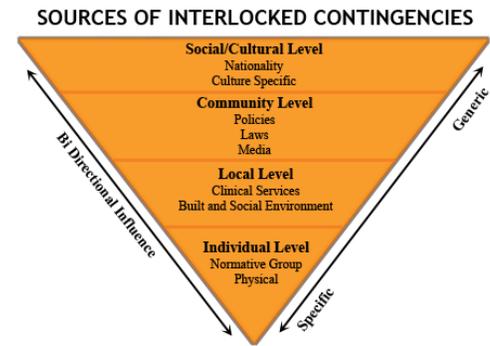




## Ecological Perspective



- Emphasis on the interactions between, and interdependence of, factors within and across all levels of a health problem

## Ecological Perspective

- Key Concepts
  - Multiple levels of influence
    - Behavior affects and is affected by multiple determinants at all level of human life
  - Reciprocal causation
    - Individual behavior shapes and is shaped by the social environment

## Levels of Influence

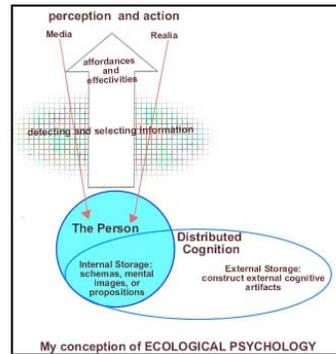
**Table 1.** An Ecological Perspective: Levels of Influence

<i>Concept</i>	<i>Definition</i>
<b>Intrapersonal Level</b>	Individual characteristics that influence behavior, such as knowledge, attitudes, beliefs, and personality traits
<b>Interpersonal Level</b>	Interpersonal processes and primary groups, including family, friends, and peers that provide social identity, support, and role definition
<b>Community Level</b>	Rules, regulations, policies, and informal structures, which may constrain or promote recommended behaviors
<b>Institutional Factors</b>	
<b>Community Factors</b>	
<b>Public Policy</b>	Local, state, and federal policies and laws that regulate or support healthy actions and practices for disease prevention, early detection, control, and management

## Foundations

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- Public Health
  - Host-agent-environment model
- Psychology
  - Skinner's behaviorism
  - Lewin's Ecological Psychology
  - Stokols' Social Ecology



## Ecological Psychology

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- Kurt Lewin (1936)
  - The outside environment's effects on the person
  - Mediated primarily by perception
- Roger Barker (1968)
  - Observations of school children
  - Two children in one environment behave more similarly than one child in two environments

## Ecological Explanations for Behavior

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- Stresses the function (environmental consequences) of behavior over the content of the behavior of individuals
- Physical and social contingencies explain and ultimately control behavior
- Focus on the environmental (non intrapsychic) determinants of human behavior

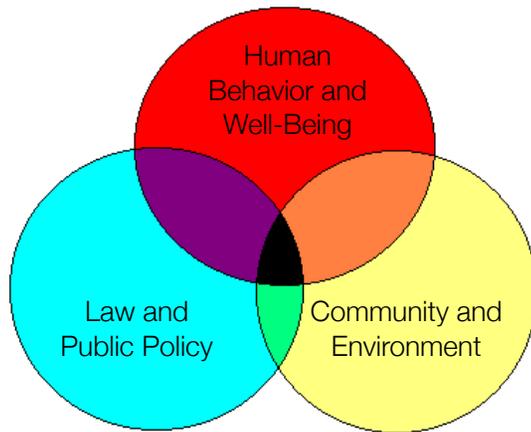


## Social Ecological Models of Health and Behavior

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1. Cross-Disciplinary, Multi-Level Analyses of Phenomena
2. Ecological Paradigm and Systems Theory--interdependence of system elements, feedback loops, anticipating unintended side effects of interventions
3. Contextual Influences on the Relationships Between Environment, Health, and Behavior
4. Action Research Perspective--Translation of theory and research findings into community interventions and public policies; social validity and sustainability of interventions

## Interdisciplinary Analysis of Environment, Behavior, and Health

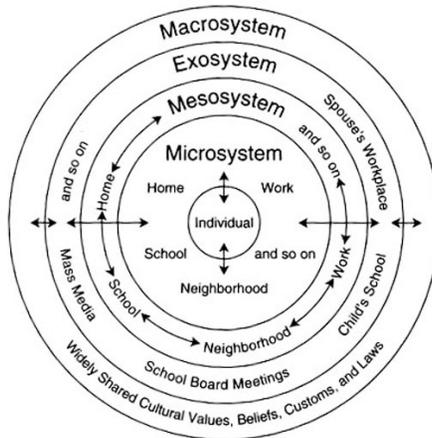


## Bronfenbrenner's Ecological Contexts of Development

- Microsystem: Individual's body and biological reality
- Mesosystem: The individual's home, work, neighborhood environments
- Exosystem: Larger environment
- Macrosystem: Culture, Law, etc.



