





Placemaking for Healthy Cities: Research into Practice

Michael W. Mehaffy, Ph.D.

Director, Future of Places Research Network, Stockholm
Director, Sustasis Foundation, Portland OR







Centre for the Future of Places

KTH (Stockholm) research centre evolving from the Future of Places partnership, a 4-year forum developing key messages for the New Urban Agenda, bringing together over 1,500 researchers, professionals, government leaders and activists from 275 organizations in 100 countries.

The forum's focus is on public space as the essential connective framework for healthy urbanization.

Public space and health in the New Urban Agenda:

- ...human health and well-being
- ...physical and mental health
- ...social interaction and inclusion
- ...household and ambient air quality, to reducing noise
- ...promoting attractive and liveable cities [and] human settlements (etc)

Database on public space research (KTH)

		asase off par	one space research (K111	
	Behavior •	Main Finding +	Key concept -	Reference
		Detached single	Real estate value	Cho, SH.
		Recreation and	Real estate value	Kovacs, K
	Attraction ~	provision of publ.	Restorative activities	-
	Play+	"The example of	Restorative activities (entertainment)	Oosterman
	Play -	the child's freed	Restorative activities (play)	Lennard, H
	Play +	In order to prom	Restorative activities (Play)	Ergler, C. I
	Play =	1) the duration o	Restorative activities (Play)	Anastasia
0.	Viewing +	High visibility an	Safety	Schroeder
	Movements *	Sense of commu	Sense of community	_
	Sense of C →	The described s	Sense of community	Joines-Nov
	Sense of C +	Results indicate	Sense of community	Pendola, R
		Spatial distributi	Sense of community	Talen F (

Many Physics

44

Yahong the Boachie of Public Space Systems

Madest W Middelly Strainers Nationals Inc. Surrich Frysolation

14 July 2805

MATE. This paper was first proposed for kinylles ER, whose suggest is pumplely actional algorithm.

Aging in emphorhoods differing in wallandity and income associations with physical activity and obserts in older adults. Social Science of Medicine, 73(10), 1525-1533.

Kosti, R. L., & Panagiotakou, D. B. (2006). The epidemic of obesity in children and adolescents in the world. Control European Journal of Public Modific, 18(E), 153.

Krisvit, K. J. (2007). Residential relocation and changes in other travel: door neighborhood-scale solven form matter? Asserval of the American Planning Assertation, 69(3), 265–281.

Leyden, K. M. (2000). Social capital and the built reviewence: the importance of walkable neighborhoods. American Journal of Public Health, 93(9), 1546-1551.

Litman, T. (2004). Economic value of walkability. World Drumport Folicy di Practice, 10(1), 5-14.

Michaelly, M. (2015). Urban Form and Groonhouse Gas Emissions: Findings, strategies, decision exposes sevening of Technology: Delft (NL)

Polemen, J. M. (2008). Empirical evolution for the Jenons Parados. In The Jenons Furnation and the Method Recourse Efficiency Improvements, 140–172. New York: CRC Press.

Perhin, J., & Dijkoto, L. (2001). Promoting safe walking and cycling to improve public health: lessons from the Netherlands and Germany. American Journal of Public Moulei, 93(9), 1509-1516.

Petran, R. (2001). Social capital: Measurement and impropersion. Consider Journal of Policy-Research, 2(1), 41-51.

Patram, R. (2001). Availing Alone: America's Declining Social Capital New York: Street and Schooler.

Restolou, S. V., & Miller, N. (2011). Revidential land values and walkability. Journal of Santainable Real Estate, 3(1), 23-43.

Saulem B., Salin F., Frank L. (2007). Environmental constates of walking and cycling: findings from the transportation, orbits design, and planning literatures. Actuals of Beltavioral Medicine. 2007. 25(2):80-91.

Sallis, J. F., & Glass, K. (2006). The role of built environment in physical activity, eating, and obesity in childhood. The Patters of Children, 14(1), 99-108.

Salvoses, D., & Ronda, St. (2002). The importance of quality of life in the location decisions of new economic forms. Reviews of Economic Development Literature and Processes, 15.

Southworth, M. (2005). Designing the walkable city. Journal of Urban Planning and Development. J 1996, 246-217.

Tomatty, R. and Haider, M. (2009). Walkelicity and Moods. IEC Sprand Report 2009. Vancouver: Seast Growth IEC (www.netartgrowth.loc.ca). at www.amartgrowth.loc.ca/Fortols/IEDownlands/uplc-aprays/tropert-2009.pdf.

Uping, N., & Moden, Z. (2014). Walkability and Attachment to Teartum Places in the City of Kools Lampur, Malacesia. Atlant. Journal of Tearton, X (V), 53-65.

World Health Organization. (2008). Obusity: preventing and managing the global epidemic (No. 890). Gamesa: World Health Organization.

