TRIPP

Trafinz
transport connections
for liveable communities
Rendezvous Grand Hotel
14-17 Sept
Auckland
2014

Injury prevention for children

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- WSBs are contributing – albeit modestly – to a social movement revaluing New Zealand cities as walkable places
- Sense of community that is fostered by regular conversations among relatively diverse groups of children and adults
- WSB concept, emblematic of enduring concerns about the (in)ability of children to negotiate automobile-dominated space independently
- Supervised walking is neither the sole answer to children's mobility needs, nor a panacea for the ills of auto-dominated environments

Walking and cycling to school

UK (Pooley, et al., 2005)

1975-2001

From 75% to 55% (5-10 years)

From 60% to 45% (11–16 years)

USA (NCSRS 2011)

1969-2009

From 48% to 13% (5-14 years)

From 89% to 35% (> 14 years)

SUBJECTIVE CONCERNS OF PARENTS

Barrier	Percentage of parents identifying with the barrier
Distance to school	62
Traffic-related danger	30
Weather	19
Crime danger	12
Opposing school policy	6
Other reasons (not identified)	15

U.S. Centers for Disease Control and Prevention, 2004

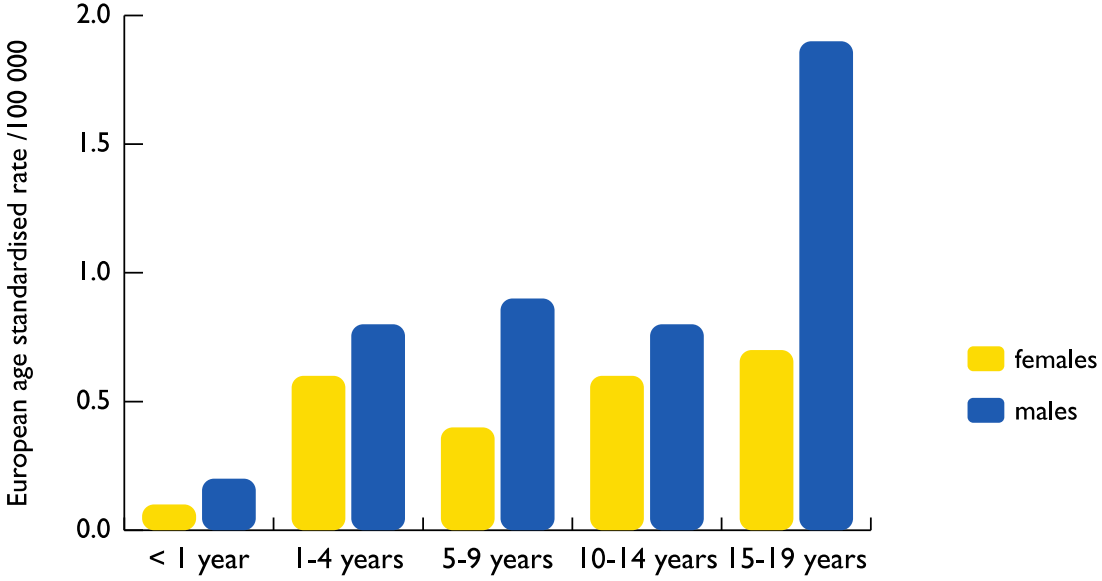
Studies…..

- Toronto Area: Distance from home to school had the strongest: a 1 km decrease in distance increased the odds of walking by 0.71 to 0.72 times (Mitra et al., 2010)
- Threat of “stranger danger” surpassed traffic fears and played a defining role for 75% of parents (McDonald and Aalborg, 2009)
- A higher density of intersections was found to be positively associated with walking/cycling among a few studies (e.g., Braza et al., 2004; Schlossberg et al., 2006; Kerr et al., 2007)
- Others have reported an inverse relationship (Timperio et al., 2004; Ulfarsson and Shankar, 2008)

females males

Pedestrian related deaths for children and adolescents (Europe age standardised rate per 100 000, 0-19 years by sex)

MacKay M and Vincenten J. Child Safety Report Card 2012: Europe



08-2010, 2007-2009 or most recent three years of data for all EU countries except Greece as ICD-9 codes do not allow breakdown of road traffic injuries.

