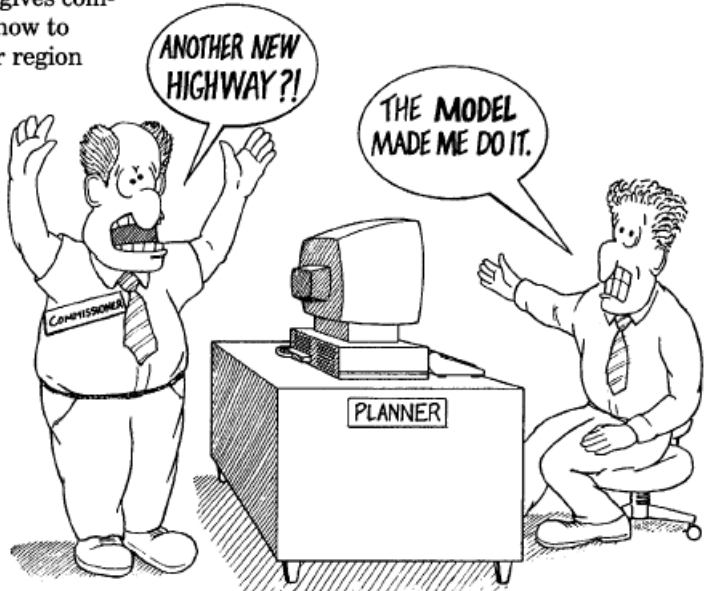

Percentage Saying "Very Important"

Clean, Unlittered / Attractive Appearance / Greenery — Appearance

Near Public Transport / Walking Conditions / Close to Shops / Close to Parks — Accessibility / Convenience

Accessibility — Multi-Modal Mobility

EASY for CAR — Auto-Mobility

Peaceful & Quiet / Safe from Traffic — Traffic

Sociable, Friendly / Good for Children — Neighbors/ Children

Bruce Appleyard, AICP
appleyard@berkeley.edu

When Curb Radius Is Too Large?…

Cars Encroach and Drive Fast

Bruce Appleyard, AICP
appleyard@berkeley.edu

YES
SIDEWALKS
IN
HAWTHORNE

NO
SIDEWALKS
IN
HAWTHORNE

Contributions of Livable Streets

- Established framework to evaluate impacts of traffic on people & communities
  - Introduced the phrase "Ecology of the Street"
  - Changed focus from driver-ped conflict to driver vs. resident conflict
  - Articulated the "roles" people play and the unequal distribution of power

The Use of Streets: A Reassessment and Tribute to Donald Appleyard
EDUARDO VASCONCELLOS

Bruce Appleyard, AICP
appleyard@berkeley.edu

Contributions of Livable Streets
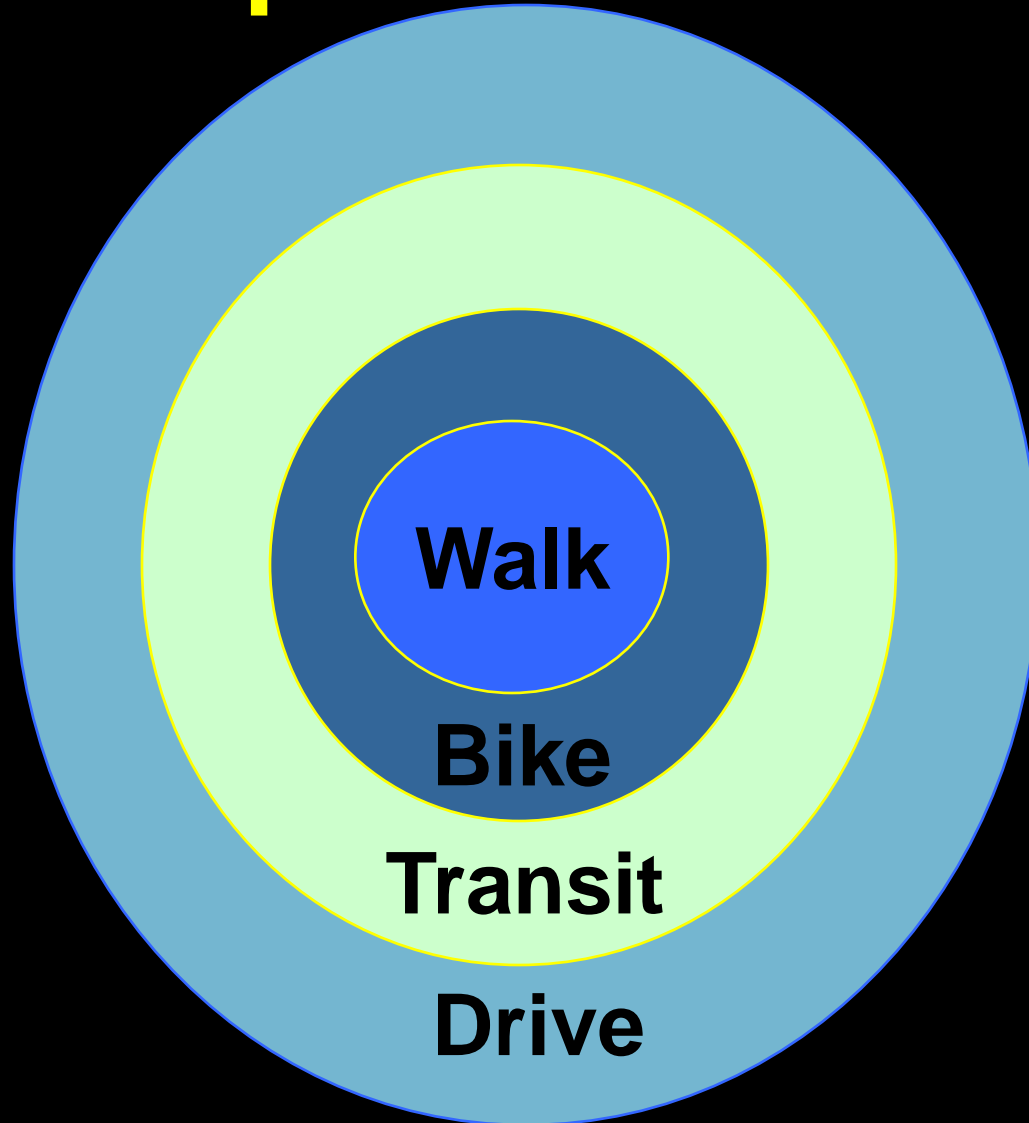
The Promise of Our Streets:
Argued for a
*   "National Livable Streets Program"*
The Complete Streets Movement

Processes Before Prescriptions:
Context Sensitive Solutions (CSS)

Bruce Appleyard, AICP
appleyard@berkeley.edu

Livable Streets: Pioneered Complete Streets Hierarchy[*]

Walk

Bike

Transit

Drive

Important for lowering GHG as often about a quarter of all trips are less than or equal to one mile.