EXECUTIVE SUMMARY

Recent research has provided a clearer picture of the importance of interconnected public space systems in cities — that is, the connected systems of streets, plazas and parks, and the private-space systems that adjoin them. Following are key conclusions of the new research:

- Economic benefits. The economic interactions of a city are dependent, to a surprising degree, on a well-connected, well-functioning public space system. To the extent this system is degraded or nonexistent, the city's economy will under-perform.
- Transport benefits. Well-designed streetscapes can increase walking and public transit use, and help to reduce vehicular traffic congestion (and the cost of building and maintaining expensive vehicular infrastructure). The corollary is that a degraded streetscape system will contribute to induced demand for automobile travel, resulting in greater congestion, infrastructure cost and other negative impacts.
- Social benefits. A comfortable, attractive public realm promotes social interaction and formation of social control, which in turn promotes social resilience.
- 4. Health henefits. A walkable public space system promotes activity, exercise and stress reduction.
- Environmental benefits. Cities with well-connected, quality public space systems reduce dependence on automobiles, and increase the ability to exploit compact, resource-efficient neighbourhood types that further reduce environmental impacts.
- Benefits for the elderly, children and vulnerable populations. A well-connected, safe public space system
 provides choice of mobility for those who are unable to drive automobiles, and also affords opportunity for
 exercise, recreation and social interaction.
- 7. Benefits from tourism, and from company/employee relocation. A walkable public realm is more attractive to tourists who will more likely return, and are more likely to share their positive experiences with others. Walkable streets with shaps provide the number one most popular activity for tourists shopping which in turn further benefits the local economy. In addition, companies considering relocation of offices are increasingly responding to preferences of employees who seek (among other amenities) attractive, walkable.

- Environmental benefits. Cities with well-connected, quality public space systems reduce dependence on automobiles, and increase the ability to exploit compact, resource-efficient neighbourhood types that further reduce environmental impacts.
- Renefits for the elderly, children and reducrable populations. A well-connected, safe public space system
 provides choice of mobility for those who are unable to drive automobiles, and also affords opportunity for
 exercise, recreation and social interaction.
- 7. Benefits from tourism, and from company/employer refocation. A walkable public realist is more attractive to tourists who will more likely return, and are more likely to share their positive experiences with others. Walkable streets with shaps provide the number one most popular activity for tourists shopping which in turn further benefits the local economy. In addition, companies considering relocation of offices are increasingly responding to preferences of employees who seek (among other amenities) attractive, walkable neighbourhoods to live and work.

Many of these benefits are systemic, that is, they are fully achieved only when these systems function well as a whole. In addition, there are other factors that contribute to each of these benefits, and it is often difficult to tease out the cassestive role of the different factors for a given locale.

For both reasons, it is difficult to quantitatively measure the direct effects of specific local changes. Nonetheless it is possible to measure indicators of public space benefits, as we will discuss in the second part of this document.

Summary

The recent findings from the sciences show that cities are complex adaptive systems with their own characteristic dynamics, and – if they are going to perform well from a human point of view – they need to be dealt with as such. At their very cores are the public space systems that connect human beings to all their other parts, and ultimately, to one another.

If these public space systems are well-structured and connected, then, as the research demonstrates, the city outperforms relative to baseline. If these public space systems are fragmented, sprawling, privatised, or in poor condition, then the city will under-perform.

This implies that we must place greater value on walkable public space systems, and greater priority on their creation improvement. Among other things, it means we must replace older models of cardominated planning with newer models of well-connected, multi-modal, pedestrian-centred cities. Indeed, that is a key agenda item for the upcoming Habitat III United Nations conference, for which this author has consulted.

However, to improve these public space systems, we must do more than change our ideas of design. We must re-assess our current systems of planning, building and managing cities—the laws, codes, standards, models, incentives, and disincentives that effectively make up the modern "operating system" for urban growth. To make better cities, we need to shift to an evidence-based approach, able to draw on the best lessons of science and history about the making of well-functioning, good cities, from a human point of view.

Summary

The recent findings from the sciences show that cities are complex adaptive systems with their own characteristic dynamics, and – if they are going to perform well from a human point of view – they need to be dealt with as such. At their very cores are the public space systems that connect human beings to all their other parts, and ultimately, to one another.

If these public space systems are well-structured and connected, then, as the research demonstrates, the city outperforms relative to baseline. If these public space systems are fragmented, sprawling, privatised, or in poor condition, then the city will under-perform.

This implies that we must place greater value on walkable public space systems, and greater priority on their creation improvement. Among other things, it means we must replace older models of cardominated planning with newer models of well-connected, multi-modal, pedestrian-centred cities. Indeed, that is a key agenda item for the upcoming Habitat III United Nations conference, for which this author has consulted.

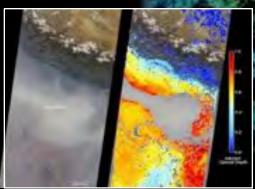
However, to improve these public space systems, we must do more than change our ideas of design. We must re-assess our current systems of planning, building and managing cities—the laws, codes, standards, models, incentives, and disincentives that effectively make up the modern "operating system" for urban growth. To make better cities, we need to shift to an evidence-based approach, able to draw on the best lessons of science and history about the making of well-functioning, good cities, from a human point of view.

Are cities the problem – or are they the solution?

"The cities of the 21st century are where human destiny will be played out"

- Herbert Girardet







We in developed economies need to recognize the urgent need to overcome poverty and its ills...





But is our model of urbanisation actually providing all of what cities can?

... Health improvements

... Life opportunities

... Human development

... Sustainable growth

... Quality of life?



We are getting serious unexpected consequences - health, resource depletion, etc...



Increasing inequality, with too many excluded -and for those not excluded, unsustainable
"externality costs" (resource depletion, pollution,
health impacts, ecological damage, climate
change...)

We have to shift to another way of urbanizing!