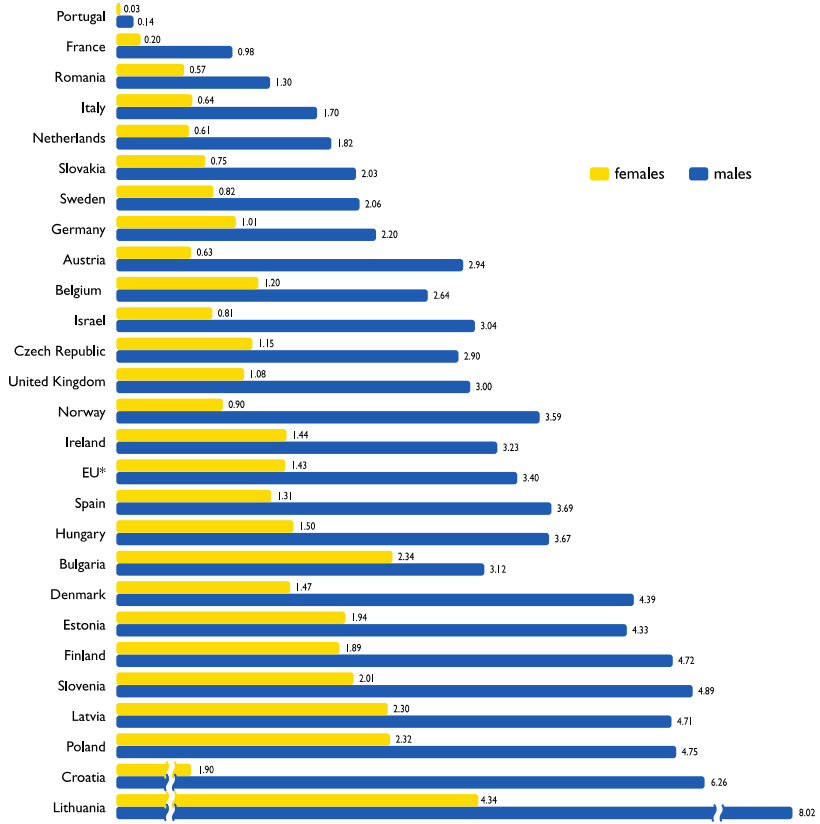
National ratings for child safety policy

- Law requiring reduced speed in residential areas (e.g. areas near schools and playgrounds)
- Law assuming driver responsibility in a crash involving a child pedestrian (e.g., places burden of proof on the driver)
- National policy providing specific supports for vehicle redesign to reduce risk of pedestrian injury
- National ministry/ government department with mandated responsibility for child and adolescent pedestrian safety
- Government approved national injury prevention strategy with specific targets and timelinesnrelated to child and adolescent pedestrian safety
- national media campaign at least once in past five years targeting child and adolescent pedestrian safety.

Pedestrian safety in Europe

Motor vehicle passenger or driver deaths for children and adolescents

(Europe age standardised rate per 100,000 population 0-19 years by sex)



