

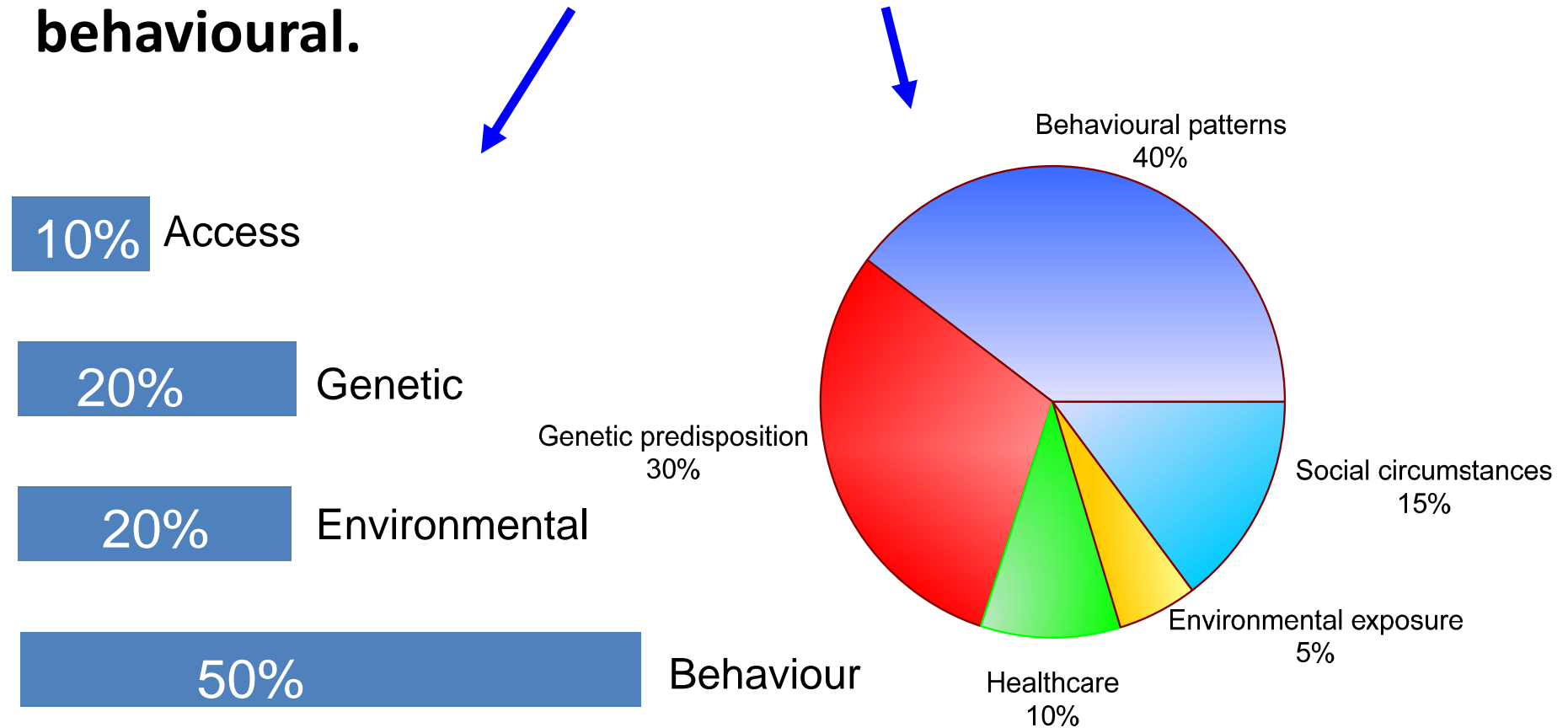
# Classifying prevention: form, function and theory

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# Why is prevention important?

Factors that affect health and mortality are principally **behavioural**.



Source: IFTF, Center for Disease Control and Prevention

McGinnis et al.  
Health Aff (Milwood) 2002;21(2):78-93

# A focus for prevention research

- The systematic study of interventions to reduce the incidence of maladaptive behaviours, and to promote adaptive behaviours, in populations
- A central characteristic is the importance of behaviour as a determinant of ill-health and health inequality.

*BUT*

- A 1994 US Institute of Medicine Report argued that
  - “without a system for classifying specific interventions, there is no way to obtain accurate information on the type or extent of current activities, . . . and no way to ensure that prevention researchers, practitioners, and policy makers are speaking the same language”

# What is the focus for EUSPR?

- First EUSPR meeting 2010: *“Can research on prevention contribute to the reduction of inequalities in health in Europe?”*
  - Joan Benach: two ways to conceptualise prevention: one where we **target** those at significant risk of ill-health, the other by providing **universal** approaches for the whole population
- Second EUSPR meeting 2011: *“Synergy in prevention and health promotion: **individual**, community, and **environmental** approaches”*

# Summary I

- **Prevention is important, and behaviour is a central focus for prevention**

*....but how do we conceptualise prevention...?*

# Form of prevention

- **Universal**: interventions are delivered across a whole population, community or setting, regardless of the level of risk for individuals receiving the intervention
- **Selective**: groups are identified as being at increased risk because of their health history or psychological and social characteristics
- **Indicated**: only with those individuals, rather than groups, who are personally identified to be at high risk for a problem or disease.