First, we need clarity of definitions, e.g.... What do we mean by "placemaking"??

... markets? ...festivals? ..."pretty places"?

... too many things to too many people?

... causing bad things, like gentrification?

... as some critics say, "rearranging plaza chairs on an urban Titanic?"

My working definition of *placemaking*:

1. Making places, not just objects

- 2. Focusing on processes, not just products
- 3. Moving beyond narrow functional requirements to address <u>human experience</u>

4. Moving beyond elemental models to re-focus on whole-systems phenomena (including <u>health</u>)

My working definition of placemaking:

5. Developing a detailed understanding of how places are <u>structured</u>, as whole-systems phenomena

"What is required is a new definition of the city, as a contact system, as a set of interactions and flows that define the kinds of networks that enable creativity and innovation to thrive and grow. This is a challenge that now defines the way we must think about all cities."

- Mike Batty and Peter Ferguson

... These networks occur in physical places, i.e. "place networks". Let's examine!

Urbanism: freedom and conflict

"Why do we build cities at all?"

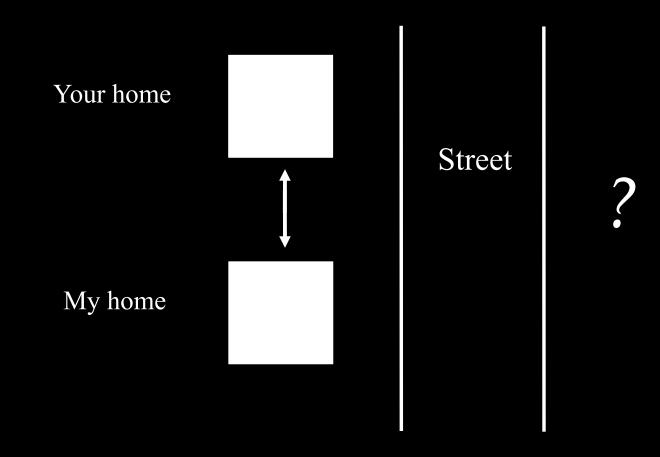
The city brings us together to create.... to create a life, a livelihood, a culture...

But in doing so, we potentially <u>constrain</u> each other's freedom to participate in that life... The structures we create limit the freedom of others. (A wall limits my freedom to enter the other side!)

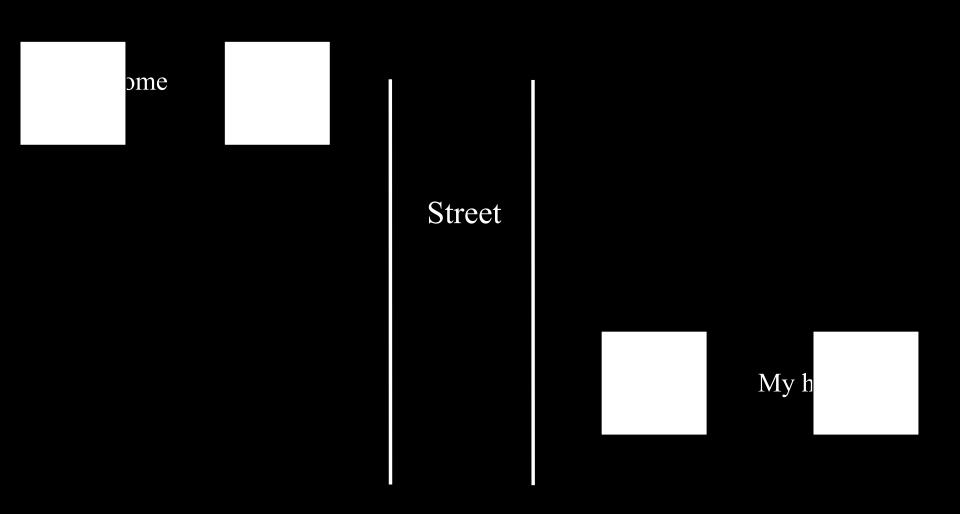
So the structure of public and private space is the physical counterpart to a political and legal system that "mediates between conflicting freedoms" (Paul Murrain)

Urbanism, in that sense, manifests this "mediation between conflicting freedoms" of the agents (people) who are interacting within the spatial networks of the city

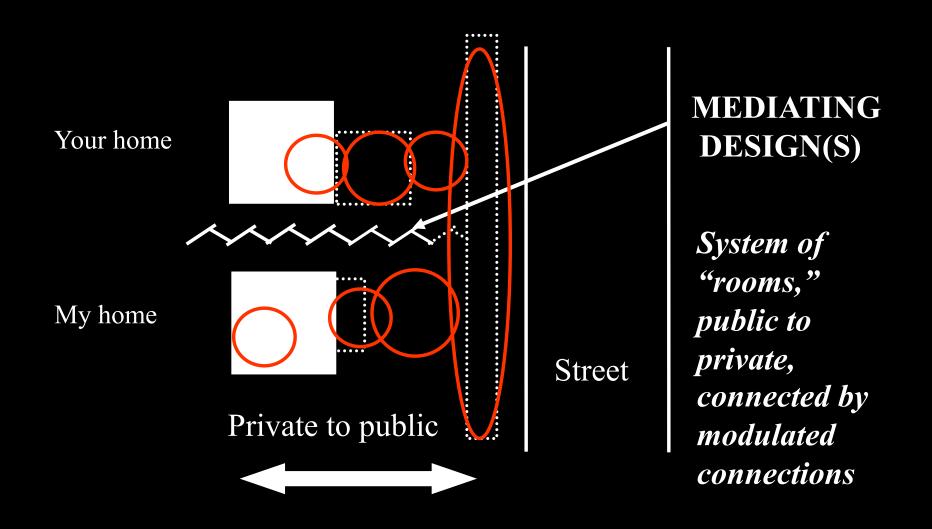
An urban relationship means we can constrain each other's freedom...