Bruce Appleyard, AICP
appleyard@berkeley.edu

LIVABLE STREETS VIDEO

http://www.streetfilms.org/revisiting-donald-appleyards-livable-streets/

Played over 10,000 times after only three months! (by January 2011)

Closing Remarks on Achieving Livability: Re-connecting, and Re-establishing Community

- As written in the pages of this book, <u>people adapt to poor conditions</u>. And thus to achieve *livability* we will often need to <u>uncover where community ties have been undermined</u>, or even displaced. And then help work toward re-establishing these social connections.

Bruce Appleyard, AICP
appleyard@berkeley.edu

Closing Remarks on Achieving Livability: Observing, Revealing and Assisting

Furthermore, to achieve livability we must be ready to <u>research and observe people's revealed behavior</u>, uncovering aspects of people's lives that could be better. In sum we will need to strive to <u>reflect the actual conditions of urban ecologies and experiences</u>—giving people the information and images necessary for them to understand what is wrong and unlivable, and what is necessary to make things better.

Bruce Appleyard, AICP
appleyard@berkeley.edu

Lessons Learned from Livable Streets: Principles for Measuring/Achieving Livability

1. *People Adapt to Poor Conditions*
   - The poor, the disenfranchised. Disconnected.

- *The Need for Advocacy and Inclusion: Understanding the Adaption and Retreat from Poor Conditions*

Bruce Appleyard, AICP
appleyard@berkeley.edu

Lessons Learned from Livable Streets/ Principles for Measuring/Achieving Livability

- It is about people
  - "It's about moving people" not about moving "tin cans" or "steel boxes"

Achieving Livability:

- Priority placed on : out-of-vehicle travellers (a vulnerable human state)
  - The "Out-Car-Experience"
  - Humanist approach

Bruce Appleyard, AICP
appleyard@berkeley.edu

Principles for Measuring/Achieving Livability

- Analysis of observed behavior
  - Reflecting this back to people
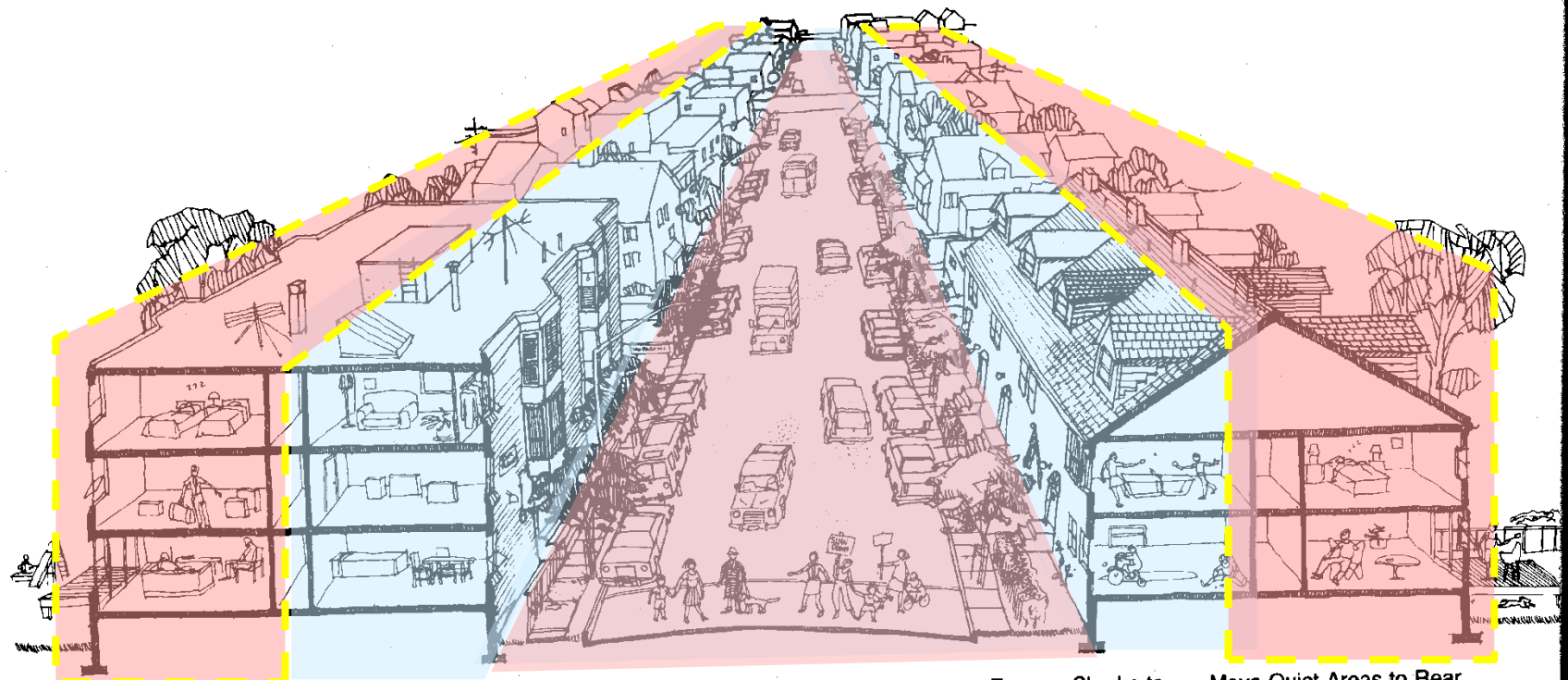- Cost internalization of Livability impacts

Bruce Appleyard, AICP
appleyard@berkeley.edu

Livability Trip Profiles

- Cost internalization of Livability impacts
- Livability Trip Profiles

Bruce Appleyard, AICP
appleyard@berkeley.edu

Livability Trip Profiles
Street: At Peace In Conflict In Retreat

30 LIVING WITH TRAFFIC IN SAN FRANCISCO

Adapt Interior Space
Migrating
Unused Front Room Space

Grilles or Shutters
Security Lights, Burglar Alarms
Debris
No Parking Signs
More Street Trees for Buffer

Walking or Supervising
Childrens' Activities
Group Protest Against
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Fences, Shrubs to
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Children Play Inside

