



Historical Persistence of Unhealthy Homes

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Outline

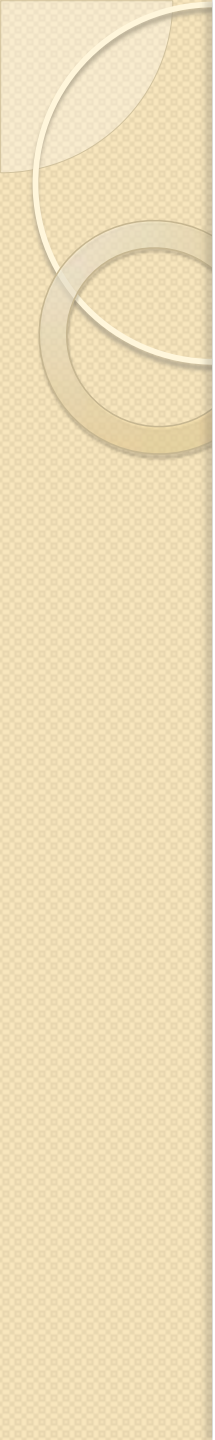
- **Chapter 1:** *Historical evolution of homes, from natural structures to built structures.*
- **Chapter 2:** *What can we learn from some of the worst cases of unhealthy homes.*
- **Chapter 3:** *Reasons for persistence.*
- **Chapter 4:** *Framework for understanding which can lead to moving from unhealthy homes to more healthy homes.*

Chapter I

- **Diversity of Perceptions**
 - Duct Cleaners
 - Mold Remediators
 - Disaster Contractors
 - Carpet Cleaners
 - Pest Control Companies
 - HVAC Contractors
 - Landlords
 - Property Managers
- **All are correct, but none are sufficient.**

Which is Most Healthy?



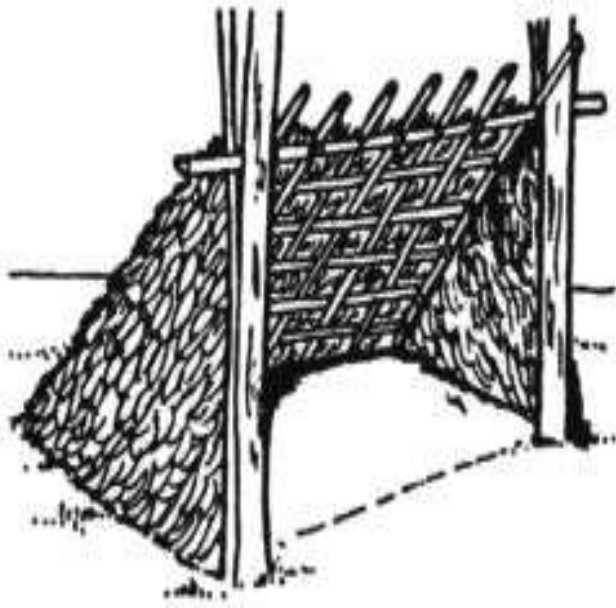






















What's in common?

- Audience Response, please!



Dirt Floors!







What's Beneath the Boards?









Which is Healthier?



And Then We Do This!



Which is Healthier?



Beginnings of Health

- The first mention of “comfort” in homes did not appear until the late 1600s.

Bill Bryson *At Home*

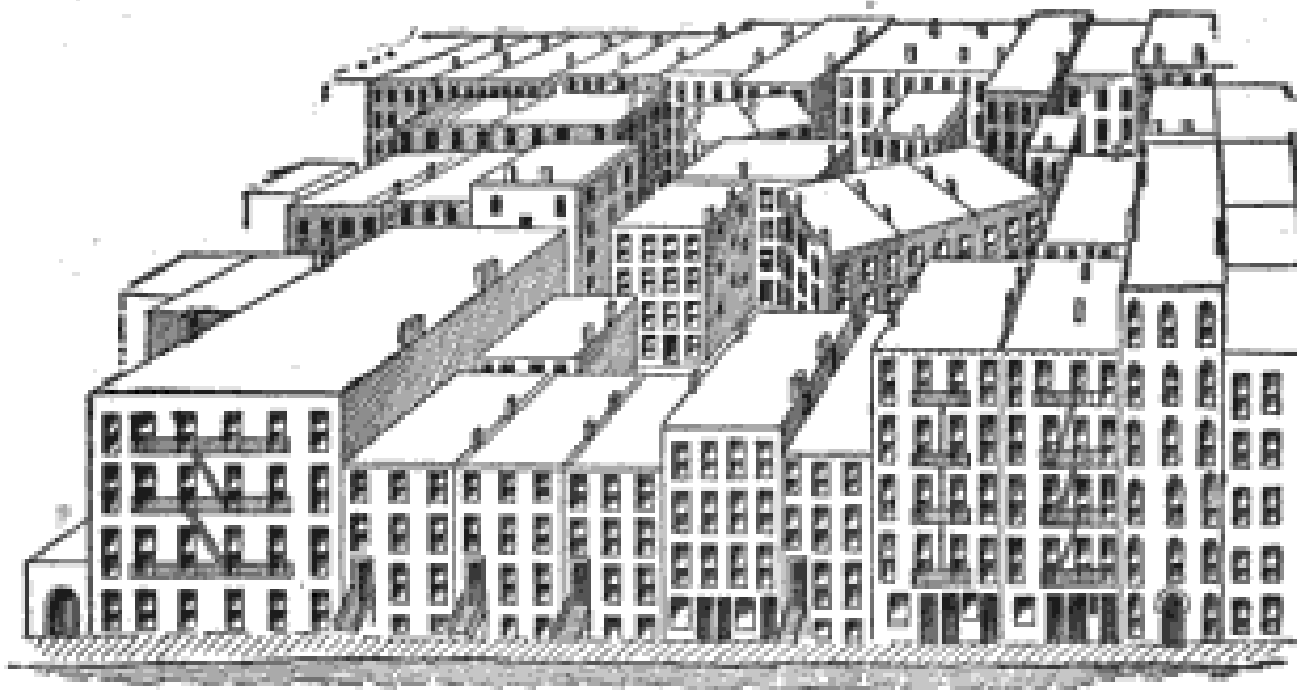
- First published mention of “health” in 1883. *Our Homes, And How to Make Them Healthy.* Shirley Forster Murphy.

