Bonds, Bridges and Links: From Communities to Population Health

Lisa F Berkman

Thomas Cabot Professor of Public
Policy and Epidemiology

Harvard School of Public Health



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The Strength of Social connections

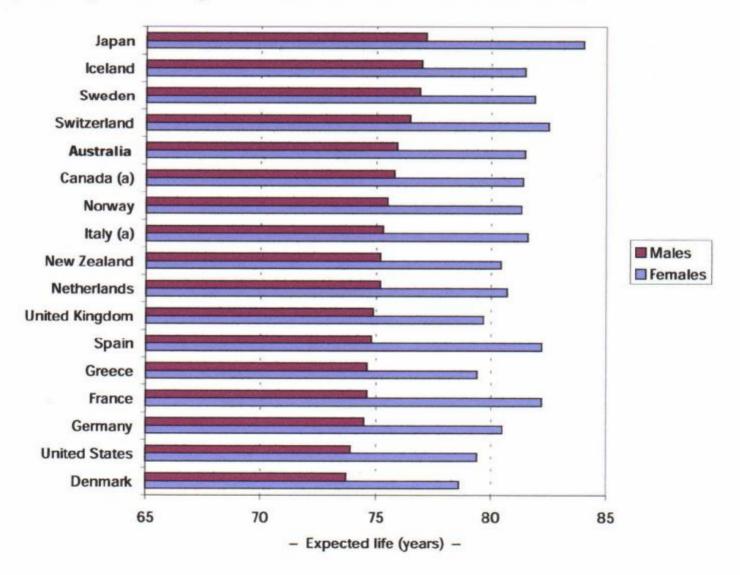
Building strong communities can be good for you and your community

Health Care Expenditure per capita in \$ PPD (Purchasing Power Capacities),

1997				
1. United States	4095	15. Japan	1760	
2. Switzerland	2611	16. Italy	1613	
3. Germany	2364	17. Finland	1525	
4. Luxembourg	2303	18. United Kingdom	1391	
5. Canada	2175	19. New Zealand	1357	
6. France	2047	20. Ireland	1293	
7. Denmark	2042	21. Greece	1196	
8. Norway	2017	22. Spain	1183	
9. Iceland	1981	23. Portugal	1148	
10. Netherlands	1933	24. Czechoslovakia	943	
11. Australia	1909	25. Korea	870	
12. Austria	1905	26. Hungary	642	
13. Belgium	1768	27. Poland	386	
14. Sweden	1762	28. Turkey	259	

Life expectancy and wellbeing – Indicator 3.5 International comparison of life expectancy at birth by sex

Life expectancy at birth by sex, Australia and selected countries, 1998



Population Health

'Why do some individuals have hypertension?'

Is quite a different question from:

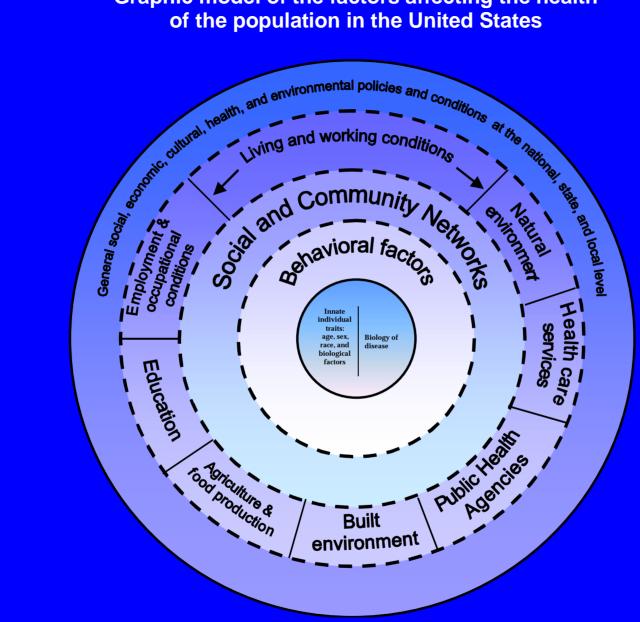
'Why do some populations have much hypertension, whilst in others it is rare?'