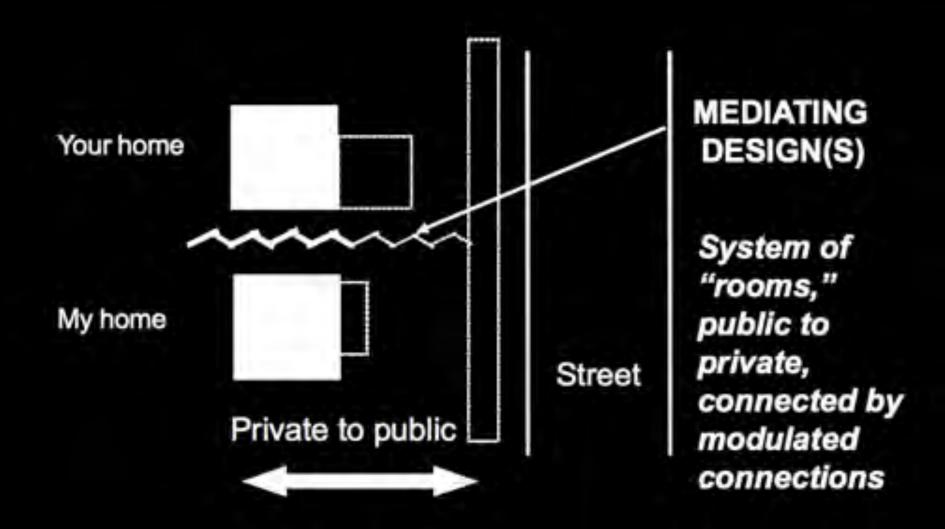
Two broad design strategies One: separation...(segregation)



A second design strategy...mediation

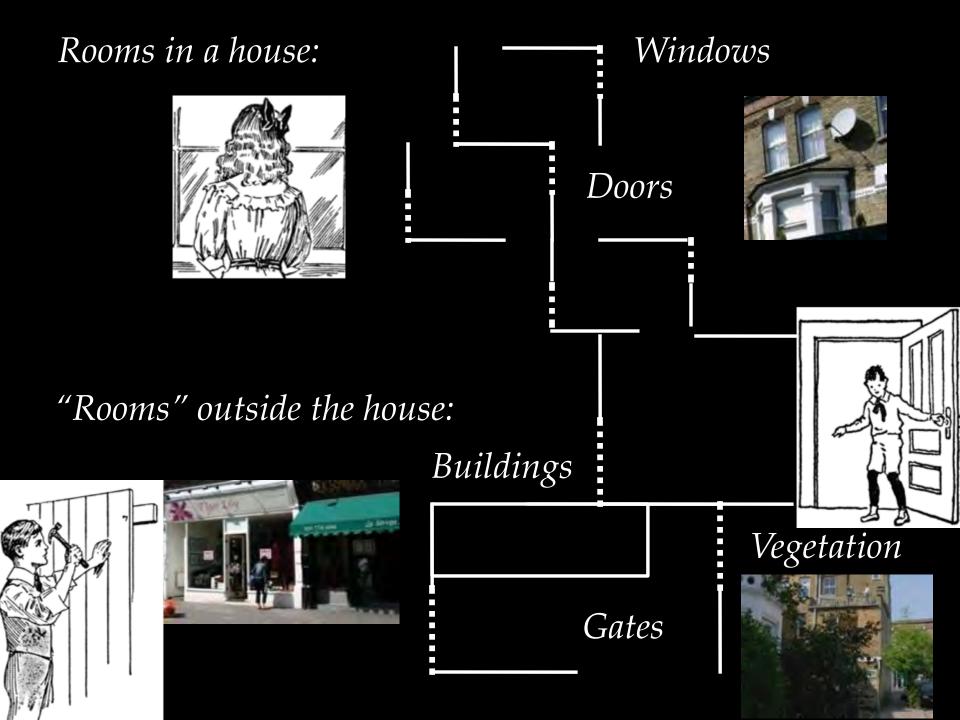


Urban structure as (approaching a) "just mediation between conflicting freedoms"



This self-organization of the connective networks of urban space is rooted in the scale of human beings, and human experience — what we might call "place networks"