- If you get no other book, get this one. 1000 pages of pure joy!

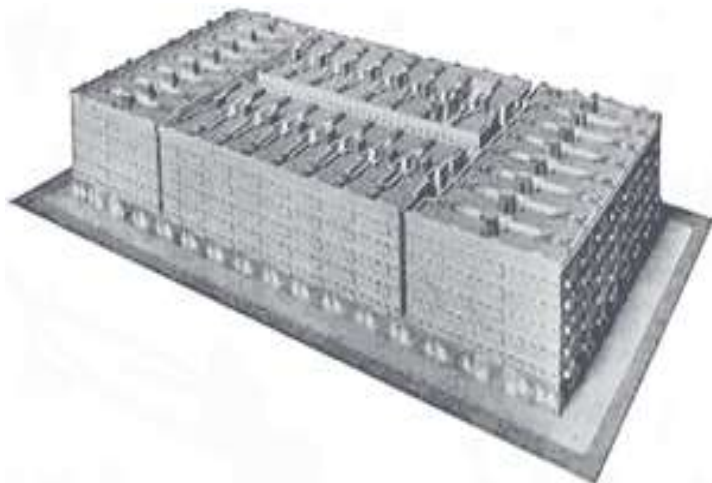


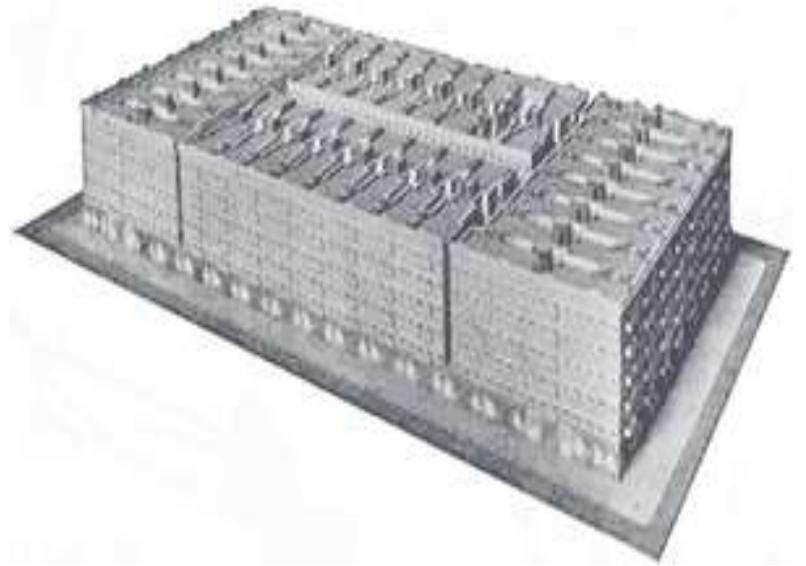
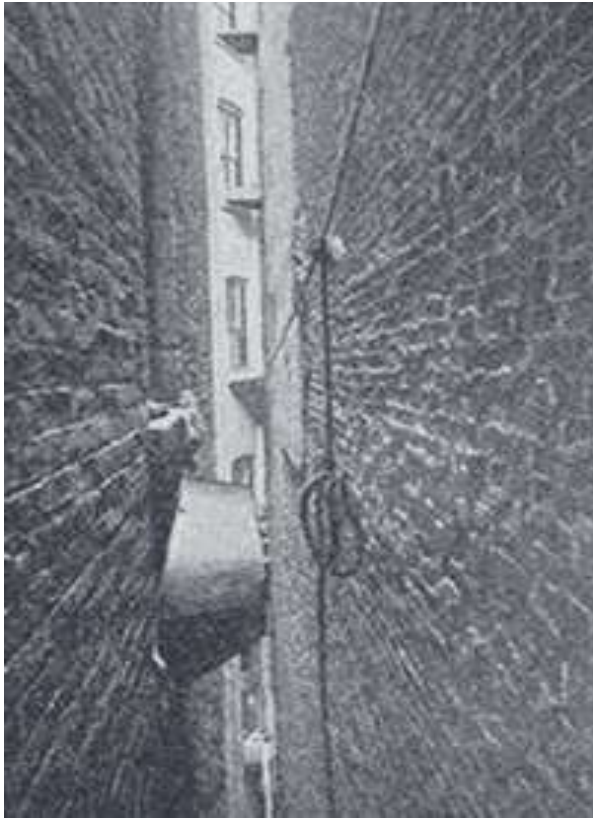
Chapter 2

- What we can learn from one of the worst situations.
- Lower east side of Manhattan, late 1800's.
- Massive migration, insufficient housing.
 - Jack Riis, *How the Other Half Live*.