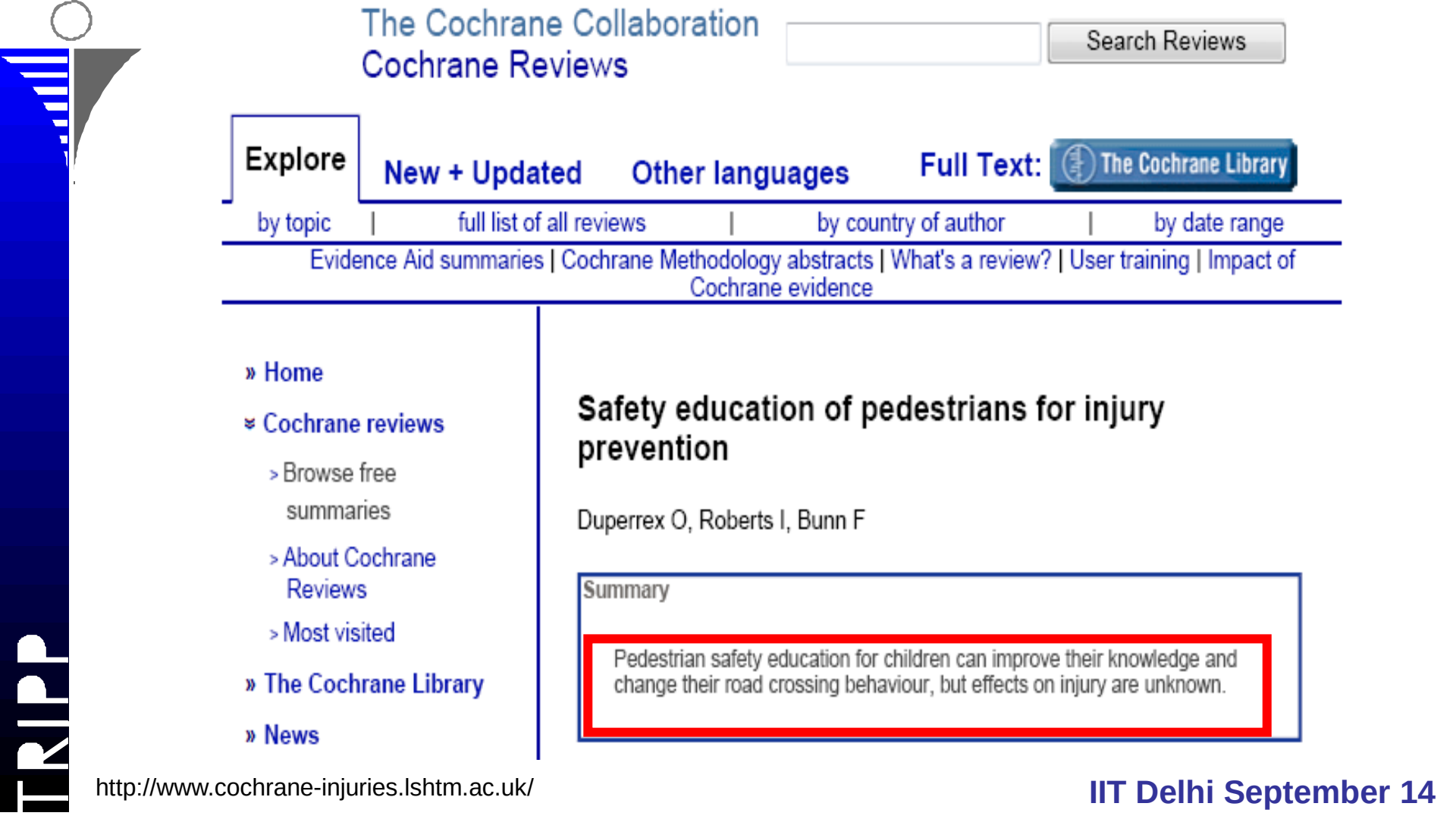
Source: WHO European Detailed Mortality Database (EDMD); 3 year averages for 2008-2010 or 2007-2009 or most recent three years of data; Cyprus, Iceland, Luxembourg and Malta excluded due to small numbers and resulting rate variability; Greece is excluded as ICD-9 codes do not allow breakdown of road traffic injuries so EU average presented represents remaining 26 countries of the EU.

Title: **The Skandia Report II: Why Are Children Injured in Traffic? Can We Prevent Child Accidents in Traffic?**