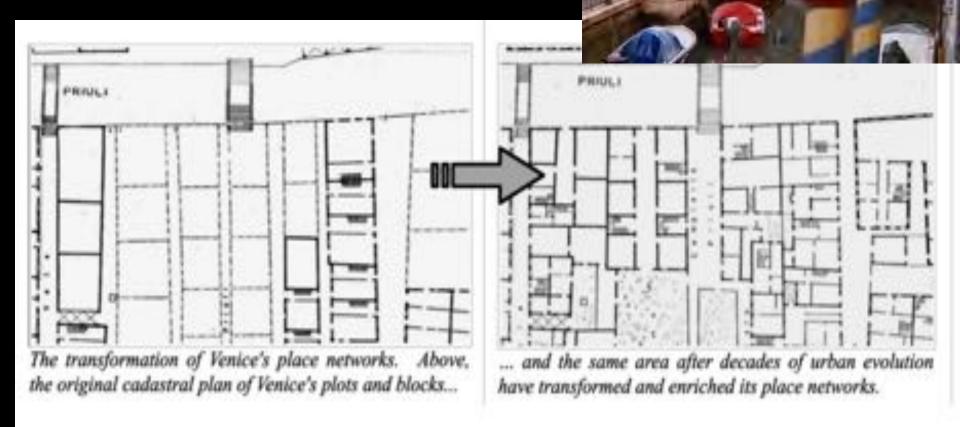
We are constantly shaping and modifying this "place network", in small and large ways, over different spans of time. We close doors, open windows, build walls... build streets and public spaces. This <u>affordance</u> (affording the power to connect, or to exclude) is a key property of cities.

This selforganization
transforms the
structure of
place networks
over time....





Venice Transformation 1500-1600 approx.



Source: Muratori (1959)



Through these incremental mediations, the public spaces of the city self-organize. We need to design (the spaces, the rules) to accommodate (generate) that kind of dynamic adaptive change.





Greatly simplified public/private scheme



Public space? Human Scale? Pedestrian experience?

Urbanization is still largely shaped by a model that is now over a century old...

• Romance of the New

Political Enlightenment



Technology as Salvation

• The Triumph of Reason

• Mechanical Technology as Ordering Idea (Image, Fashion)

"Modernism's alchemistic promise — to transform quantity into quality through abstraction and repetition — has been a failure, a hoax: magic that didn't work. Its ideas, aesthetics, strategies are finished. Together, all attempts to make a new beginning have only discredited the idea of a new beginning. A collective shame in the wake of this fiasco has left a massive crater in our understanding of modernity and modernization."

-Rem Koolhaas

The Athens Charter

Congrès Internationaux d'Architecture Moderne ...But where is the active public space?

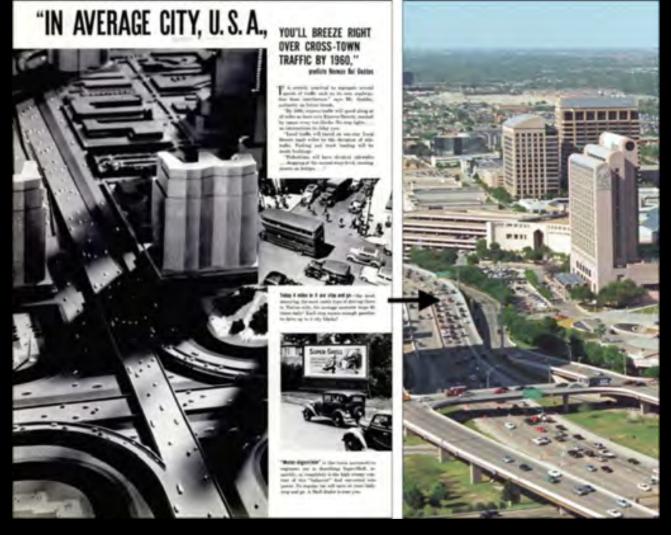


Rationally segregated urban elements: the capsule of home and the capsule of workplace, connected by the capsule of the car – but no public space!









When we segregate uses and mechanize connections, we sever the tissue of natural connections – and that has profound consequences for how the city works, and how its residents consume resources.



We have used this period of growth to move many out of poverty...

But we need to transition to a more sustainable model, that relies more on the inherent and natural capacities of cities, and less on unsustainable levels of resource use and depletion, with all their consequences and "negative externalities" (incuding health)...

We need to move from a period that relies too much on...

- Economies of SCALE and STANDARDIZATION

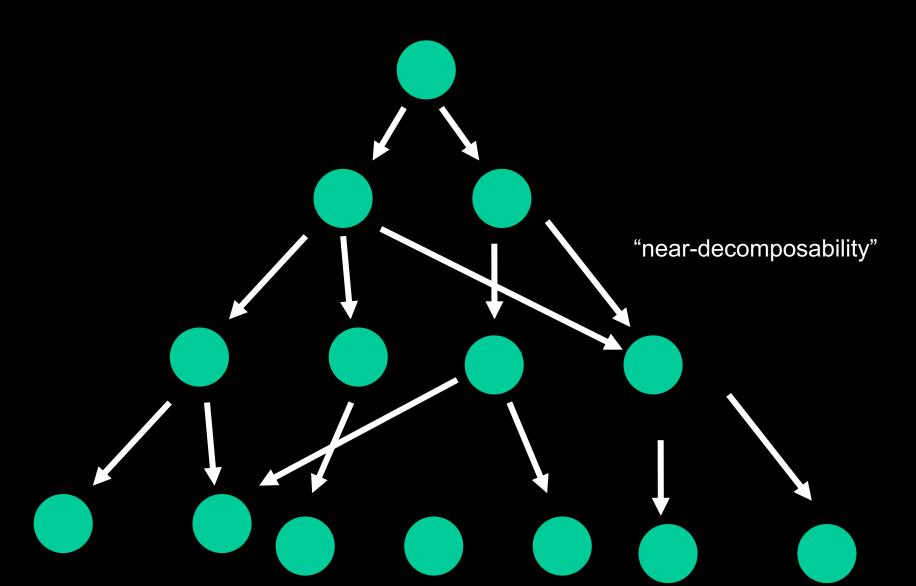
And more on...