1827 - 1830 1831 1832 1833 1834 1835 1836

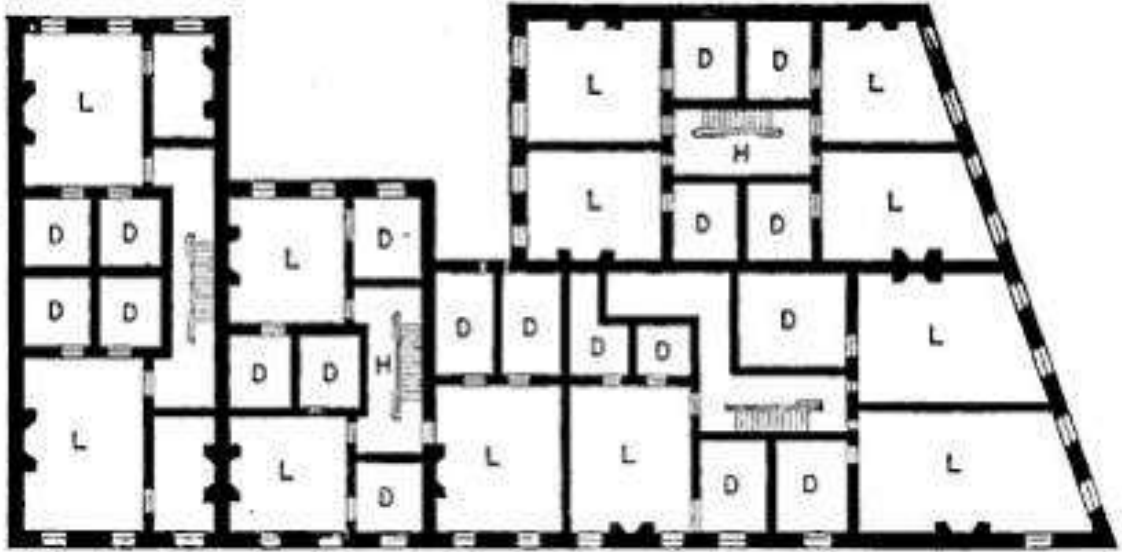




Audience Participation...

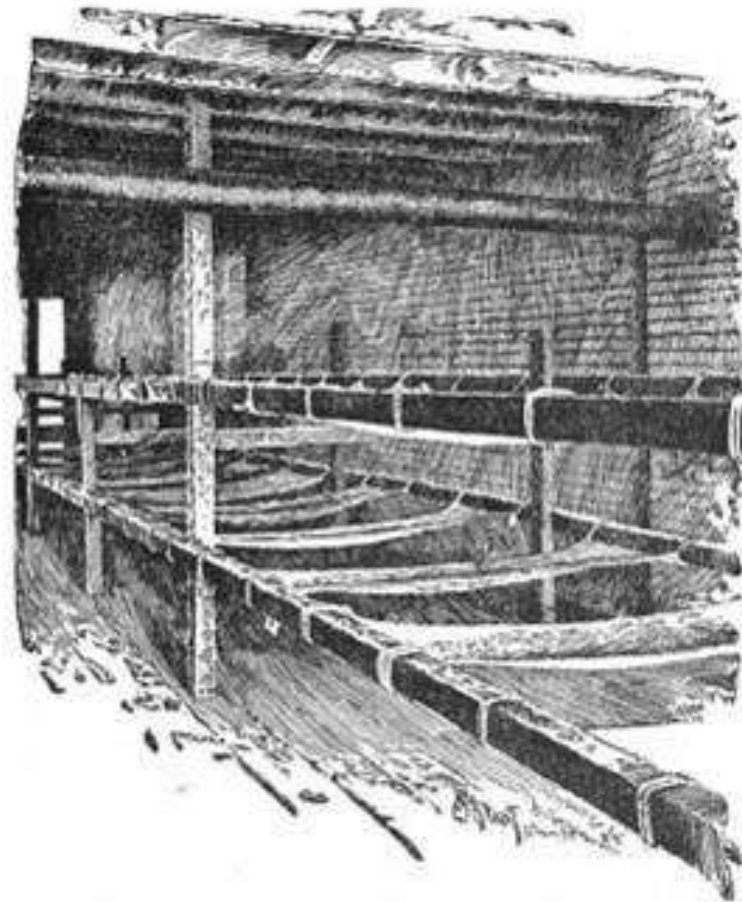
- I need 20 people on the stage.

TENEMENT OF 1863, FOR TWELVE FAMILIES
ON EACH PLAT. 4



The Remedy...