# Function of prevention

- **Environmental**: interventions to limit the **availability** of maladaptive behaviour opportunities, through system wide policies and restrictions
- **Developmental**: interventions to promote adaptive behaviours, and prevent maladaptive behaviours, through the **socialization** of appropriate norms, values and habits
- **Cognitive**: interventions to address existing cognitions about specific behaviours, through **persuasion**: providing information, raising awareness and challenging pre-conceptions

## Classifying Prevention: form and function in a prevention matrix

	Universal	Selective	Indicated
Environmental	Making behaviours illegal; tax policy for smoking, junk food, alcohol; minimum unit pricing for alcohol; gun controls	Reducing alcohol retail outlet density in high risk neighbourhoods;	legislation to prevent violent individuals from obtaining firearms
Developmental	Parenting programmes; classroom behaviour management programmes; social / life skills programmes	Home visiting programmes for at-risk new mothers; Family / parenting programmes with high risk family groups	Multi-systemic therapy for individuals with serious antisocial or criminal behaviour
Cognitive	Advertising / information campaigns; school-based knowledge and awareness curricula	Screening and brief intervention programmes; social normative feedback with higher risk groups	Substantive cognitive or motivational interventions with problem behaving individuals

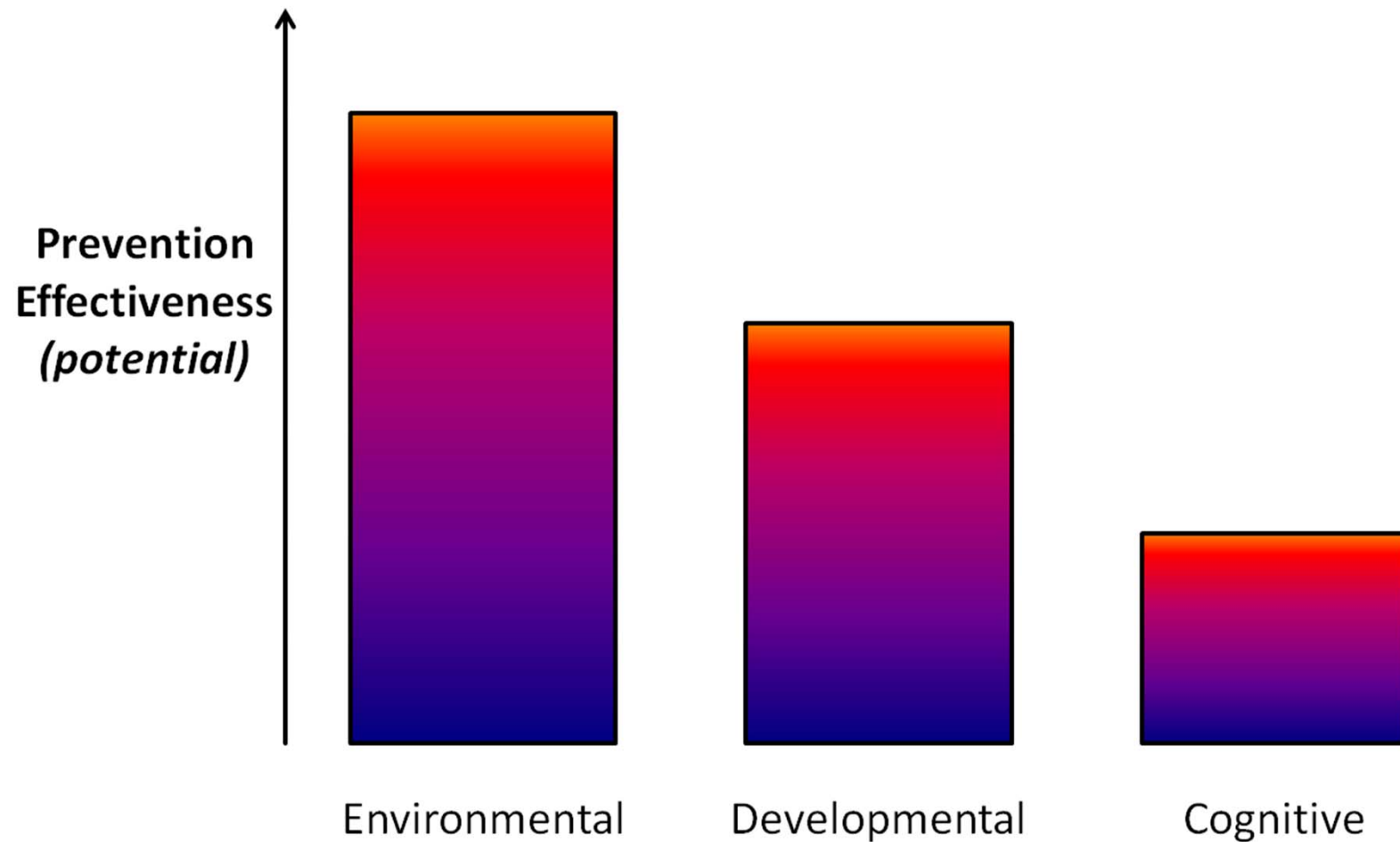


# Summary II

- Prevention is important, and behaviour is a central focus for prevention
- **Considering both form and function of prevention may provide an improved classifying framework**

*...but what sort of effectiveness might we expect from the functional levels of prevention...?*

What sort of effectiveness might we expect from the functional levels of prevention?



# Summary III

- Prevention is important, and behaviour is a central focus for prevention
- Considering both form and function of prevention may provide an improved classifying framework
- **Logic, and Evidence, point to the potential effectiveness of environmental *over* developmental *over* cognitive prevention**