- Economies of PLACE and DIFFERENTIATION

...But what does this mean in practical terms?

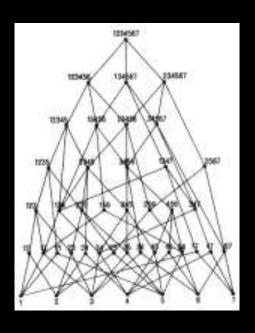
Structural Insights:

Herbert Simon (1962) "The Architecture of Complexity" ("Nearly Decomposable Hierarchies")

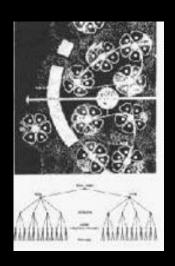


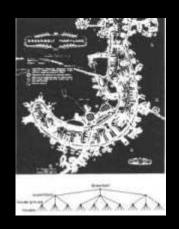
Structural Insights:

Christopher Alexander (1965), "A City is Not a Tree" "Overlap," "Multiplicity of Aspect," "Semilattice" etc

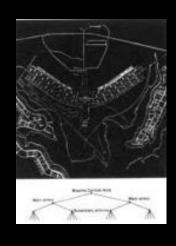




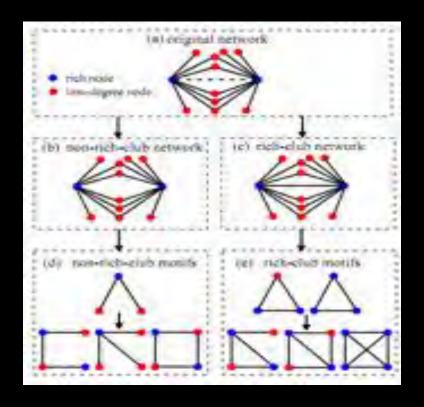








NETWORK THEORY



Understanding how a system of connections functions, and transforms over time (e.g. social networks, economic networks, technological networks,...

<u>Urban</u> networks... (Built on public space)

What do we mean by "growth"?







What do we mean by "growth"?

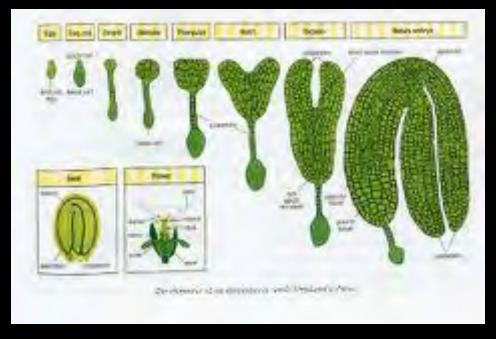




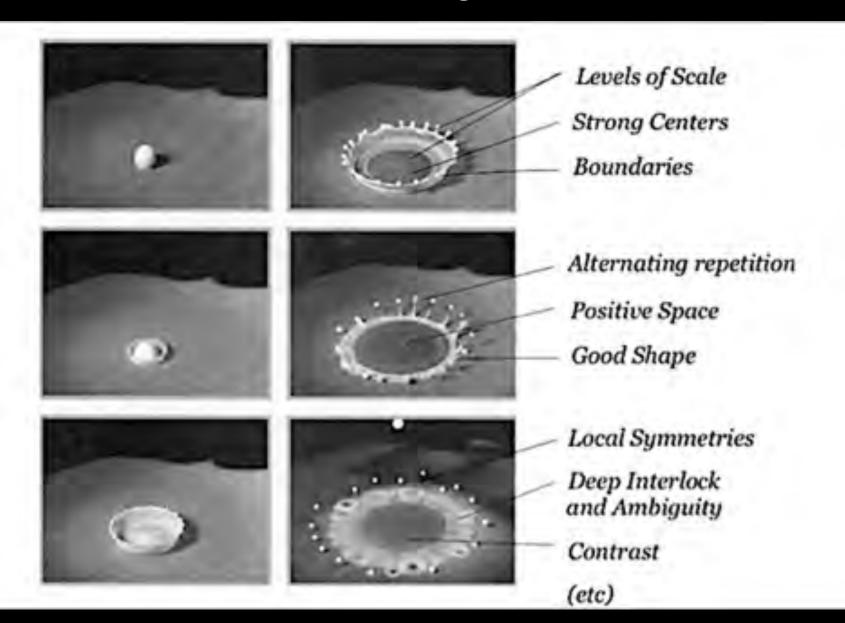








Christopher Alexander: Structure-Preserving Transformations



Gradients

Alternating Repetition



Levels of Scale



Boundaries'