Date **1974**

Authors: Sandels, Stina

This investigation concerns traffic accidents in Sweden during 1968 and 1969 in which children ages 1-10 were active participants. A total of 182 complete police investigations including preliminary investigation records, police reports to the Central Bureau of Statistics, and memorandums, were analyzed. The purpose of this report is to determine the behavior of the people involved in the incident, and, if possible, what their responsibilities were. The behavior and the opinions of the children, their supervisors, the motorists and the witnesses were studied as well as the stationary and the moving environment in which the accidents took place. Every factor is examined separately and in detail in order to give a general picture of influential factors; suggestions for preventive measures are given. The last chapter explores the question of whether child accidents in traffic can be prevented. It is concluded that it is impossible to radically lower the number of children's accidents by teaching safety measures. (CS)



http://www.cochrane-injuries.lshtm.ac.uk/

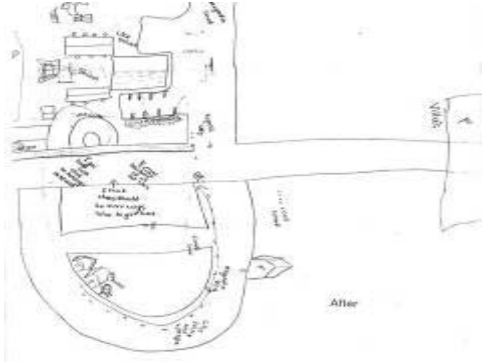
Characteristics of successful programs

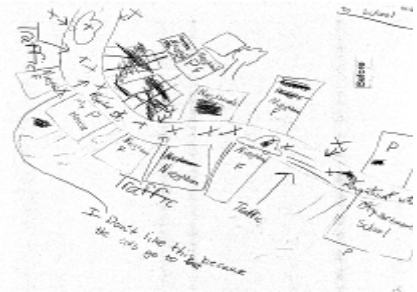
- Information regarding relative safety characteristics of similar products.
- That communicate health knowledge not previously well known.
- In conjunction with other ongoing prevention activities—for example, in combination with law enforcement programs—publicizing the enforcement presence and results of the enforcement.
- Part of broader-based, longer-term community programs.
- Based on behaviour change models, teaching skills to resist social influences..
- Education of policy makers and professionals

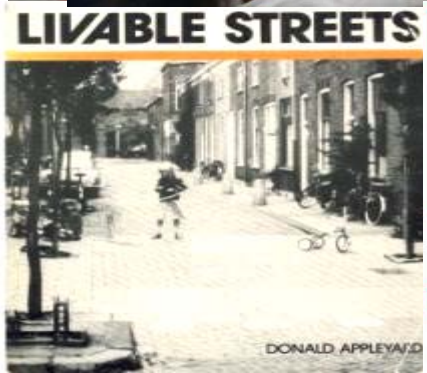
Adapted from:
Alan F. Williams (2007). Public information and education in the promotion of highway safety. Research Results Digest 322, NCHRP Project 17-33, TRB, Washington D.C.

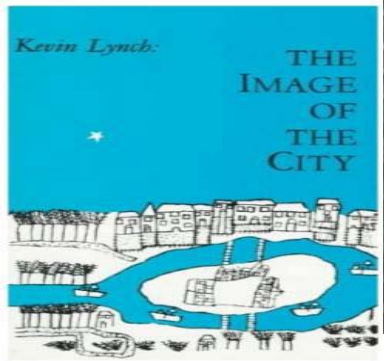
Livable Streets for Schoolchildren

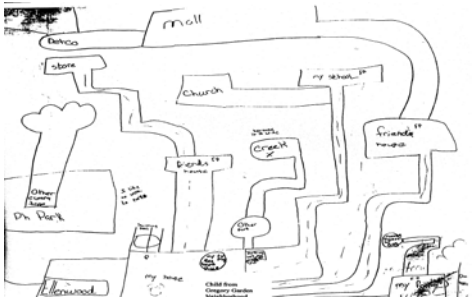
"Map neighborhood between home and school as if you want to describe it to someone"