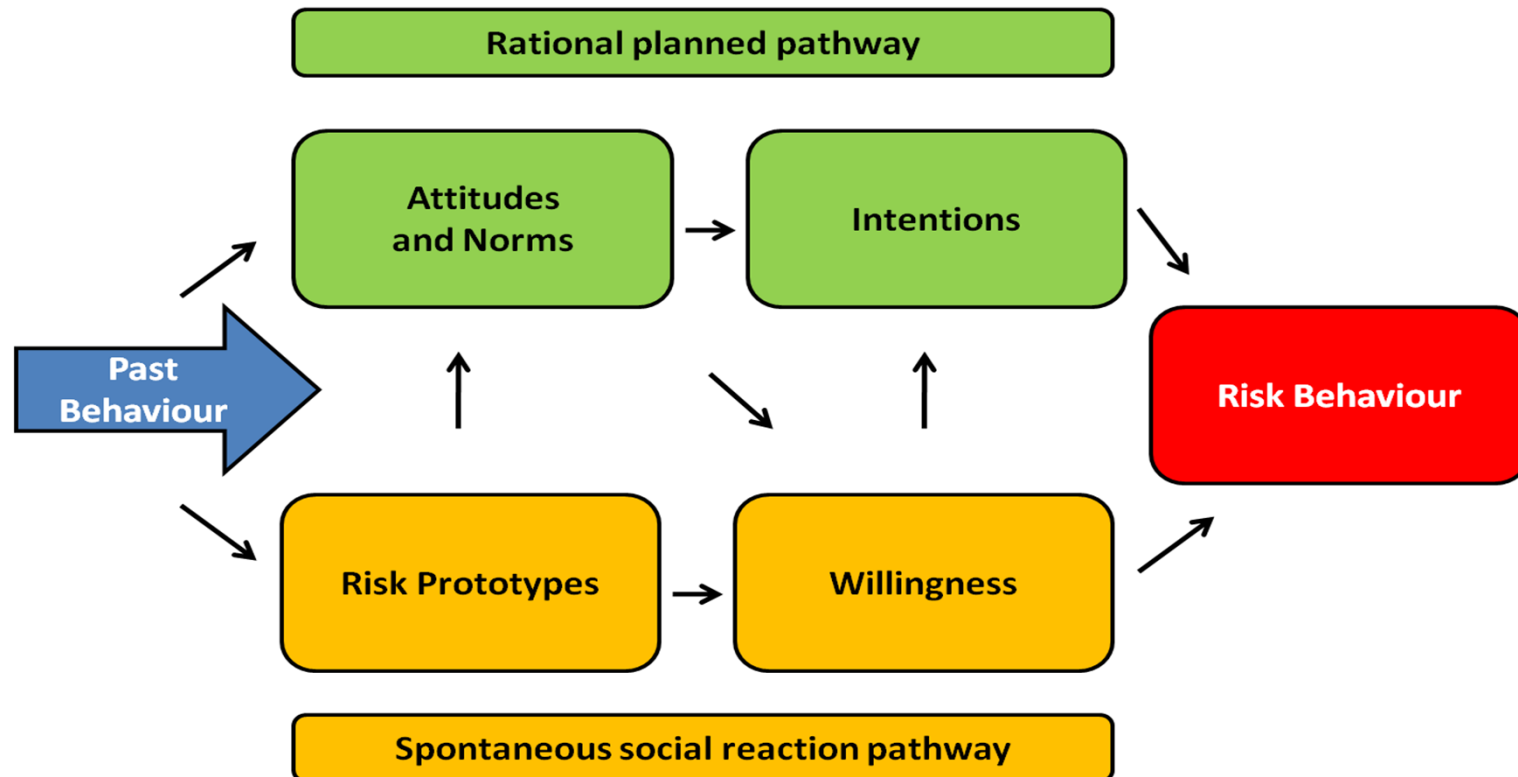
*...but what about theory...what can we say about theory and the different functional levels of prevention...?*

# Theory for Prevention

- **Environmental**: Systems Dynamic models; Ecological Psychology
- **Developmental**: Social Learning Theory; Social Control Theory; Attachment Theory; Problem Behaviour Theory; Social Development Model
- **Cognitive**: Health Belief Model; Health Action Process Approach; Theories of Reasoned Action / Planned Behaviour; Dual Process models

# The Prototype/Willingness Model

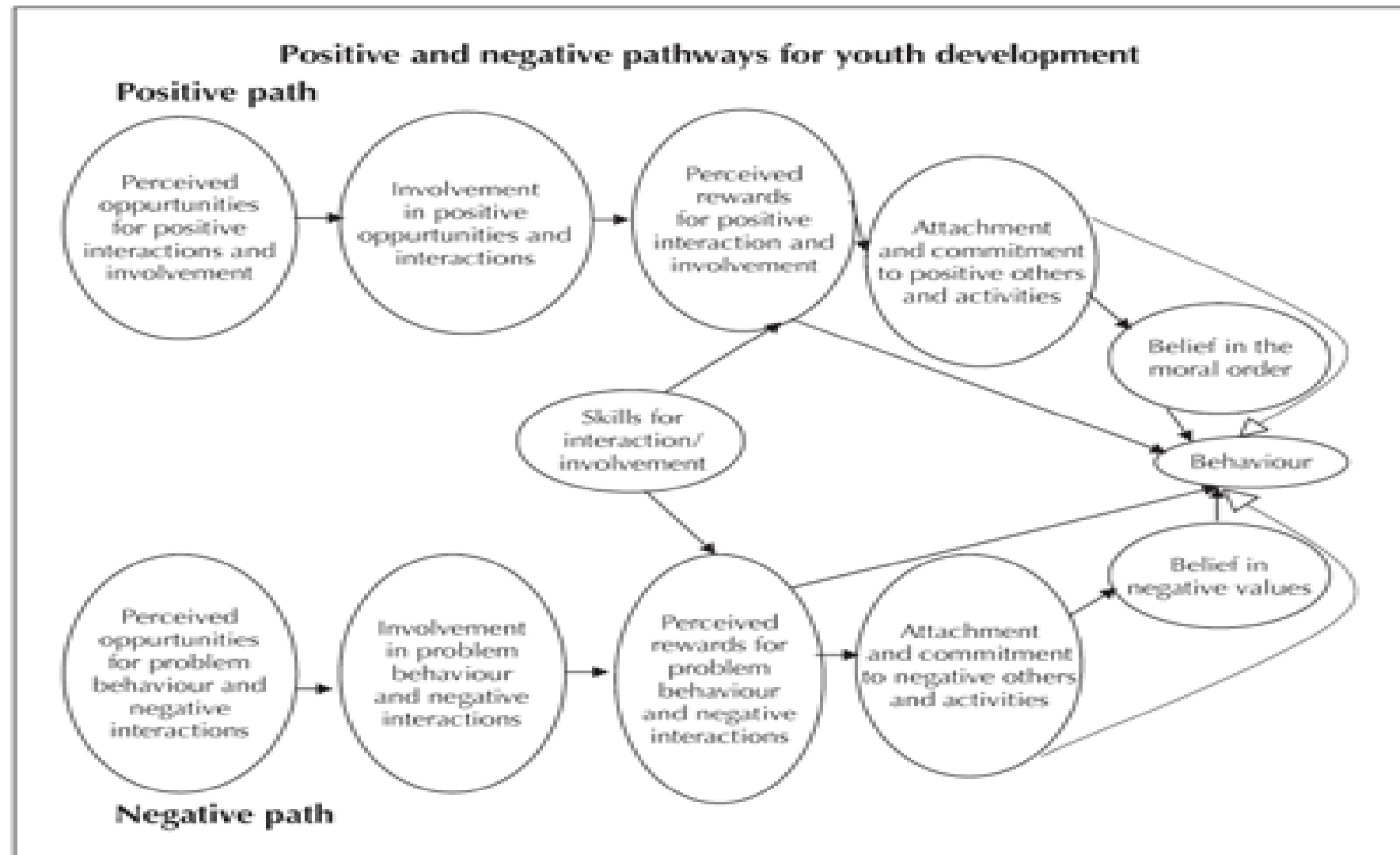
(Gibbons et al 2008; Gibbons & Gerrard 1995)