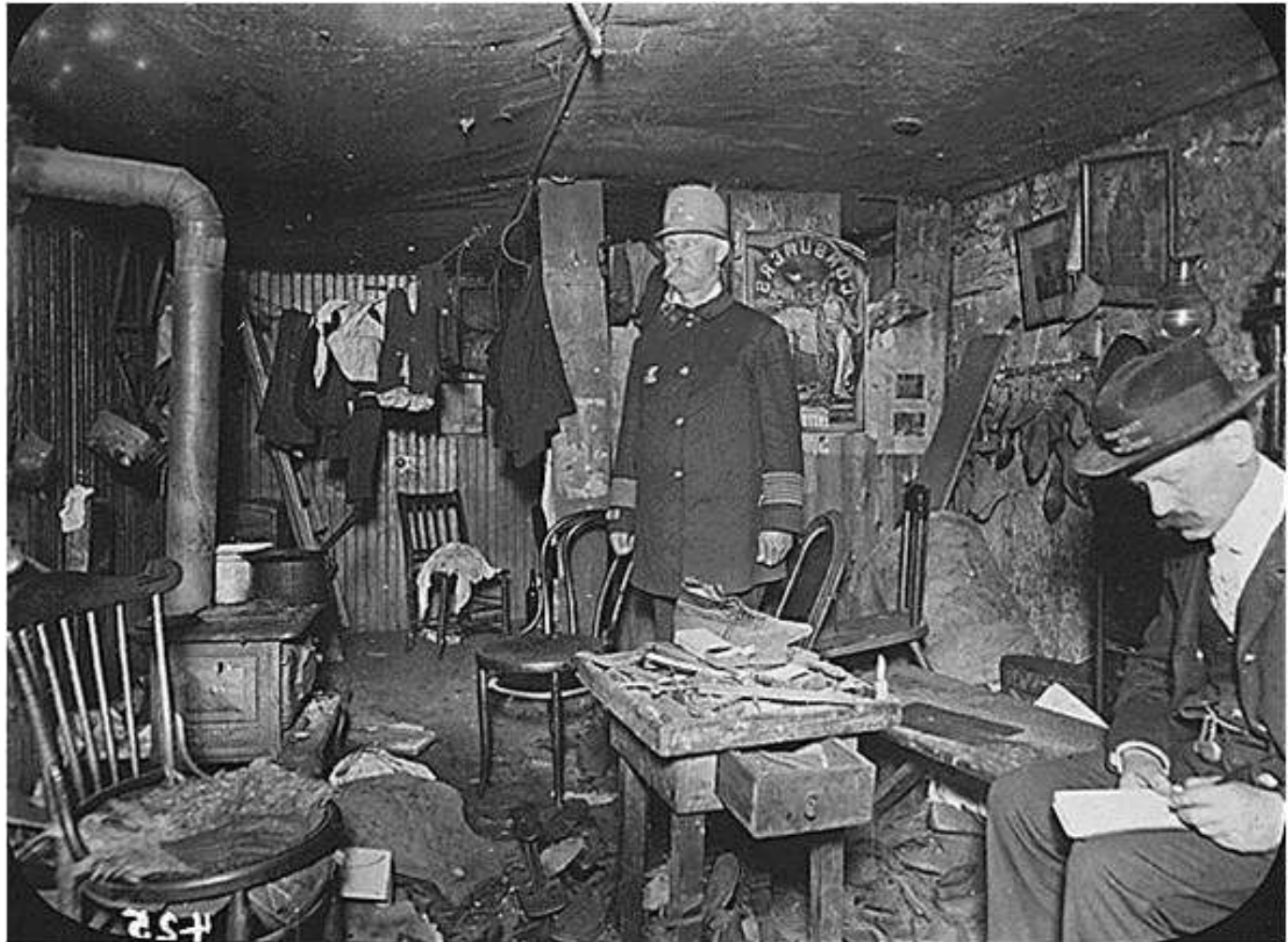
- Code enforcement entered the buildings and cut holes in the walls to let in light.
- An unintended (positive) consequence was an increase in ventilation.




BUNKS IN A SEVEN-CENT LODGING-HOUSE, PELL STREET.



Eviction Day...



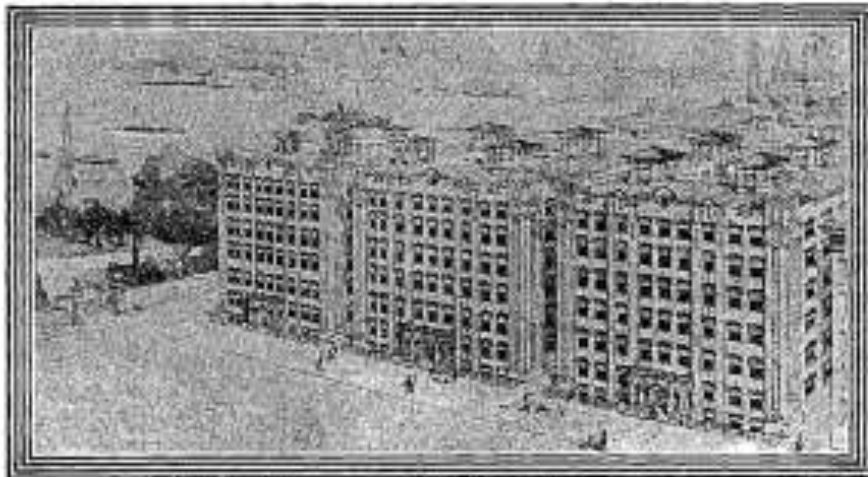
- 
- In one building in the lower east side a hog was kept in the basement. Once policy began being enforced five wheelbarrows of hog manure were removed along with the hog. That was what was considered to be the improvement from unhealthy to healthy. They got rid of the hog.