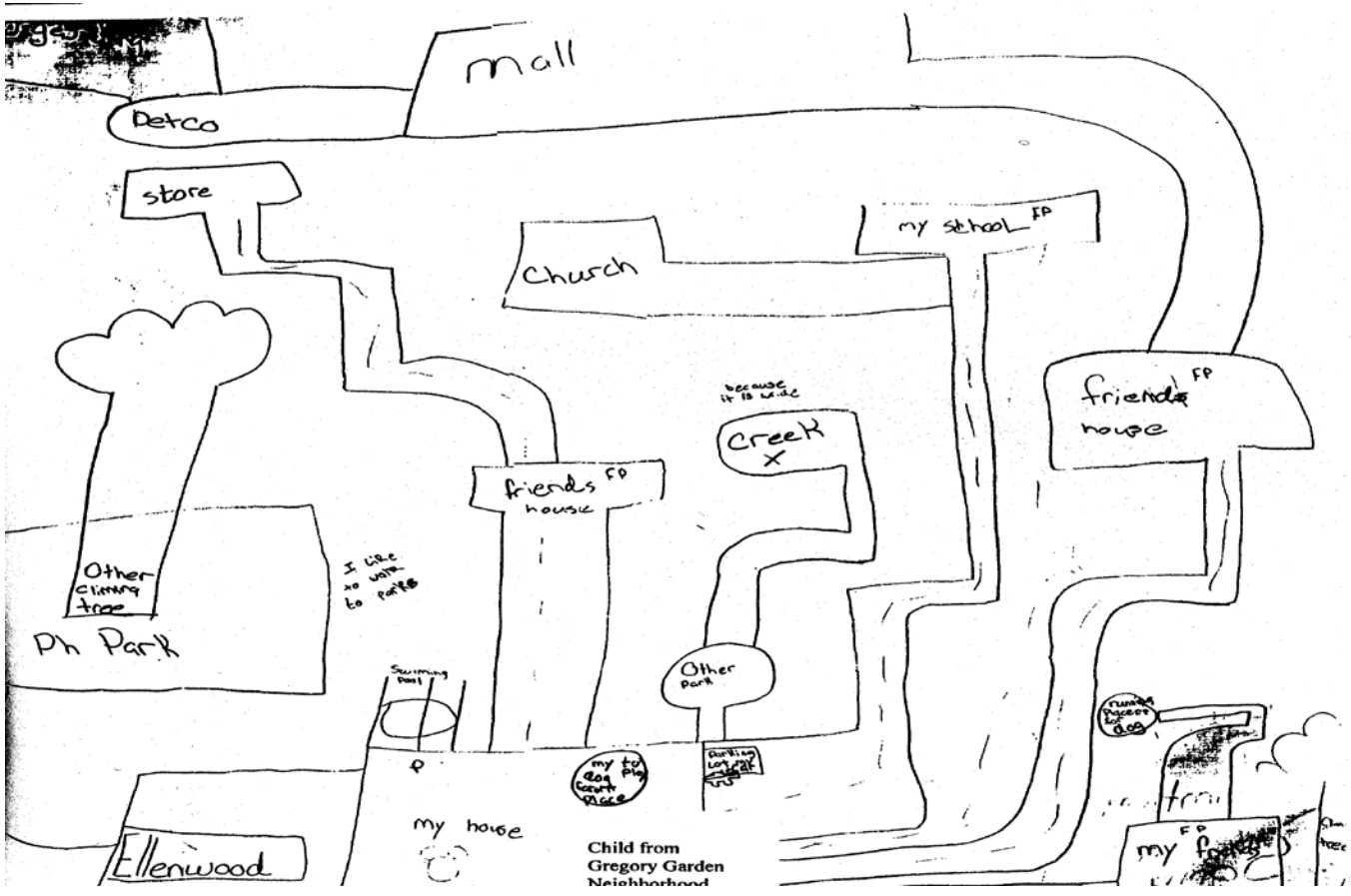


Livable Streets:

Pioneered Context Sensitive Solutions

Work with Communities and Celebrate Accomplishments and Champions

When driven everywhere, children become cognitively disconnected from their environment



"Livable Streets for Schoolchildren, Bruce Appleyard

How People Traveling by Different Modes Experience The Environment Differently

The View From Outside a Car

A child-able to freely walk and bicycle-can become much more cognitively aware of subtle qualities of the environment through which they travel.