# Theory for Prevention

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# Social Development Model



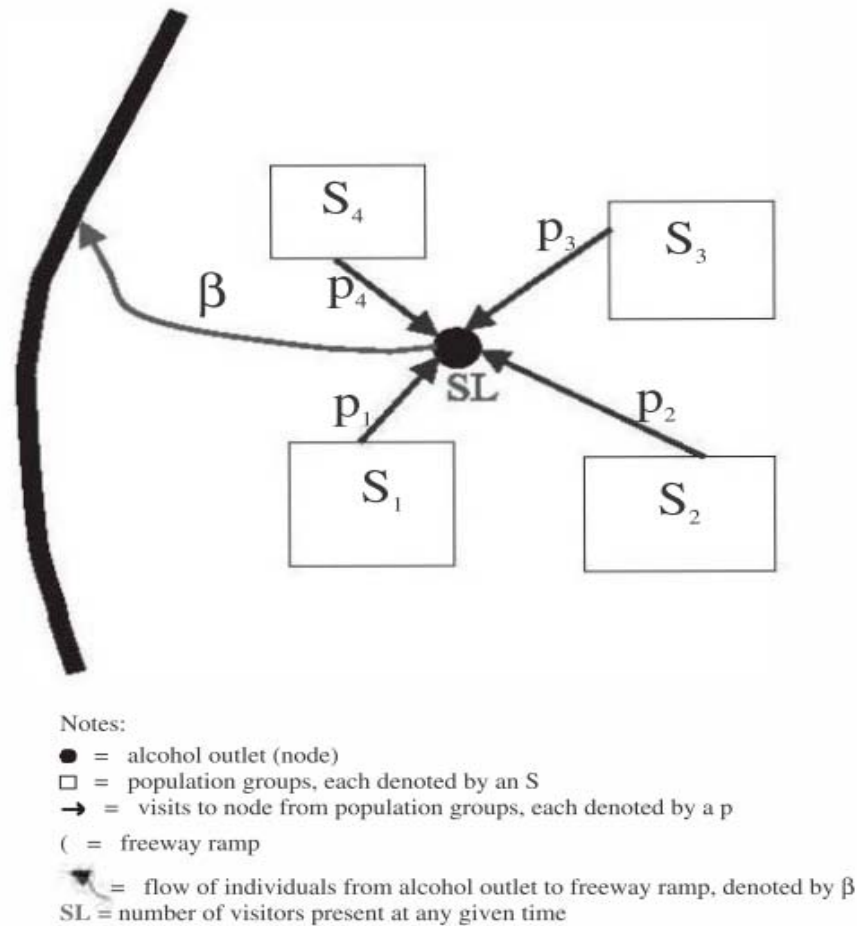
Source: Adapted from Catalano and Hawkins (1996).

# Theory for Prevention

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# Theory (environmental prevention) I



**Figure 2.** Section of a graph depicting network model of alcohol-use-related behavior.

# Theory (environmental prevention)



- Gibson argued that animals and humans stand in an 'ecological' relation to the environment, such that to adequately explain behaviour it was necessary to study the environment or niche in which the behaviour occurs.
- **Affordances** are “action” properties of the environment (or objects in the environment) as perceived by individuals, and are important for behaviour.