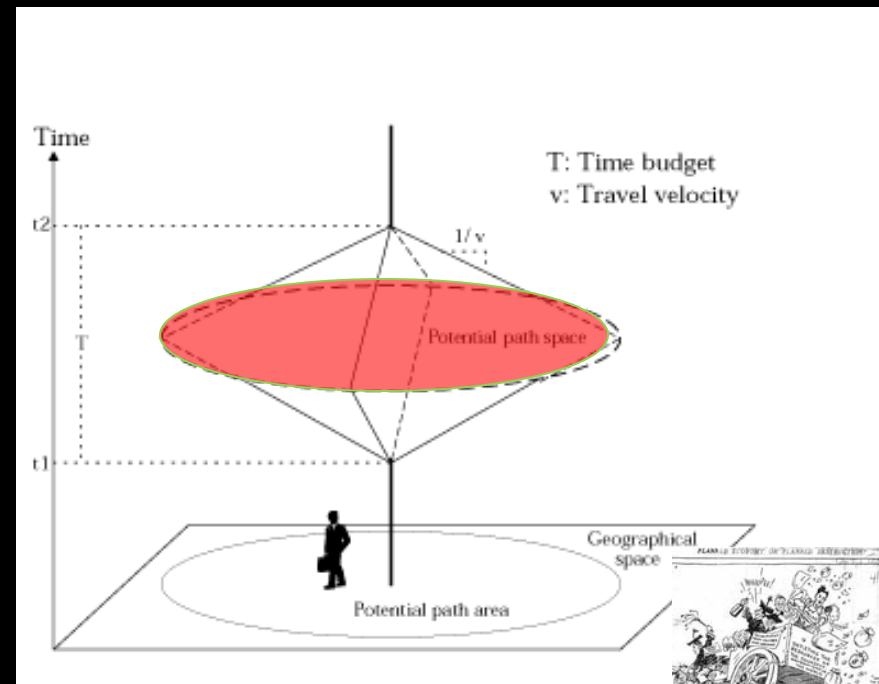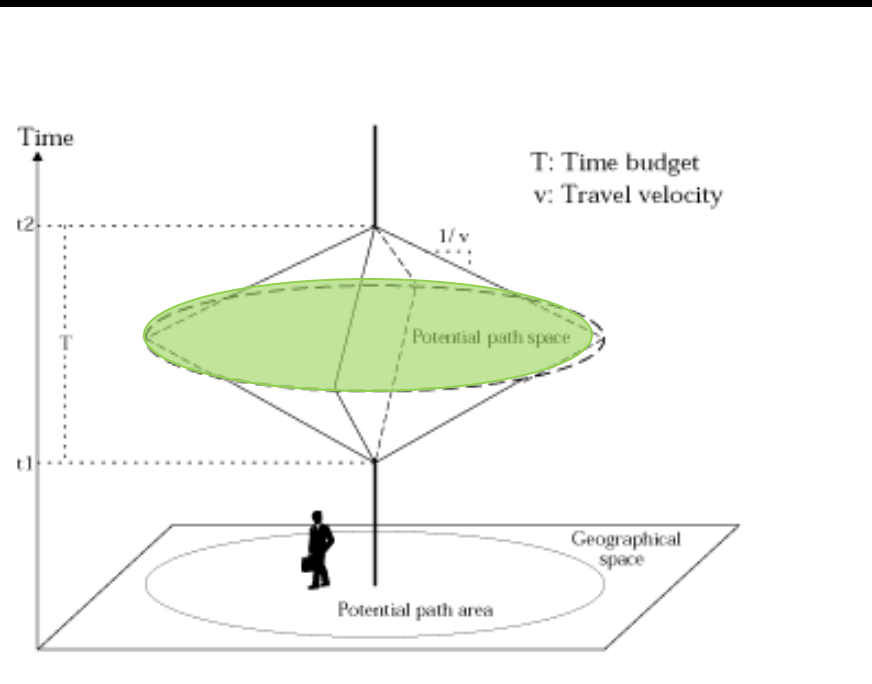Move Quiet Areas to Rear
Backyard Leisure Orientation

ADAPTIVE RESPONSES

Source: Livable Streets

Bruce Appleyard, AICP
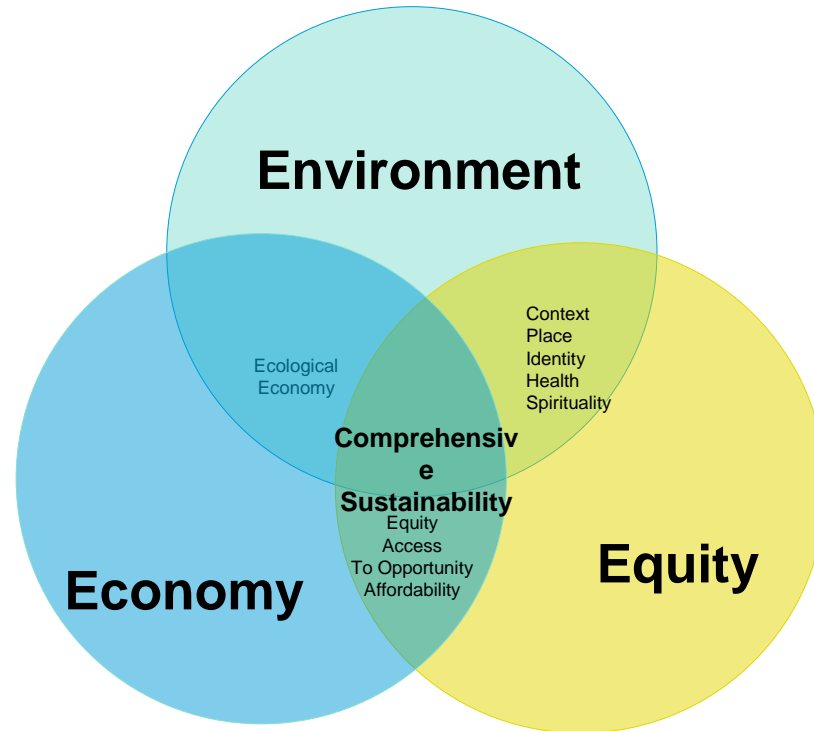appleyard@berkeley.edu

Livability Trip Profiles

- Cost internalization of Livability impacts
- Livability Trip Profiles

Bruce App...
appleyard@...

Achieving LIVABILITY In Transportation Needs some of the following

- Human Scale priority

- Comprehensive and equitable Inclusivity
  - Cost internalization of Livability impacts
  - Livability Trip Profiles

- Exchange Efficiency
  - Social Networking and knowledge transfer
  - Access to opportunity

- Analysis of observed behavior
  - Reflecting this back to people

Bruce Appleyard, AICP
appleyard@berkeley.edu

Toward a Definition of Livability to Guide Planning Decisions

Environment

Ecological Economy

Context
Place
Identity
Health
Spirituality

Comprehensive Sustainability

Equity
Access
To Opportunity
Affordability

Economy

Equity

The Brundtland Report's overarching definition of sustainable development :
"meet the needs of the present generation, without compromising the ability of future generations to meet their own needs."