Back to the bathtub

- Why would anyone throw out a perfectly good bath tub, especially when such close quarters and crowding would demand reasonable hygiene?
- There was no water to fill the tub.
- Social acceptability of personal cleanliness was not the same as it is today.
 - *The Dirt on Clean: An Unsanitized History*, by Katherine Ashenburg

VANDERBILT MODEL TENEMENT HOUSES STIMULATE NEW EAST SIDE PROJECT

Building to Begin at Once on a Row of Open Stair Tenements in Seventy-seventh Street, Opposite John Jay Park—All Light Rooms and Perfect Sanitary Conditions Provided—Object to Show That Best Type Insures Most Satisfactory Investment Future.



Open Stair Model Tenements to be Erected in East Seventy-seventh Street.

The Vanderbilt tenements near Avenue A in the possession of another stock of model tenements to be erected right on Seventy-seventh Street facing the Vanderbilt grounds. The idea, which is another very bright one for the Open Stair Tenement Company of 25 Broad Street, at E. P. Corbin of 205 Broadway, who bought the site for the Vanderbilt, has been carefully studying the Vanderbilt tenements for months, and it has determined that the open stair features of that plan are not only as health-promoting but more particularly as non-sweat and more producing than it has determined to build exactly alike.

The company will build an approximately 100,000 sq. ft. apartment building in this form. The general methods of the speculative builder will be followed. It is expected that a high rate of return will be forthcoming from these properties, and that it will speedily be realized. After making the necessary and essential in steel building, in this way it is hoped that the attention of the speculative builder may be called to this type of house and

perhaps induced to imitate it in some form.

The only photographic idea in the present company is that it would help the company if it could illustrate the fact that this type of tenement is really cheaper to build and better to rent than the ordinary type.

The company, after building this one, will want to see the market, and will keep the rent just as high as demand and supply will allow, thereby paying great dividends to its stockholders and not doing any damage to other tenants in the neighborhood by offering something lower in value.

The building will have about 100,000 sq. ft. of space, and will be built on the site of the old building, which will be sold to the Vanderbilt Company. The building will be built on the site of the old building, which will be sold to the Vanderbilt Company. The building will be built on the site of the old building, which will be sold to the Vanderbilt Company.

The Vanderbilt Company, 25 Broad Street, N. Y. City, and Messrs. Corbin & Corbin, 205 Broadway, N. Y. City, are the architects, and will oversee the property and build.

and Charles W. MacGillivray. Several of these have plans and contracts for types of apartment houses and have been interested in the project through their work of building out of dark, old-fashioned in a particular investment way. The building will be started at once, and will be completed in six months, and will cost less than about three months afterward, and so on.

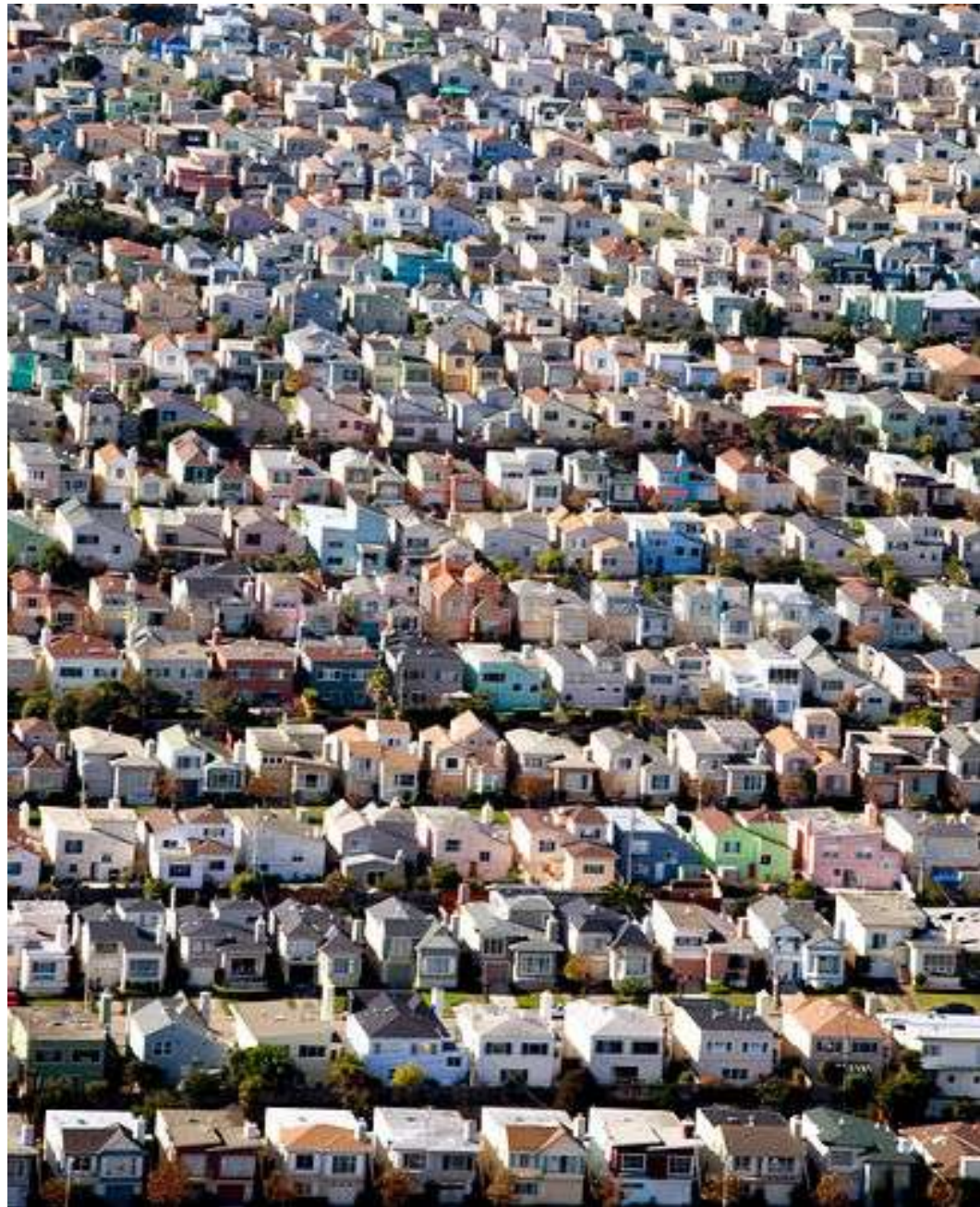
The buildings will be started in light brick. The roofs will be tiled and utilized for the purpose of protection. The buildings will be built with concrete, which are as strong as steel. In all in the light producing material. Much more will be a little outside of the open stair, from which will be available the bath, and the kitchen, which are all the same. The buildings will be built with heavy concrete, and will be built with heavy concrete, and will be built with heavy concrete.