Source: G. Rose. Sick Individual and Sick Populations, 1985

Population Health

- Is determined by the distribution of risk in the population
- As well as the magnitude of risk

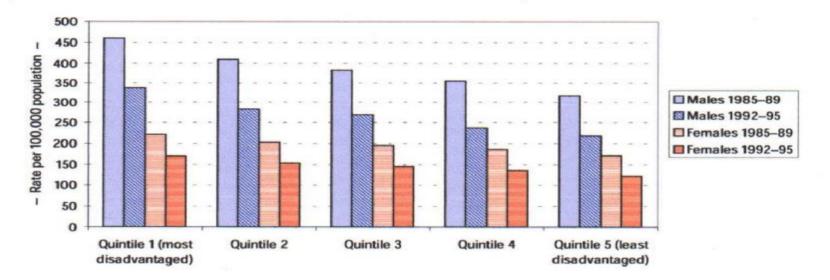
Graphic model of the factors affecting the health of the population in the United States



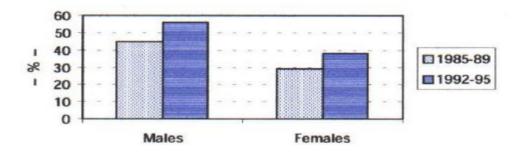
Note: The Built Environment includes transportation, water and sanitation, housing, and other dimensions of urban planning. Social conditions at the national level include racism, sexism, discrimination, cultural intolerance, and other factors that can have impact on mental (e.g., depression) and physical (e.g., health care access, etc.) health, health outcomes, and general well being. Other conditions at the national level might include major and sometimes sudden socio-political shifts, such as recession, war, governmental collapse, etc. Additionally, policies and systems related to safety and well being (e.g., law enforcement) should be considered in the sets of conditions affecting health at the national, state, and local level.

Socioeconomic factors – Indicator 4.4 Differentials in death rates across socioeconomic quintiles

Graph 1 Death rates for males and females aged 15 to 64 years by socioeconomic quintile (a), Australia, 1985-89 and 1992-95



Graph 2 Percentage difference in mortality between the 5th and 1st quintiles (a), Australia, 1985–89 and 1992–95



Inequality and Health Report

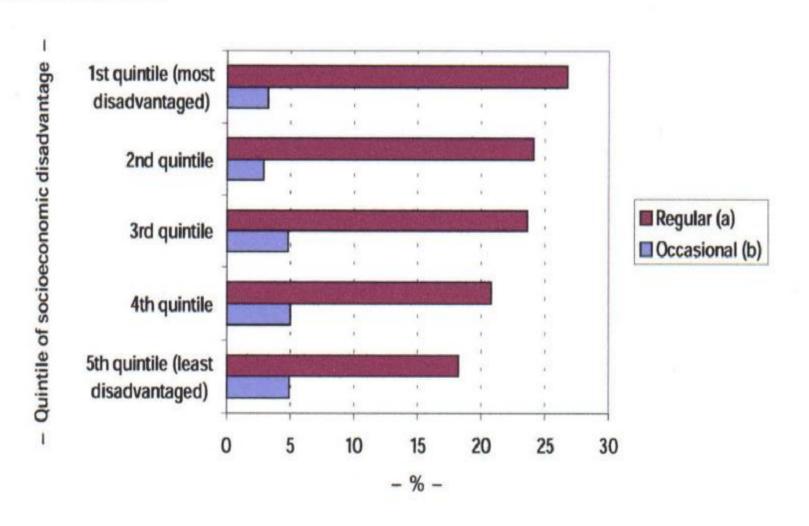
European standardized mortality rates, by social class, selected causes, men aged 20-64.

All Causes (rates per 100,000)

Social Class		Year	
	1970-72	1979-83	1991-93
I- Professional	500	373	280
II- Managerial & Technical	526	425	300
III- (N) Skilled (Non-manual)	637	522	426
III- (M) Skilled (Manual)	683	580	493
IV- Partly Skilled	721	639	492
V- Unskillled	897	910	806

Health behaviours – Indicator 4.7 Proportion of adults who are current smokers

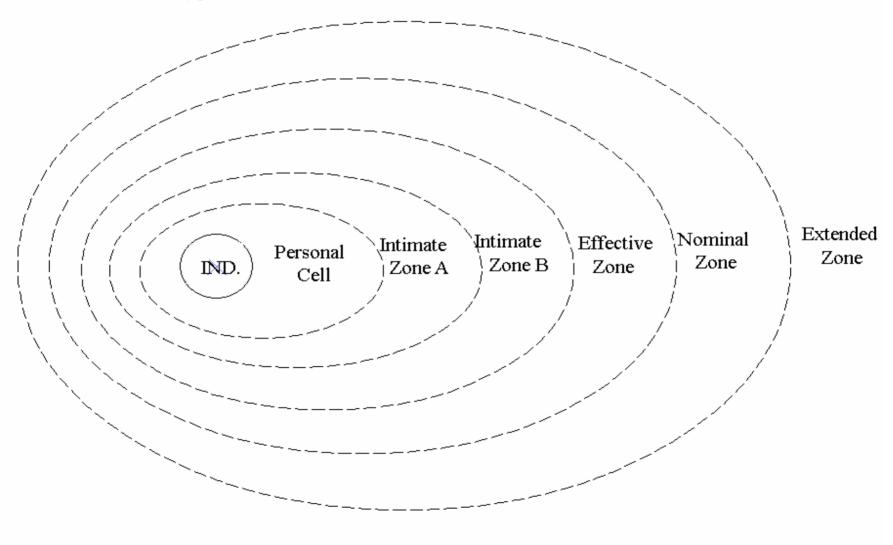
Tobacco use by socioeconomic area: proportion of the population aged 14 years and over, Australia, 1998