# Summary IV

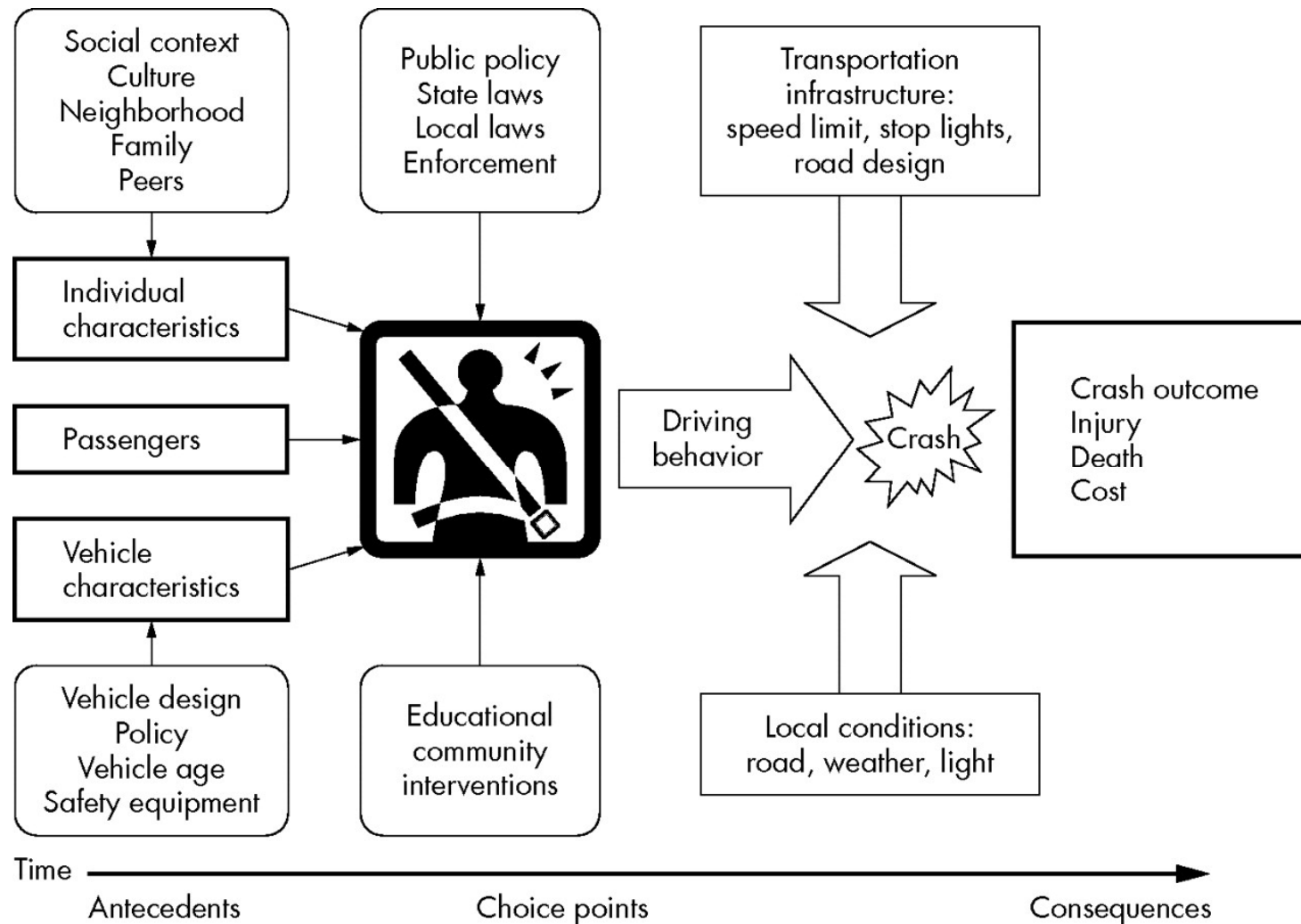
- Prevention is important, and behaviour is a central focus for prevention
- Considering both form and function of prevention may provide an improved classifying framework
- Logic and Evidence point to the potential effectiveness of environmental *over* developmental *over* cognitive prevention
- **Do dual process models imply or challenge cognitive prevention?**
- **Theory for environmental prevention should be informed by system dynamics and Gibson's concept of affordances for action**

*...so what are some of the research challenges for prevention...?*

# Prevention Research Challenges

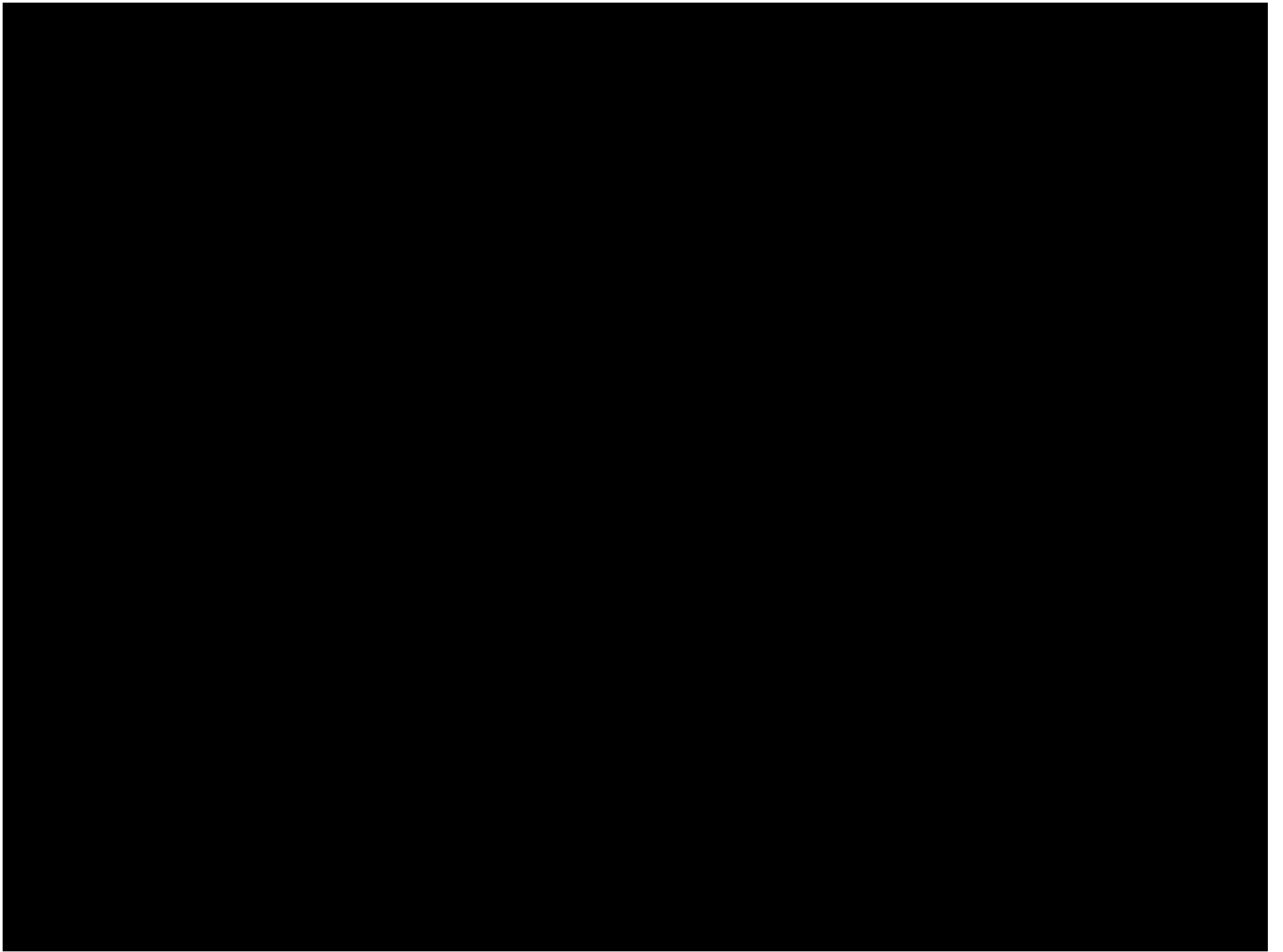
- How do we measure spontaneous behaviours, e.g. “willingness” on a social reaction causal pathway?
- Understanding external validity, e.g. which surrogate endpoints to use, if health outcomes are some way into the future?
- What methods can be used to systematically measure affordances?
- If “most published research findings are false”, what does this mean for prevention?
- How can we improve implementation effectiveness across different settings?
- Is there a risk of a compositional fallacy with prevention research?