## Bronfenbrenner's Ecological Contexts of Development



## Microsystem and Mesosystem Determinants of Health

- Social Networks and Social Support
- Interpersonal Conflict
- Socioeconomic Status
- Commuting/Job Stress
- Housing Quality
- Stimulation Overload



## Macrosystem Determinants of Health

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- Poverty/Affluence
- Social Capital
- Racial Discrimination
- Exposure to Violence and Crime
- Environmental Justice
- Health Policies
- Media and Internet
- Natural Environment Resources
- Population Density
- Ambient Noise Levels
- Urban Designs for Active Living
- Contamination of Air, Water, Soil
- Global Climate Change

## What Determines Behavior?

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- Individual/Intrapersonal Factors
- Interpersonal Dynamics
- Social Norms & Supports
- Institutional or Organizational Factors
- Community Factors
- Public Policy Factors

## Factors Influencing Health Behavior

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- **Socioeconomic status:** education, income, occupation: education is the best predictor of health
- **Skills:** 72.6% of car seats for children aren't used properly
- **Culture:** Norms, values, beliefs
- **Beliefs:** One's own perceptions of what is true - not always based in culture



## Factors Influencing Health Behavior

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- **Attitude:** A series of beliefs linked together to form patterns of behavior
- **Values:** Not always valid to assume that health is a strong value for everyone
- **Religion:** social behavior, practices (circumcision), social support
- **Gender:** Men eat more fat, less fiber, sleep less, and are more often overweight than women



## Reciprocal Causation

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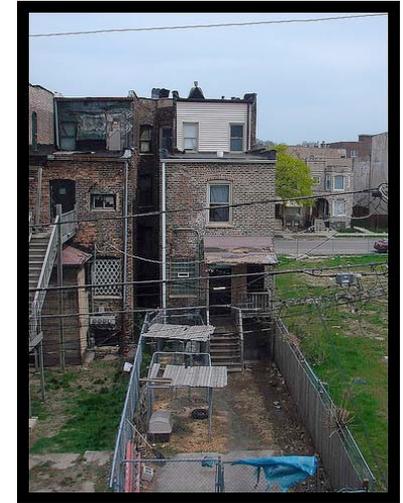
- People influence the people and situations around them
- People are influenced by the people and situations around them
- Example: 56 year-old man with elevated cholesterol - workplace cafeteria provides only fatty, unhealthy food choices



## Health-Promotive Environment

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- Construct proposed by Stokols (1996)
- Interventions should be designed to alter the environment
- Environmental effects on health are:
  - Indirect via health behaviors
  - Direct via forces of emotional well-being and social cohesion



## Behavior Settings: 3 Components

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- Physical Properties
  - The physical surroundings and objects in it
- Human Components
  - The players
- Setting Program
  - The script



## Principles

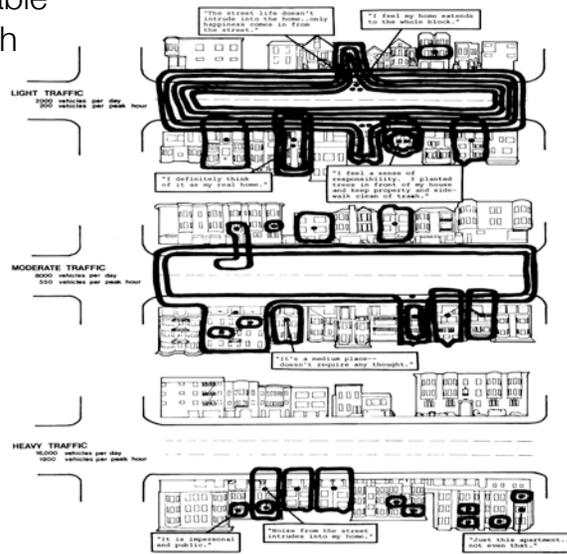
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- Multiple types of environmental influences affect behavior
  - Natural environment
  - Built environment
- Multi-level interventions are usually most effective
  - But most interventions still target the individual

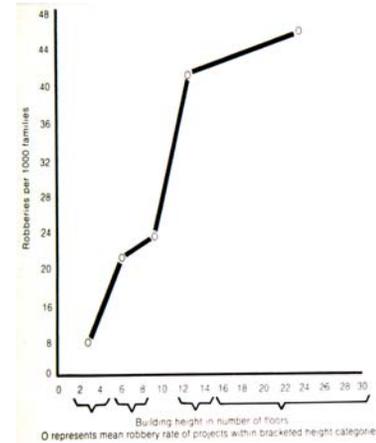


## Appleyard's Livable Streets Research

- Sense of “home” and happiness varies with traffic density
- As traffic increases, perceptions of noise, potential danger, lack of privacy increase



## Newman's Defensible Space Research



- Building height in inner city projects is directly related to rate of robberies
- Defensible Space is a quality that can be deliberately designed and has major effects on health

## Ambient Temperature and Violent Crime