Social Connectedness

- Social isolation is linked to higher mortality, morbidity, and lower survival
- Care giving relationships are critical for early childhood development
- Community ties, voluntary associations influence health and health behaviors

Social Network Model

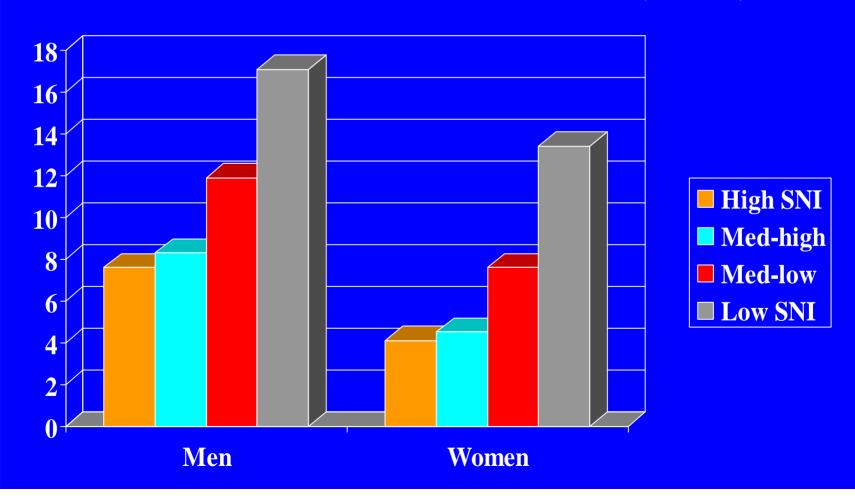


Source: Bolssevain, Jeremy: Friends of Friends, 1974

Social Networks

- Marital status or living with a partner
- ties with relatives
- ties with friends
- group membership &voluntary associations
- religious associations and attendence

Mortality Rate from All Causes by Social Network Index (SNI)



Men and women who were socially isolated were two to three times as likely to die over the 9 year follow-up period as those with many more ties.

It didn't matter whether you had one specific type of tie or another.

What mattered was whether you had several different types of ties

Handling and Aging in Rats

Mean (±SEM) Basal Corticosterone Levels (μl/dl) in Handled and Nonhandled Female Rats (n=12/group) Sampled at Various Ages

Age	Handled	Nonhandled
3 Months	9.1 ± 2.0	8.8 ± 0.8
8 Months	8.8 ± 1.1	11.4 ± 1.1
16 Months	11.9 ± 0.6	$15.0 \pm 0.9*$
24 Months	11.7 ± 1.1	17.8 ± 1.0*

^{*}Indicates a value that is significantly(p<0.05) different from same-aged H animals

Meaney, Aitken, Bhatnagar, Sapolsky (1991). Neurobiology of Aging, 12:31-38.

Handling and Aging in Rats

Mean (±SEM) Swimming Distance to Find Platform

	Group		
Age	Handled	Nonhandled	
6 Month-old	4.3 ± 1.1	5.5 ± 2.9	
12 Month-old	5.1 ± 1.0	$9.0 \pm 2.5*$	
24 Month-old	5.0 ± 1.3	11.2 ± 2.2*	

Meaney, Aitken, Bhatnagar, Sapolsky (1991). Neurobiology of Aging, 12:31-38.

^{*}Significantly different from 6 month-old nonhandled animals and all H animals (p<0.05)

Social engagement is defined as the maintenance of many social connections and a high level of participation in social activities.