Toward a Definition of Livability to Guide Planning Decisions

- ***Quality of Life***

  - Placing a priority on society's disadvantaged and most vulnerable.

- ***Public Realm***, but ***Mediating the Power Play Therein.***

- B***alanced Opimization of Society's Collective Quality of Life***

Bruce Appleyard, AICP
appleyard@berkeley.edu

Toward a Definition of Livability

- *Livability* is a balanced optimization of the collective quality of the "human experience"
  - in and around public spaces,
  - placing a priority on the disadvantaged and most vulnerable.

  One's pursuit of Livability Should Not Unduly Detract from a Region/Community's Collective Quality of Life

Bruce Appleyard, AICP
appleyard@berkeley.edu

Closing Remarks on Achieving Livability:
Re-connecting, and Re-establishing Community

- As written in the pages of this book, <u>people adapt to poor conditions</u>. And thus to achieve *livability* we will often need to <u>uncover where community ties have been undermined</u>, or even displaced. And then help work toward re-establishing these social connections.

Bruce Appleyard, AICP
appleyard@berkeley.edu

Closing Remarks on Achieving Livability: Observing, Revealing and Assisting

Furthermore, to achieve livability we must be ready to <u>research and observe people's revealed behavior</u>, uncovering aspects of people's lives that could be better. In sum we will need to strive to <u>reflect the actual conditions of urban ecologies and experiences</u>—giving people the information and images necessary for them to understand what is wrong and unlivable, and what is necessary to make things better.

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appleyard@berkeley.edu

ET+ Scenario Builder:

Buildings

- Quickly paint scenarios using financially feasible building blocks

Scenarios

- Compare multiple scenarios across variety of indicators

- Track progress in real-time

- Developing 18 "Apps"
  - Complete and Livable Streets

- Solving Transportation Problems With non-transportation solutions

Indicators

- **"It's The Housing, My Friend"**

The Dual Perspective For Measuring and Achieving Livability

Region

Site

Community Corridor

Site

Site

Bruce Appleyard, MCP, AICP
brucea@serapdx.com

SERA

Thank You!

Bruce Appleyard, AICP
ppleyard@berkeley.edu

Street Vision

""We should raise our sights for the moment.

What could a residential street —

> a street on which our children are brought up, adults live, and old people spend their last days —

what could such a street be like?"

Donald Appleyard, *Livable Streets*, 1981

Bruce Appleyard, AICP
appleyard@berkeley.edu
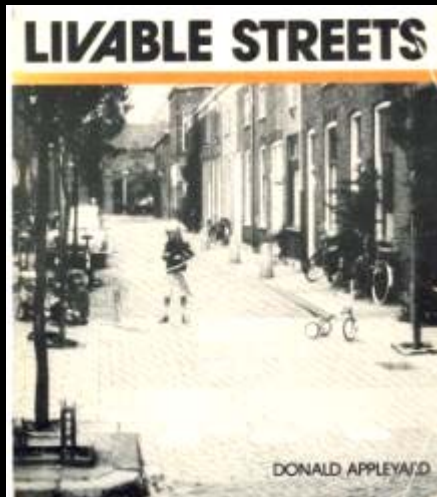
We must ask the following:

- Who is missing? Who is being excluded?

- Achieving Livability means to:
  - actively reach out and include others.
  - recognize that people will adapt to poor conditions

Bruce Appleyard, AICP
appleyard@berkeley.edu

Re-imagining and Re-envisioning the Promise of our Streets

we need to help people re-imagine and re-envision the promise of our city's most accessible public spaces—

the places where we can most easily gather and socialize to share knowledge, support, and to learn about the world;

where we can choose to walk or bicycle to save the environment and improve both our physical and creative health; and finally the places where we can freely find rest, joy and rejuvenation—

our streets.

Bruce Appleyard, PhD

LIVABLE STREETS

DONALD APPLEYARD
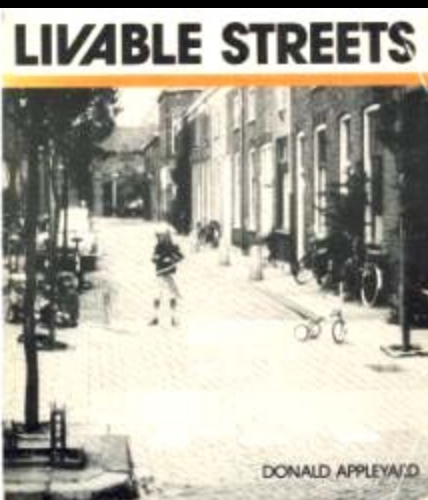
Bruce Appleyard, AICP
appleyard@berkeley.edu