Strong Centers



Local Symmetries



15 Properties of Natural Morphology

1. Levels of scale



4. Alternating Repetition



7. Local Symmetries



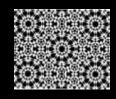
10. Gradients



13. The Void



2. Strong centers



5. Positive Space



8. Deep Interlock and Ambiguity



11. Roughness



14. Simplicity and inner calm



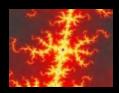
3. Boundaries



6. Good shape



9. Contrast



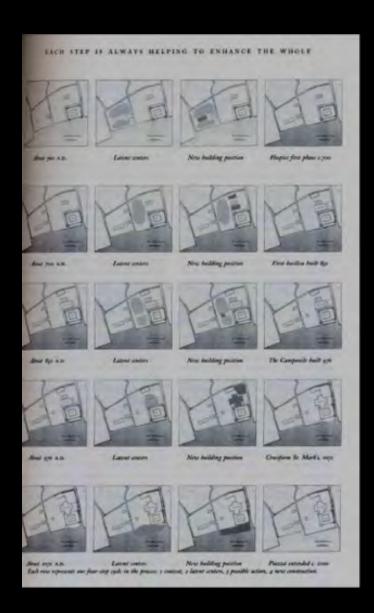
12. Echoes

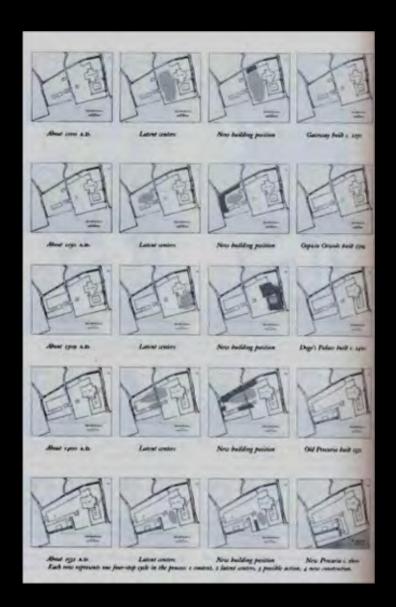


15. Not-separateness

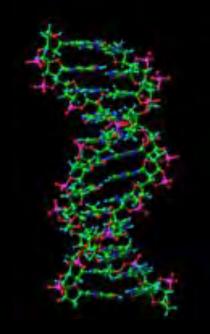


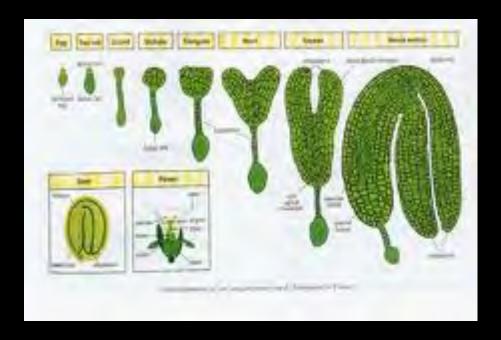
Structure-Preserving Transformations



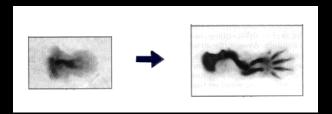


Stepwise growth according to rules and processes...









- Genetic algorithms
- Chemical control signals
- Stepwise transformations
- Compounding forms
- Differentiation
- *Etc...*

Stepwise growth according to rules and processes...



- Segregated use zoning
- Remote design processes
- Bank lending rules
- Traffic engineering
- *Market dynamics*
- *Etc...*





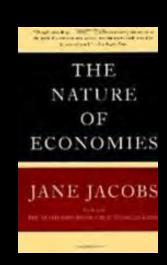




Jane Jacobs – strategies of "economic gardening"... combining many ingredients and tools as in a garden, to promote healthy (economic) growth

Understanding "the kind of problem a city is"

(...that sustainable development is!)











A problem "more like gardening than carpentry"

• Finding, building fertile soil (Diagnosing/improving conditions)

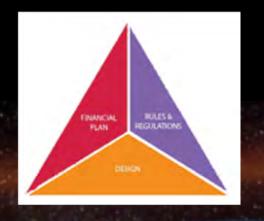
Planting good genetic seeds (Patterns, prototypes)

• Watering and fertilizing (Incentives, funding)

• Pruning/weeding (Regulations)

• Building trellises (Infrastructure, frameworks)

And combining all of the above, into strategic toolkits!



TRANSLATING RESEARCH INTO PRACTICE:

Promising Examples of Tools and Strategies Needed For Placemaking Practice

(We need more!)

Tools and strategies we need:

- 1. An evidence base for "why it matters"
- 2. New models of city-wide frameworks
- 3. Strategies of finance and economics
- 4. Diagnostic and assessment tools
- 5. Database of best practices + outcomes
- 6. Effective public involvement processes
- 7. Pilot projects to create momentum
- ... and all in a shareable "toolkit" format