The buildings, although somewhat narrow, will all be started by the company, and the work will probably be done in the same way that the buildings and more only not answer investment purposes to the best advantage. The buildings will be built with heavy concrete, and will be built with heavy concrete.

The company may consider building in other parts of Central New York with the view of making thereby in the speculative building this type of house to establish.

How We Build Today...









Chapter 3

- ***Reasons for persistence.***
- There is an implicit missing link in the history of housing, exemplified by the unhealthy conditions, whether in the extreme as we've just seen, or in the modern structures to which we've adapted.



***What is
missing is
people.***

Why We Exclude People

- Not wanting to be accused of practicing medicine.
- Avoiding entanglement with their psychological drama.
- The added expense removes profit.
- But occupants desire privacy and quiet enjoyment.
- Fundamentally, a man's' home is his castle where even the King cannot enter without permission.

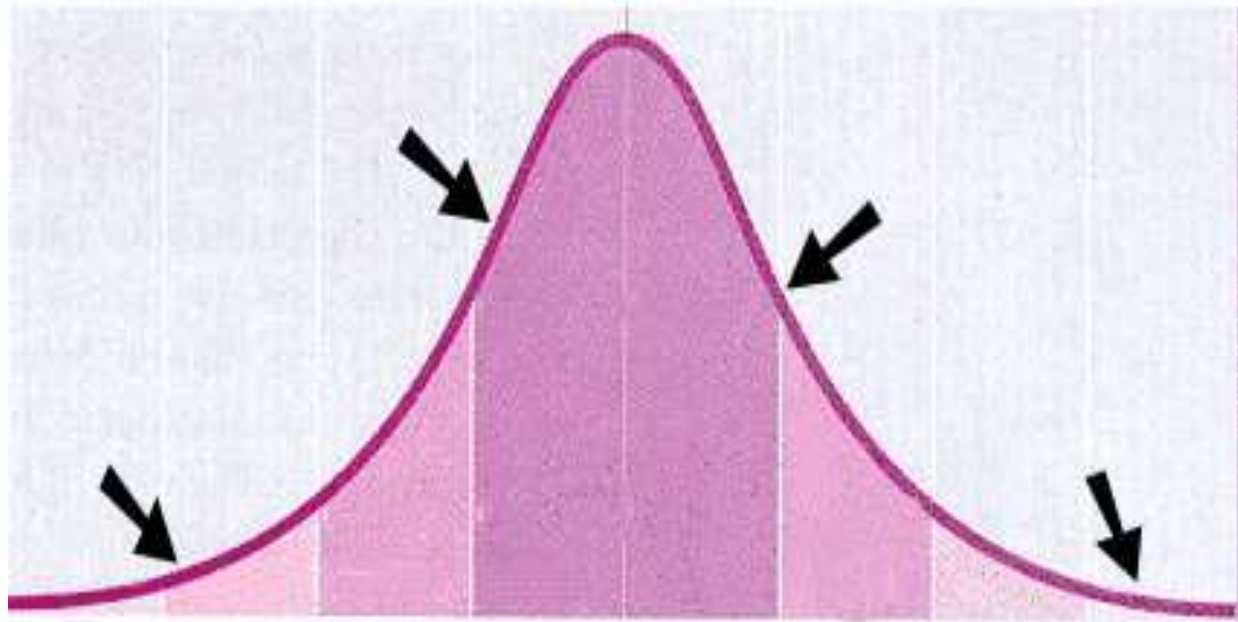
American Housing Survey

- Even those who reported 2-3 or more significant defects in their house reported they were satisfied and comfortable.