Allow for uncertainty and "Intrigue"

- **Allowing for drivers to experience, uncertainty ("intrigue").**

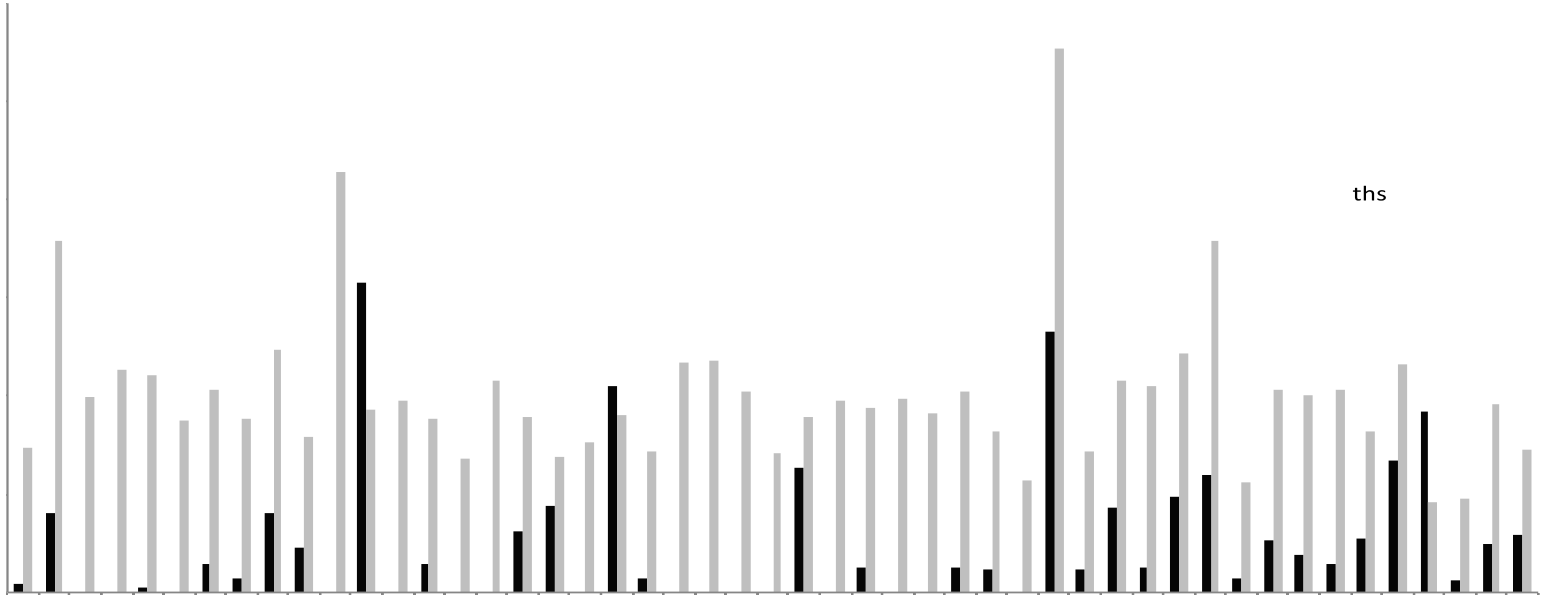
Monderman, Hamilton Baille, Engwitch

- **Likely leads to safer conditions for those traveling outside of their vehicles.**
- **More people= Cautious Driving**
- **Built environment matters to safety**

Eric Dumbaugh

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
    - *Context Sensitive Solutions (CSS)*
  - Articulated the “roles” people play and the unequal distribution of power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SAFETY

- What do we really know ?
  - Crashworthiness of cars and use of restraint systems effective
  - Vehicle speeds major determinant in fatality rates
- Weaknesses in knowledge
  - How to design streets and for mixed traffic
  - Safety of “careless” pedestrians, bicyclists

“…operator error stems primarily from the structure they operate in, and thus, stems from the actions of elites. Elite errors and elite interests stem from their class and historical power positions in society, and changes in these positions are glacial”

Charles Perrow (*Normal Accidents*)

Safe roads for children

- Children, elderly, walking speed ~ 0.8 m/s
- Pedestrian green phase < 30 s
- Therefore, motorised lanes < (30 X 0.8) = < 24 m
- Universal design principles
- Shops and/or street vendors by design
- City blocks ~ 800 m square
- Maintain urban average speeds at 15 km/h
- Public transit on surface