Three Pillars Model

□ Lutzkendorf and Lorenz (2005)
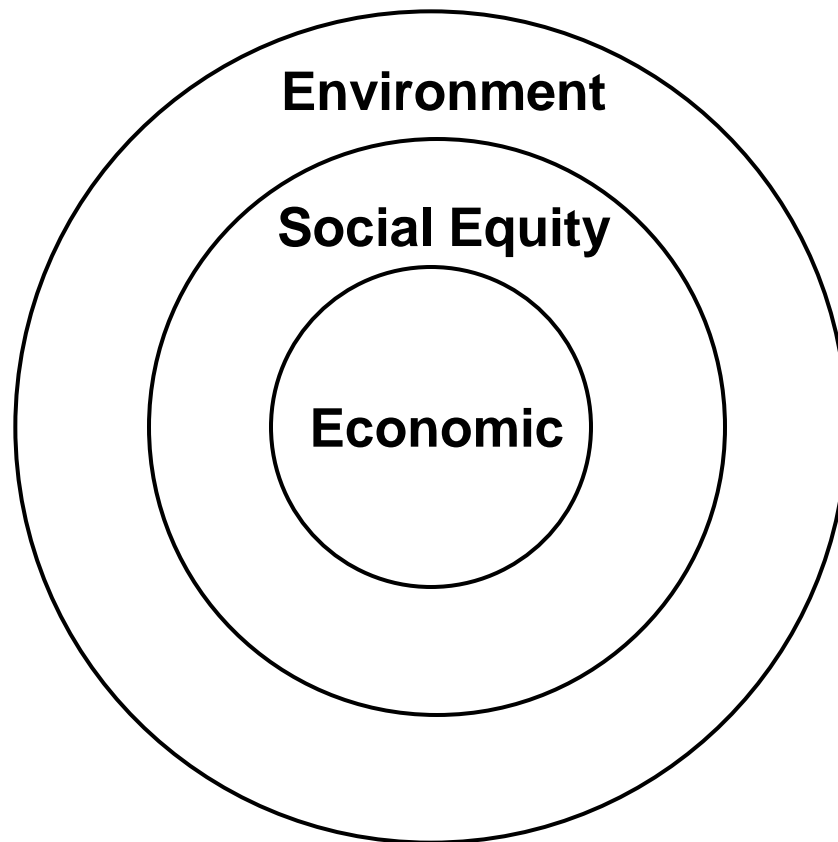
Future Work
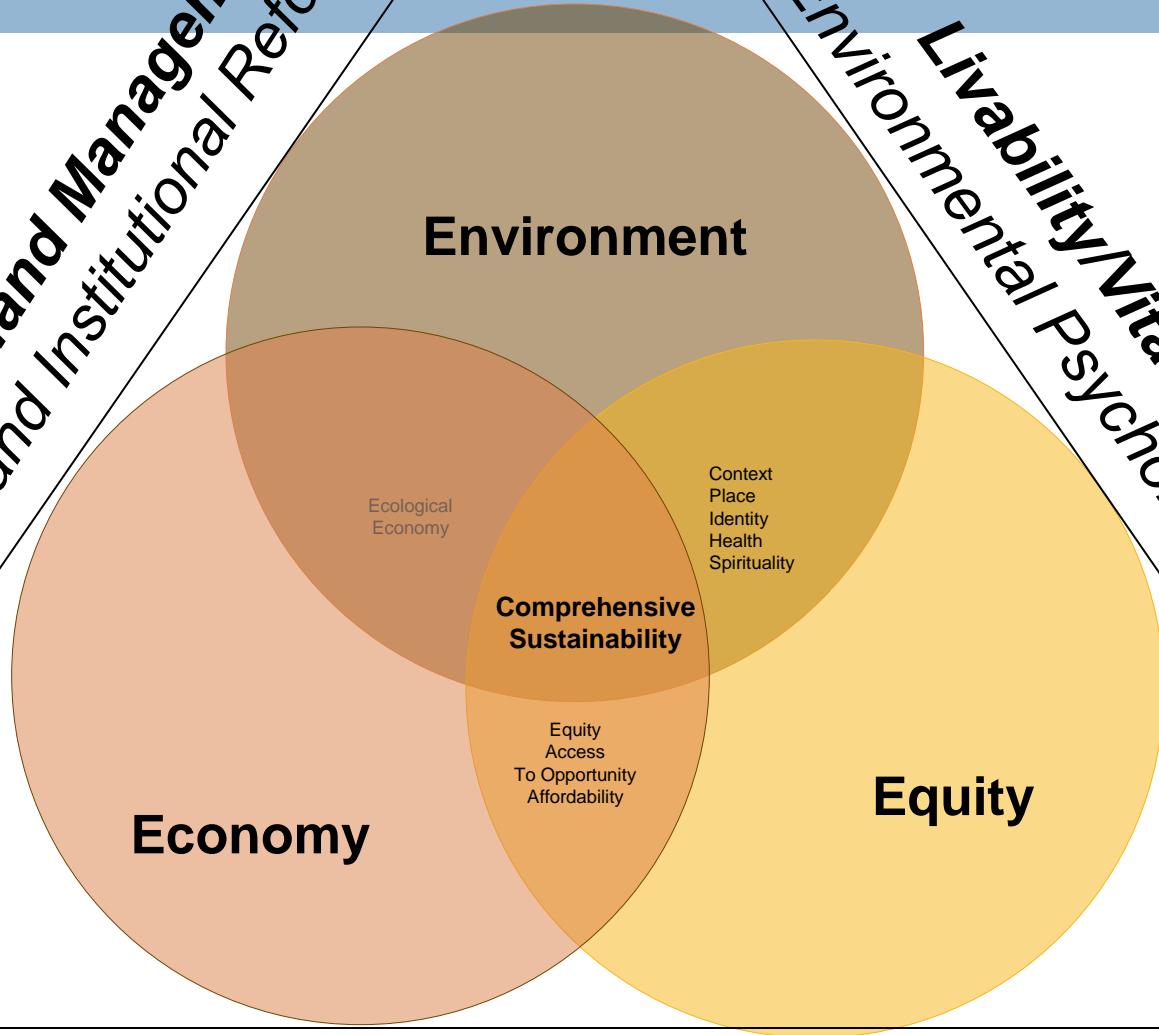
Auto-Mobility Paradigm Then
Berkeley - Circa 1975