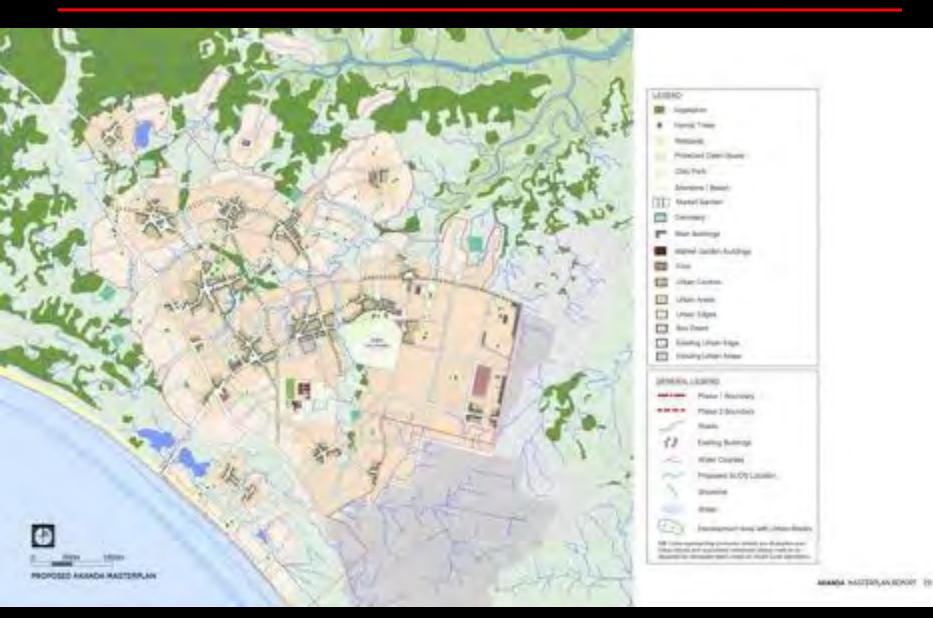


2. New Models of City-Wide Frameworks



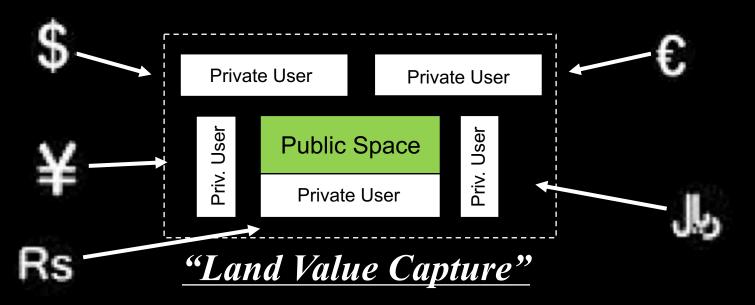
Urban Extension of Orenco Station, Portland, OR USA

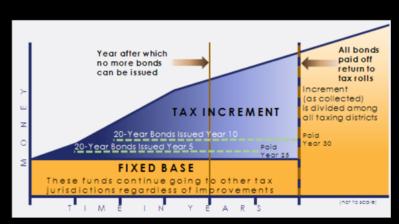
2. New Models of City-Wide Frameworks



Akanda, Gabon City-Wide Master Plan

3. Strategies of Finance and Economics





"Tax Increment Finance"

(Etc...)

4. Diagnostic and Assessment Tools

<u>Indicator 11.7.1...</u>

Goal 11. "Make cities and human settlements inclusive, safe, resilient and sustainable."

Target 11.7: "By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities."

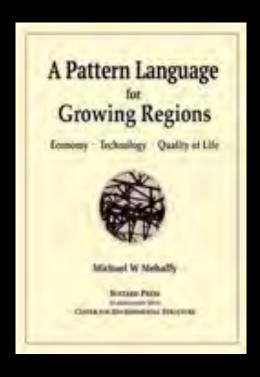
4. Diagnostic and Assessment Tools

Indicator 11.7.1: "Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities"

Parks?
Natural areas?
Remote, or close?
Distribution?
What about streets, plazas?



5. Database of Best Practices and Outcomes

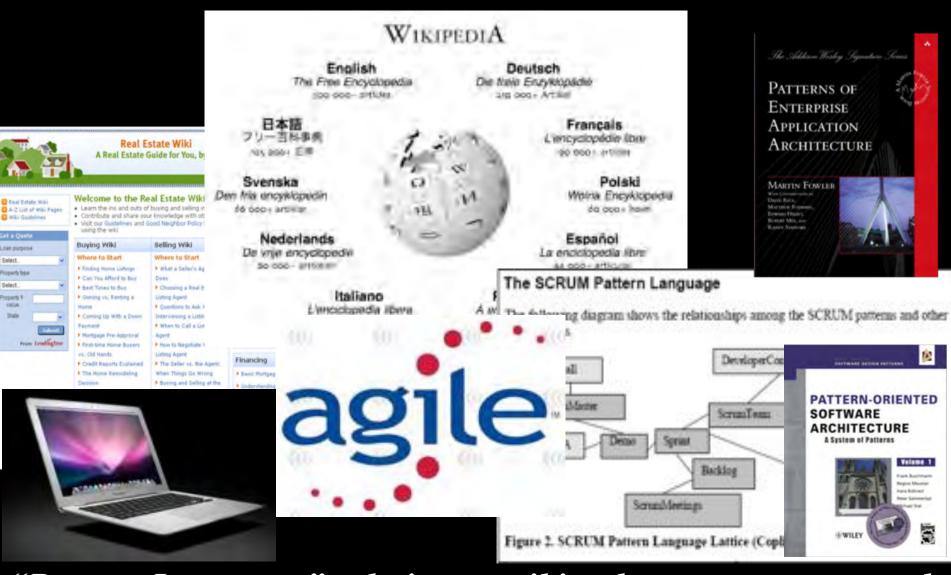






New print "Pattern Language" project for growing regions Followed by online shareable and editable version

5. Database of Best Practices and Outcomes



"Pattern Language" relation to wiki, other open-source tools

7. Pilot Projects to Create Momentum



"Snowball Projects"

Asia



Africa

"Urban Acupuncture"



Latin America

And all of these in a shareable, "toolkit" format...

Thank you!