## Putting it all together: A multilevel, multisystems model of driving behaviour.



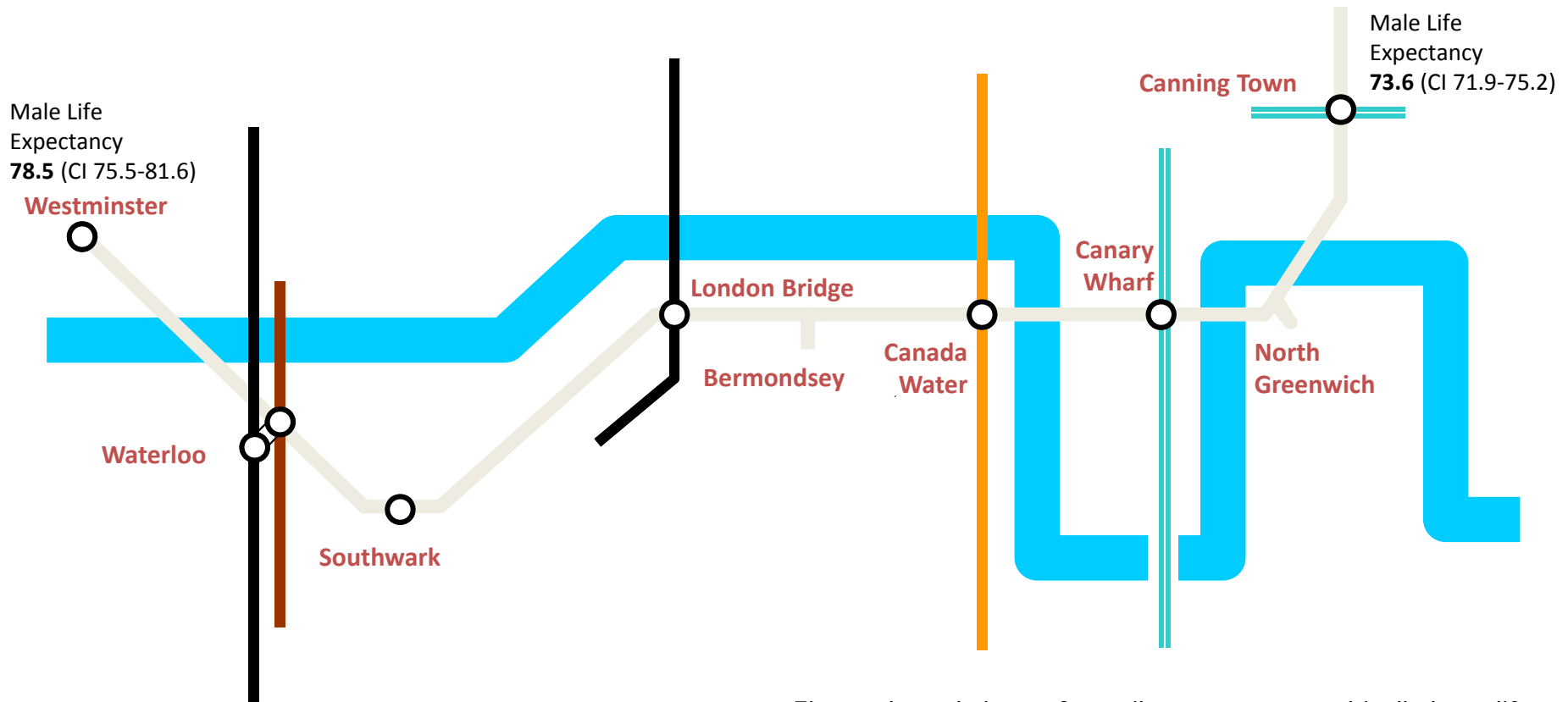
# Summary V

- Prevention is important, and behaviour is a central focus for prevention
- Considering both form and function of prevention may provide an improved classifying framework
- Logic and Evidence point to the potential effectiveness of environmental *over* developmental *over* cognitive prevention
- Do dual process models imply or challenge cognitive prevention?
- Theory for environmental prevention should be informed by system dynamics and Gibson's concept of affordances for action
- **Methodological challenges include measurement, implementation, replication, and the right level of evaluation**



# Differences in Male Life Expectancy within a small area in London

Travelling east from Westminster, every two tube stops represent over one year of life expectancy lost – Data revised to 2004-08