Bruce Appleyard, AICP
appleyard@berkeley.edu

Bruce Appleyard, AICP
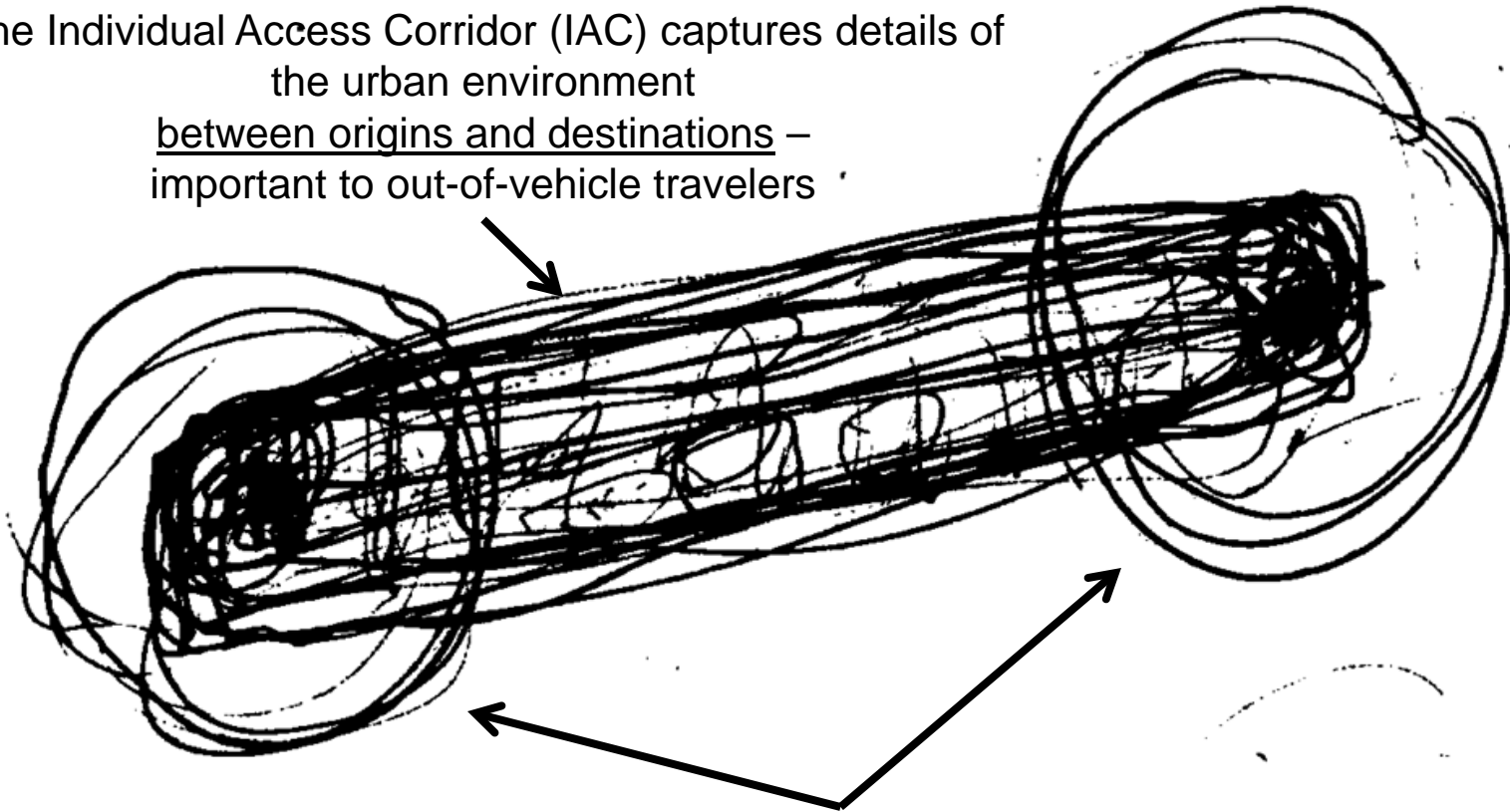**appleyard@berkeley.edu**
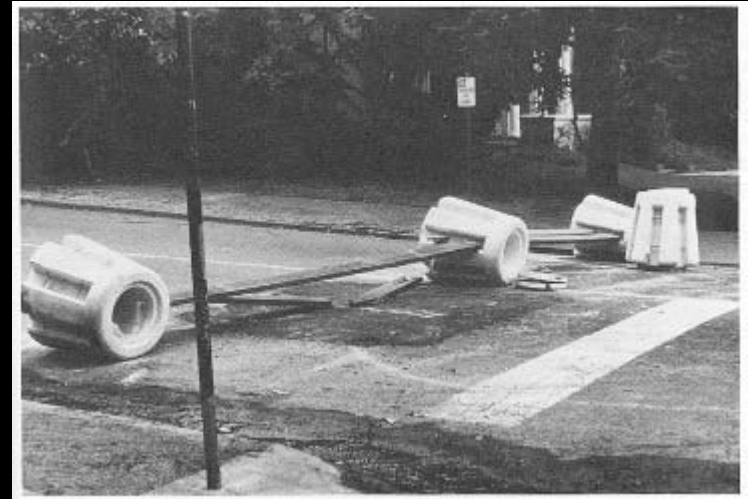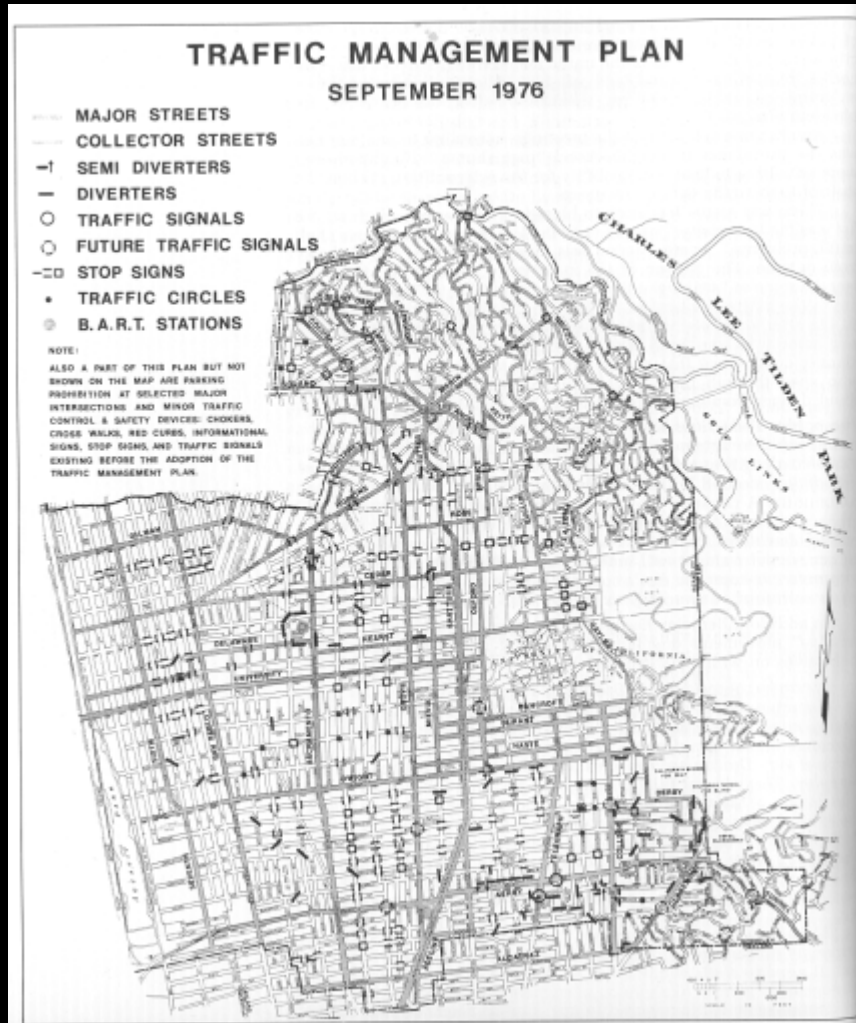
New Spatial Unit of Analysis

• To more equitably handle these two perspectives
• Individualized, detailed information
• Frameworks created help manage "information overload"