Even Those Who Try, Fail.

- They are stuck in the legacy of history.
- They are blinded by a distorted view of science.
 - Limited to mechanistic phenomena.
 - Cannot test more than one hazard at a time.
 - Subservient to the god of “Statistical proof.”

Individual Susceptibility



Over Reliance on the Absolute

- The Black Swan effect.
 - Caption “Celebrating the proven safety of the Hindenburg with 457 accident free days.”



Not all Levels are the Same



A Framework which Works...

(Kind Of)

- *The Techno-Human Condition* by Allenby and Sarewitz. (MIT Press 2011).
- Three levels of complexity.
 - Each with its own starting point
 - Each with its or normative criteria
 - Each with a different place in the dynamics of the larger system.

Level I

- Cause and Effect.
- At the “shop” level of functioning.
- Effect is fairly limited to itself and its immediate use.
- Sophisticated, complex, yet physically discrete, tangible, and recognizable.
 - Automobiles

Level II

- The larger system in which Level I is embedded.
- Socio-technological system, less predictable and more complicated.
- Contains subsystems which, acting together, create emergent behaviors that cannot be predicted from the behavior of the individual, Level I units.
 - Unintended consequences.
- Highways, malls, suburbs, petroleum-delivery infrastructures.

Level III

- Larger, more global systems co-evolving with the Level I and Level II.
- Long-term demographic trends and subsequent political and social evolution.
- Environmental and resource systems.

Level III (cont)

- Mass-market consumer capitalism.
- Individual credit.
- Behavioral and aesthetic subcultures and stereotypes.
- Oil spills.
- Extraordinary freedom and mobility.
- No longer trapped in homes by social and economic patterns.

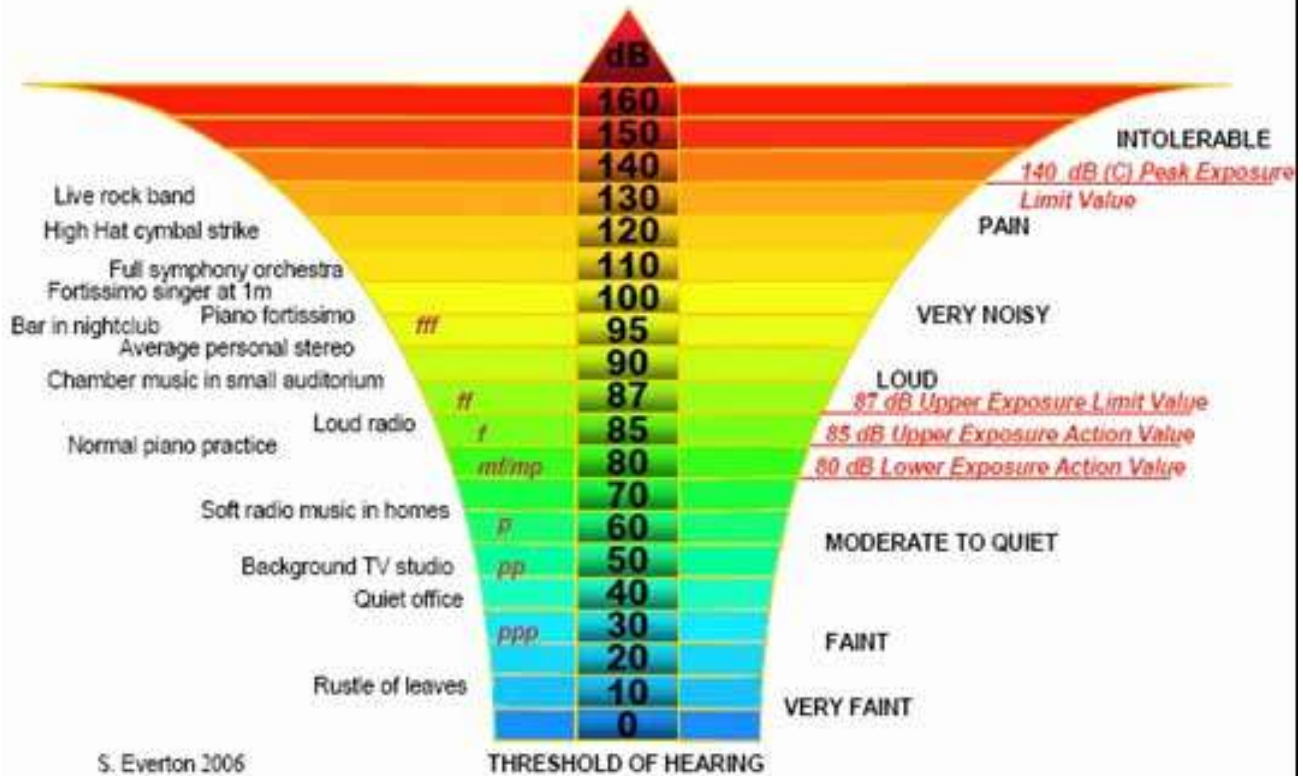
Example: Noise

Table 1: Noise levels compared to a ten turbine wind farm

Activity	Sound pressure level (dBA*)
Jet aircraft at 250m	105
Noise in a busy office	60
Car travelling at 64kph at 100m	55
Wind farm (10 turbines) at 350m	35–45
Quiet bedroom	35
Background noise in rural area at night	20–40