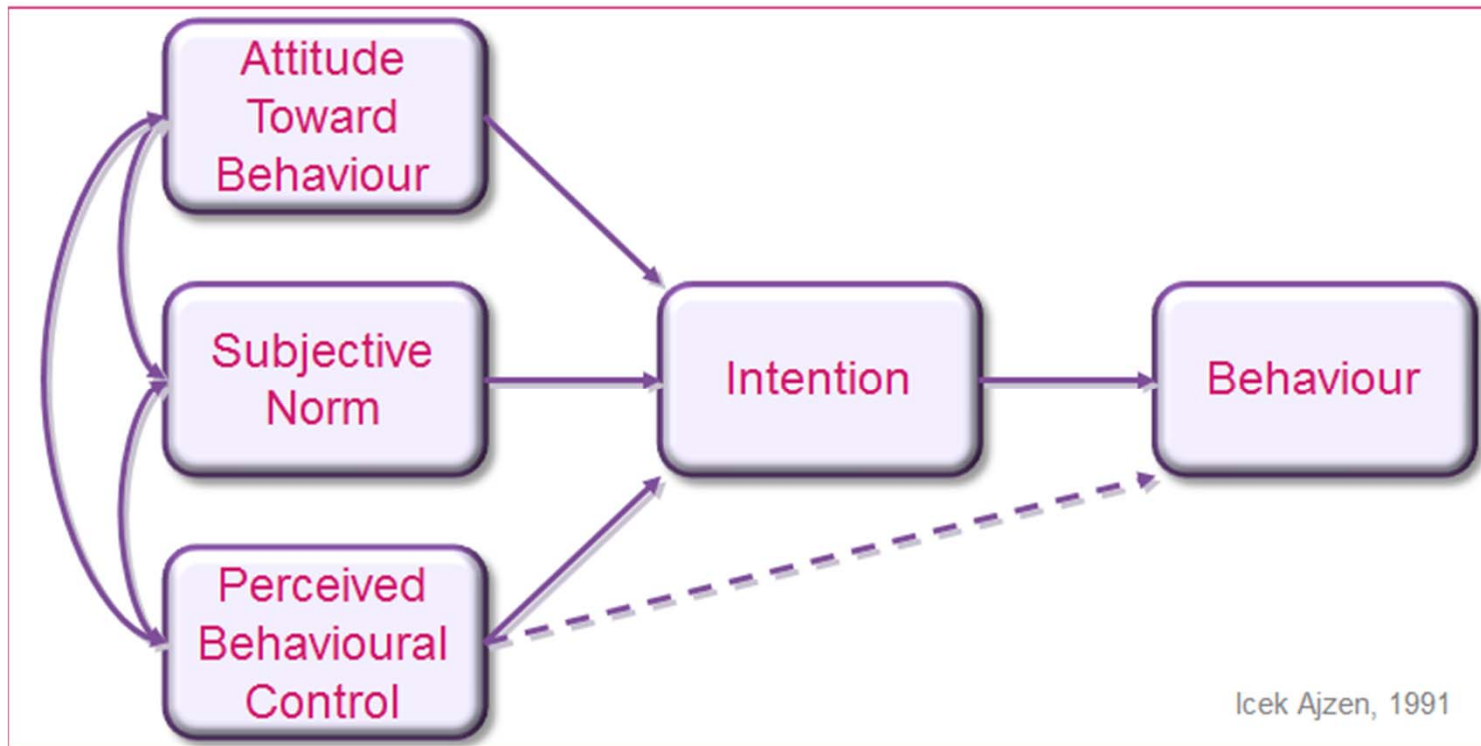


Electoral wards just a few miles apart geographically have life expectancy spans varying by years. For instance, there are eight stops between Westminster and Canning Town on the Jubilee Line – so as one travels east, every two stops, on average, mark over a year of shortened lifespan.<sup>1</sup>

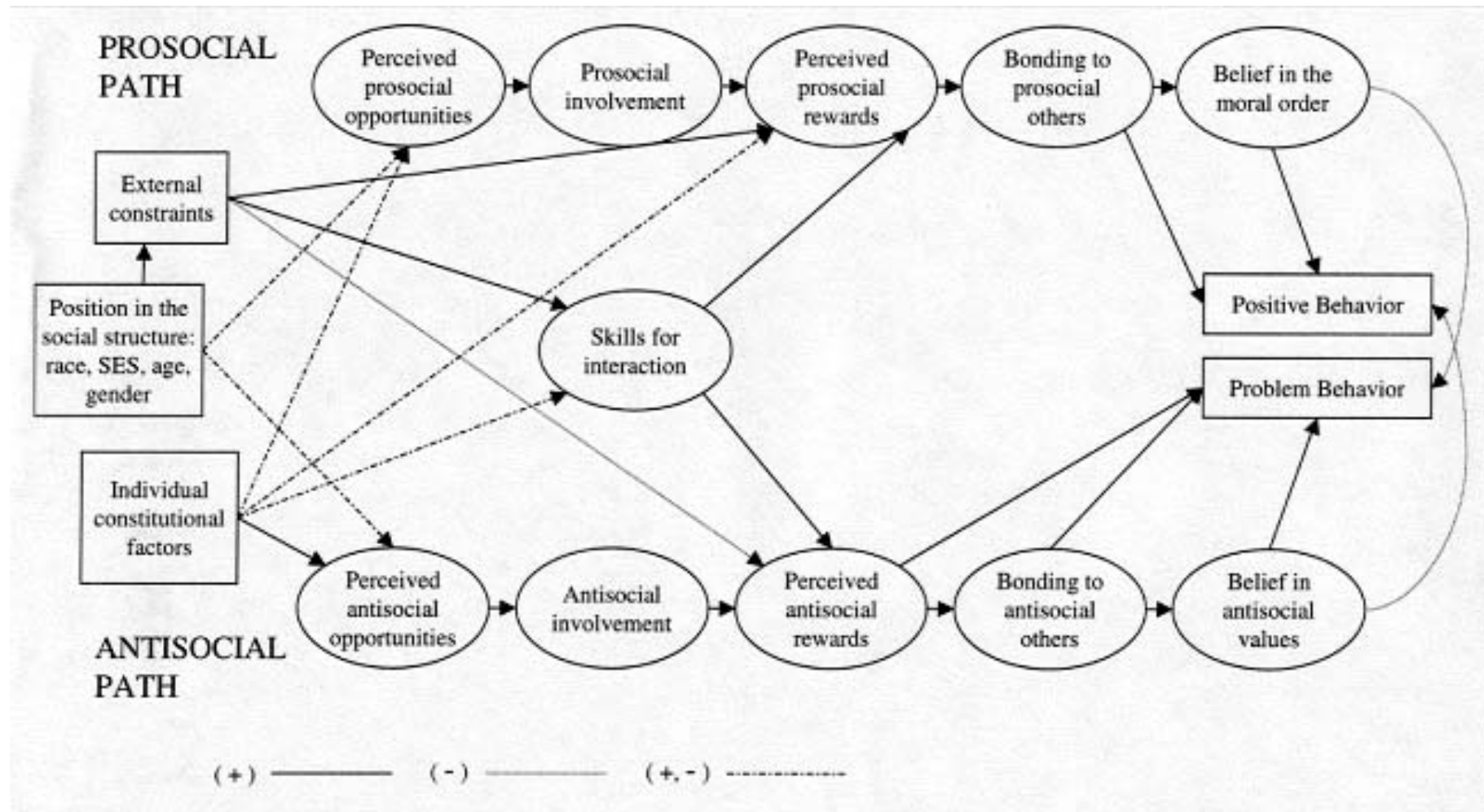
<sup>1</sup> Source: Analysis by London Health Observatory of ONS and GLA data for 2004-08. Diagram produced by Department of Health