The Individual Access Corridor (IAC) captures details of
the urban environment
between origins and destinations –
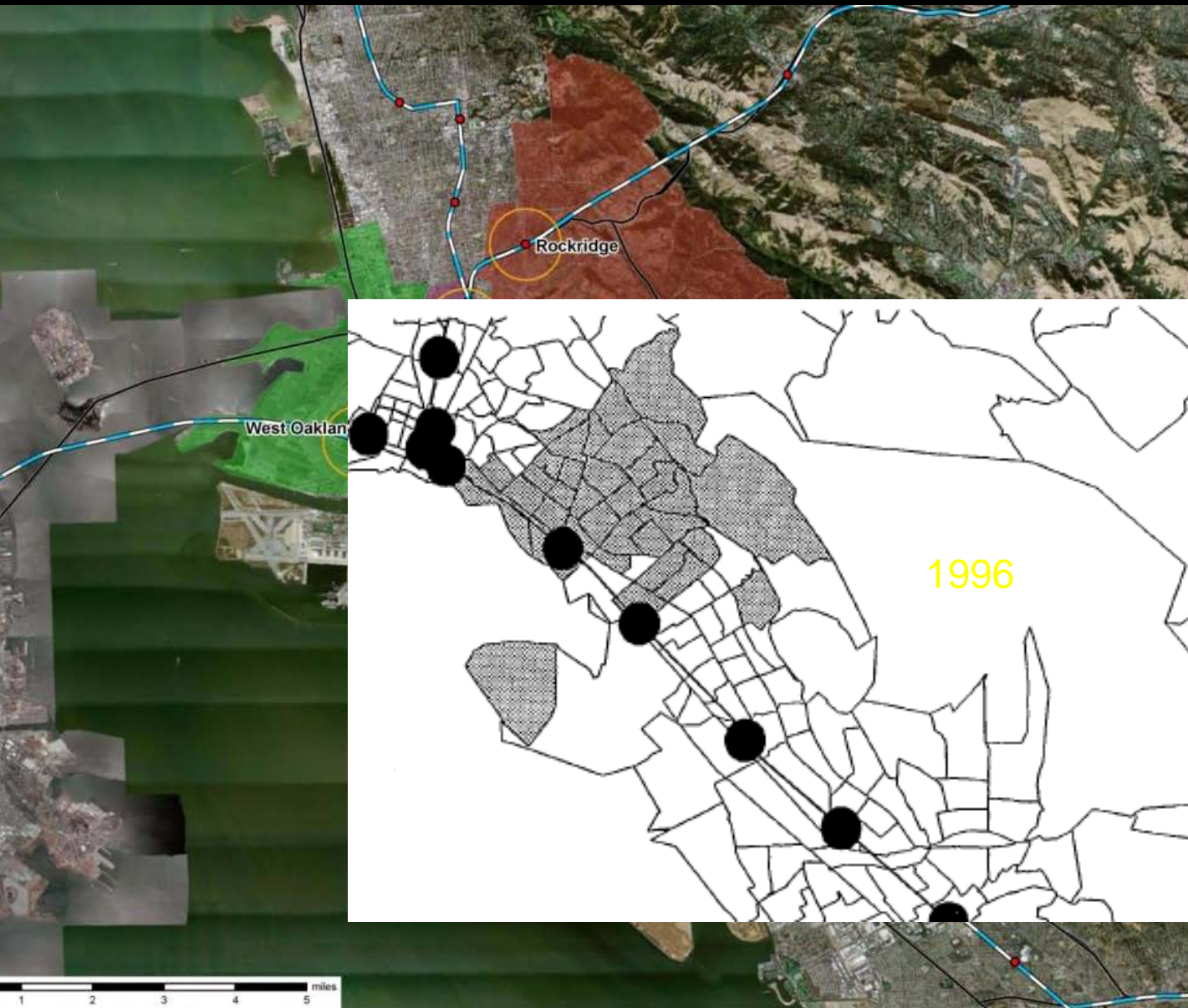important to out-of-vehicle travelers

Conventional spatial units of analysis-
Zones around the origins and destinations

The IAC in Action:
- Estimated paths for thousands of survey respondents.
- Created analytical frameworks
- Broadens the prevailing research paradigm.
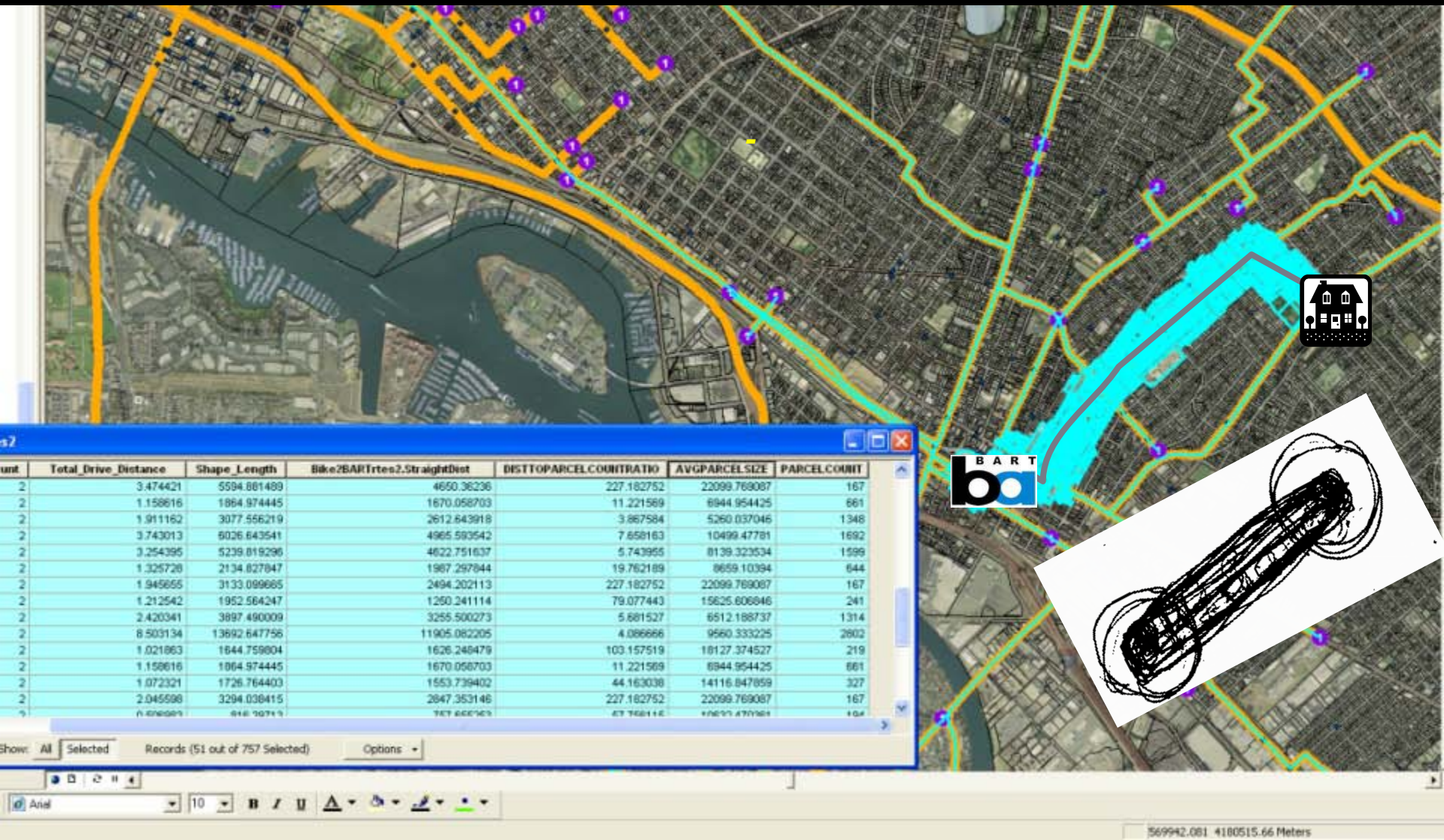
BART Oakland Stations
Catchment Areas by TAZ