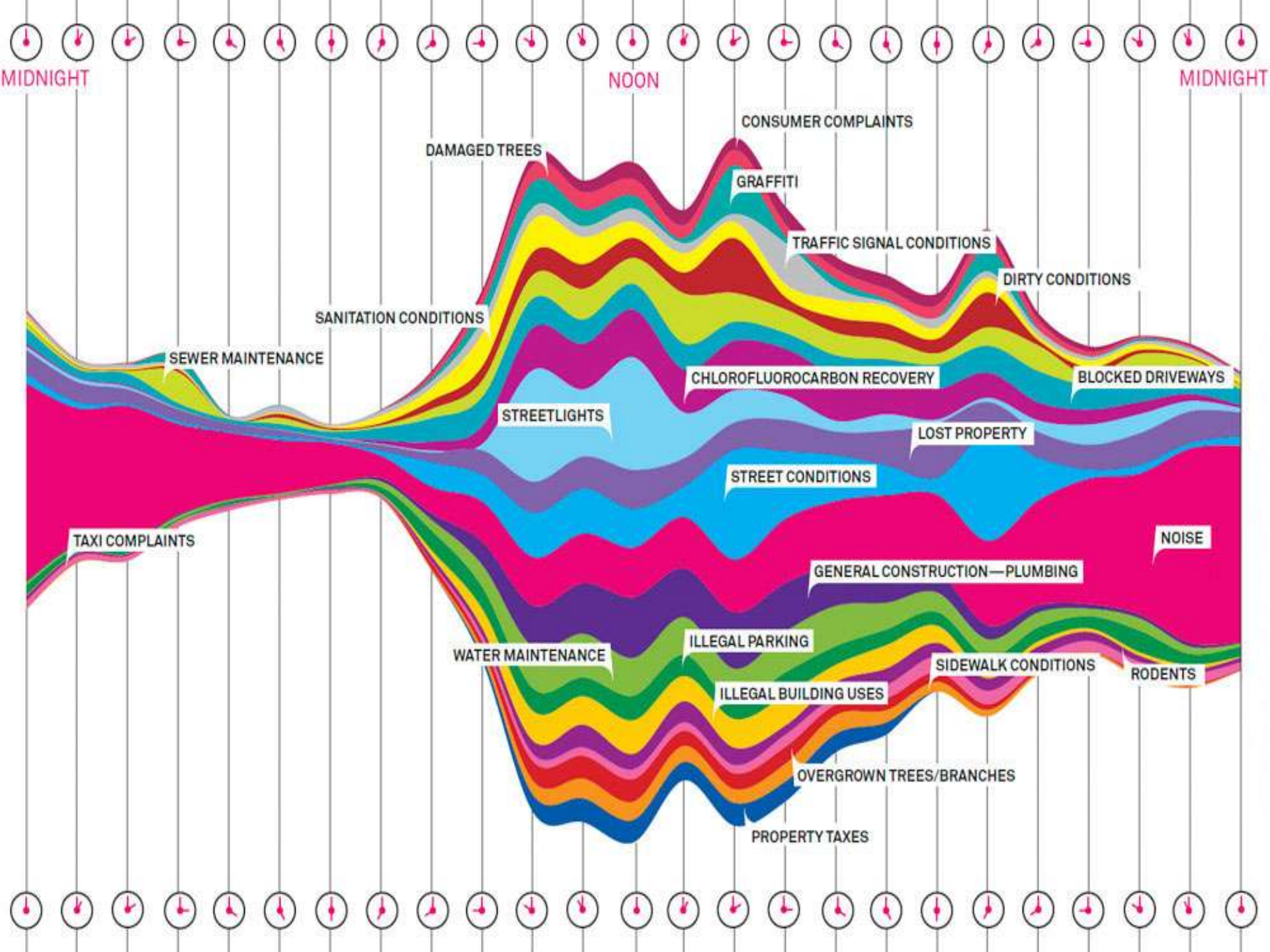
1 Representative Noise Levels in dB

Some approximate examples of noise levels.









Paraphrasing Allenby and Sarewitz

“struggling to define “healthy homes” may be less important than understanding the implications of the ambiguity and conflict between and among the various attempts and views.

In other words “healthy homes” may function more usefully as a lens for observing than as a specimen for studying. What we observe can then generate hypotheses to study.”

Levels of Healthy Homes

- Level I – Housing
- Level II – Homes
- Level III – Healthy Homes

Key Research Questions

- Why do people discount the impact on their home despite the intense attention to “finding the right one?”
- Why do people rate their home as highly satisfactory at the same time they identify on the AHS that it has 2-3 or more significant defects?

The Hope

- Improvement is possible. But we have to want it. We must begin by reframing the conversation with appropriate questions based on the correct level of our examination: Level I, Level II, and Level III will have different questions with different answers.
- We must learn how to handle those differences.



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