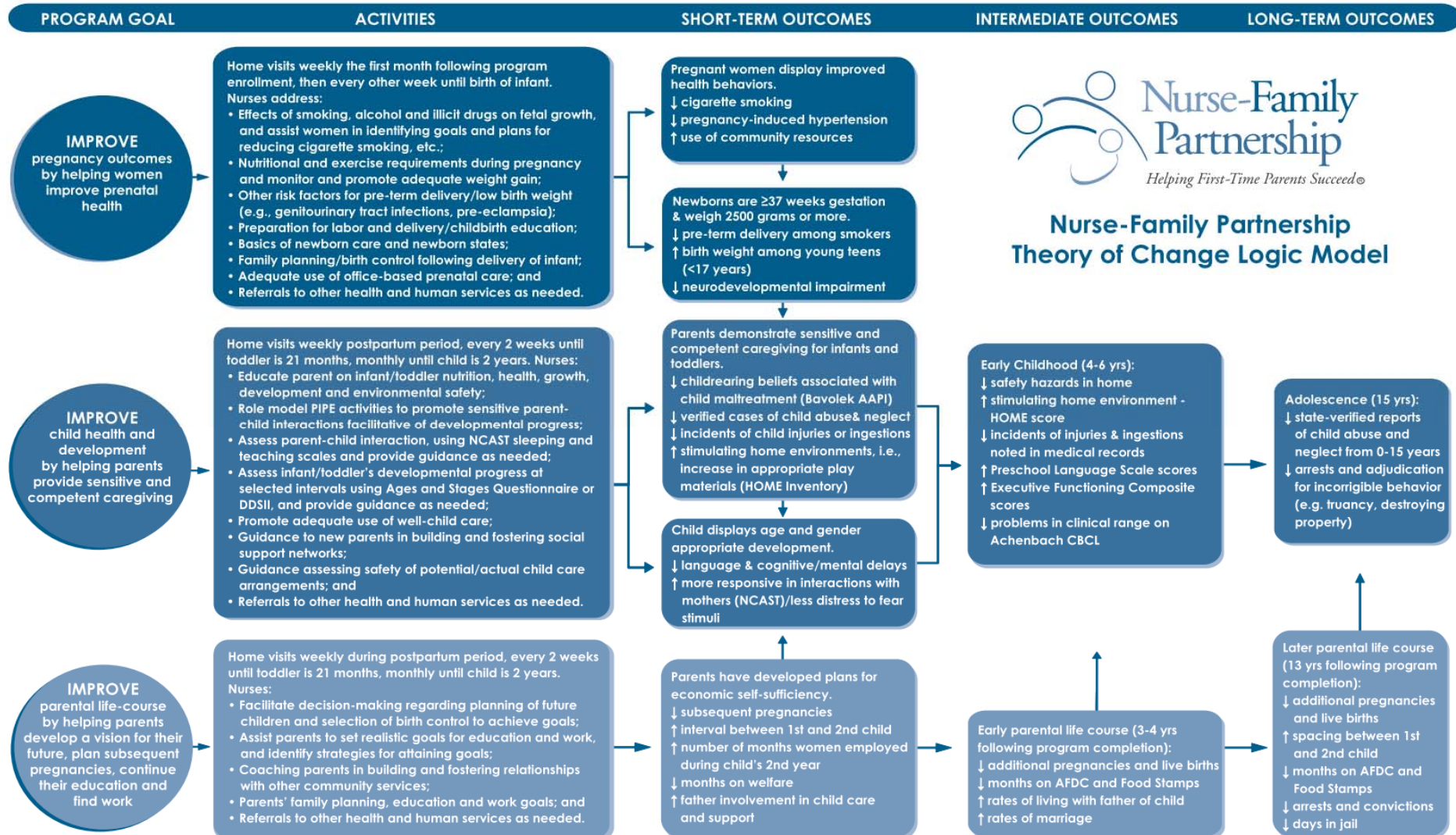
# Theory (cognitive prevention) I



# Theory (developmental prevention) I



# Theory (developmental prevention) II



## Nurse-Family Partnership Theory of Change Logic Model