Legend

- Station
- Half-mile Radius
- BART Alignment
- Major Roads

Catchment Area by Station

- Coliseum
- Fruitvale
- Lake Merritt
- Rockridge
- 12th Street
- 19th Street
- MacArthur
- West Oakland

1996

Background: Methodological Progression

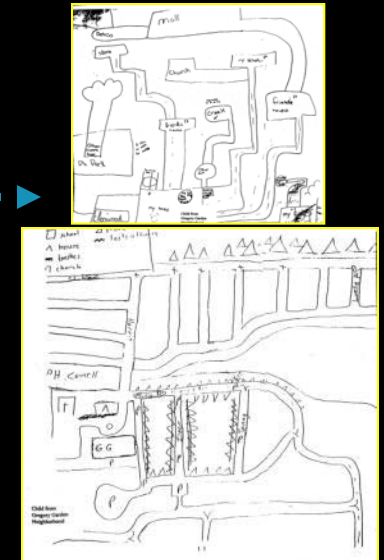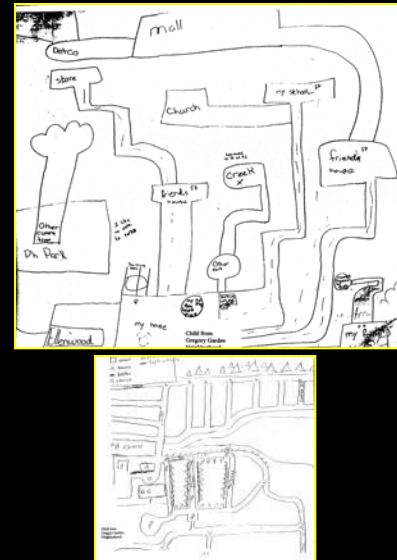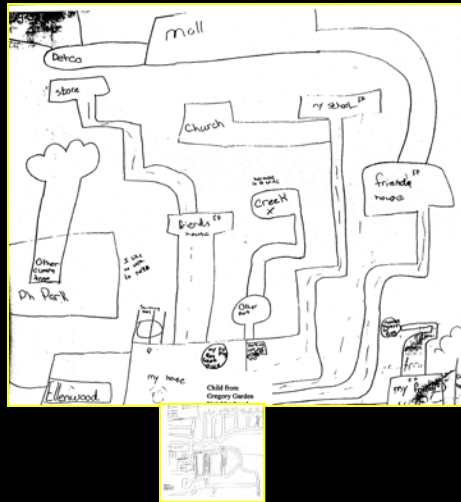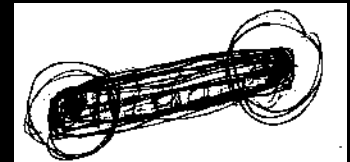| Analytical Framework	Conventional, 4-Step Modeling	D-Variables of the Built Environment	IAC Analysis
Spatial Unit of Analysis	Traffic Analysis Zones (TAZs)	TAZs or ½ mile radii	
Perspective			

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Creating Livable & Complete Streets

Safe & Comfortable

+

Sense of Place Aesthetics

Connected & Accessible
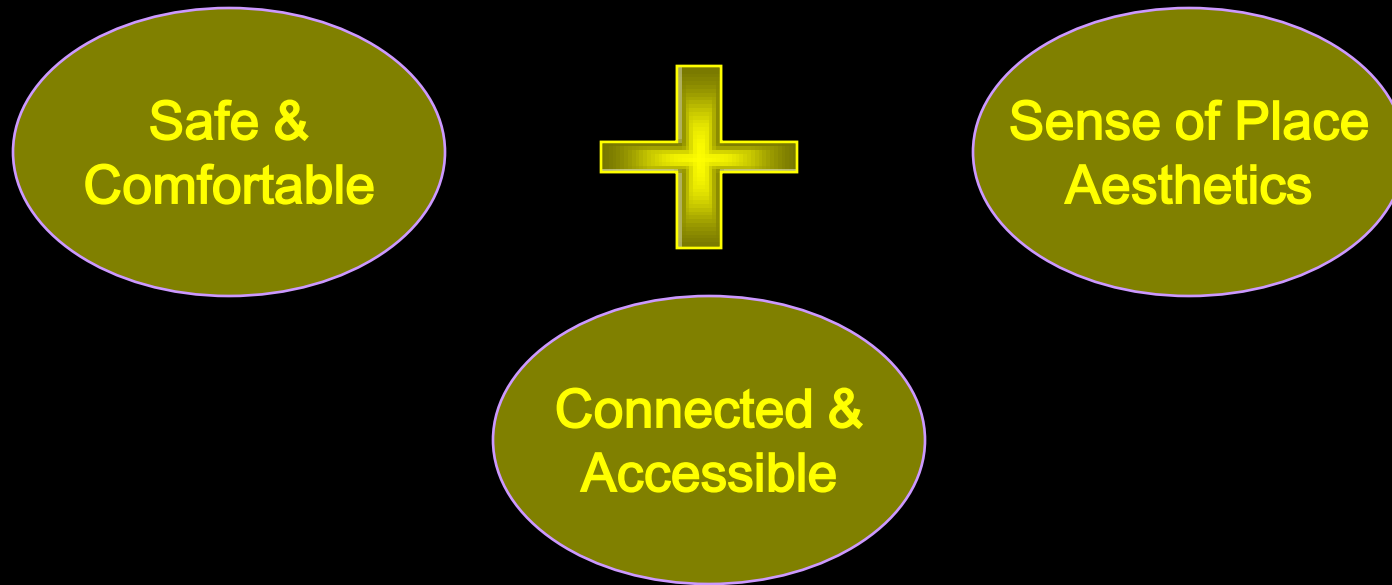
I.   **Getting Across the Street**
II.   **Getting Along the Street**
III.   **Placemaking**
IV.   **Traffic Calming**

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Livable Streets are Comfortable Places For People and Pets

Rijsvijk, The Netherlands
Source: Hamilton-Baille Associates

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