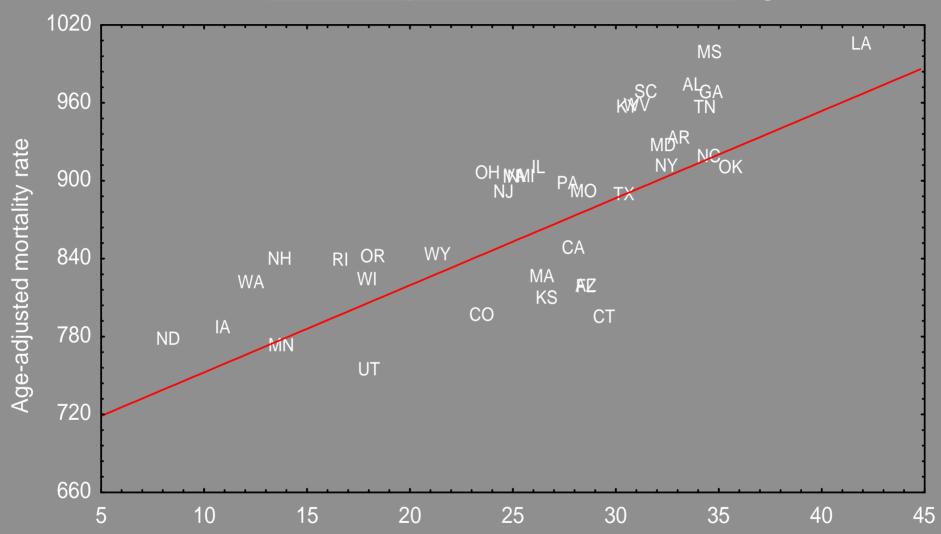
In a study of 2,812 older men and women, those who were least socially engaged were 2.3 times as likely to decline cognitively as those who were more engaged independently of education, race, disability, impairments, depression, cardiovascular profile, smoking, alcohol use or level of physical activity.

Bassuk, SS, Glass, TA, Berkman, LF: Social Disengagement and Incident Cognitive Decline. Annals of Internal Medicine 131(3): 165-173, 1999.

What is Social Capital?

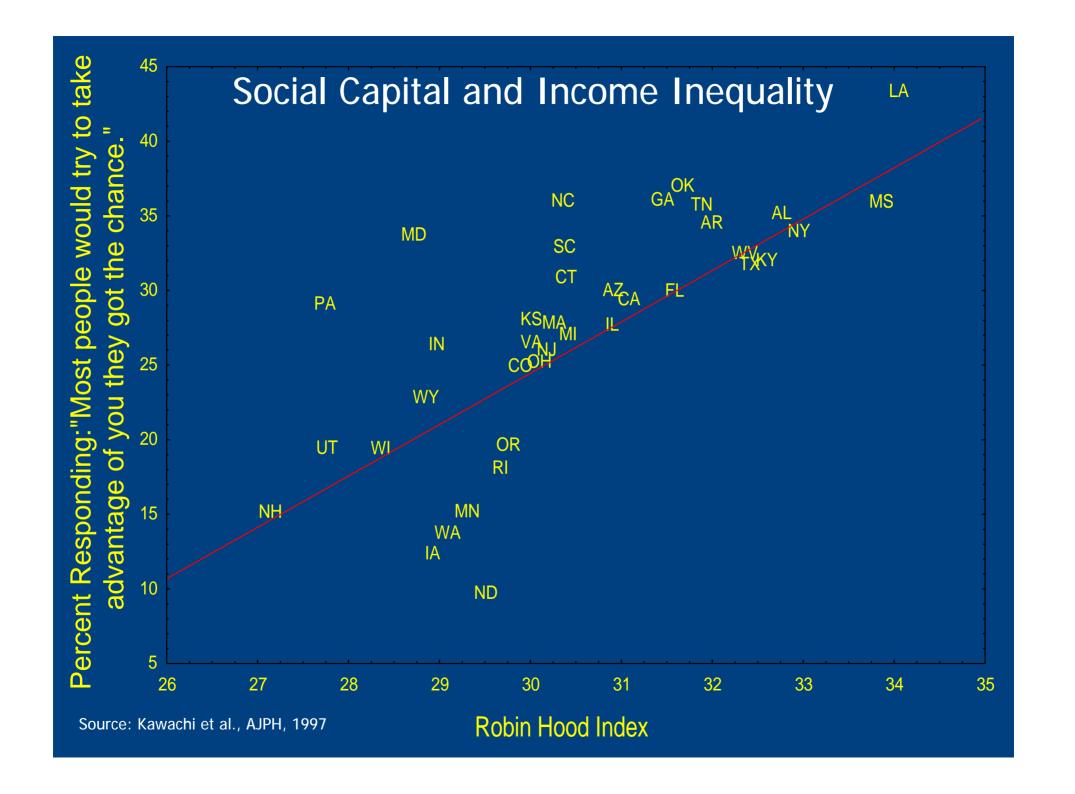
- The sum of resources, actual or virtual, that accrue to an individual or group by virtue of possessing a durable social network (Bourdieu)
- Social capital facilitates actions of individuals in the social structure
- Investment in social relations with expected returns in the marketplace.(Lin)

Social Capital and Mortality



Percent Responding: "Most people would try to take advantage of you if they got the chance."

Source: Kawachi et al., AJPH, 1997



Number of people who volunteer (as a % of population), by age group for selected types of organisations (a), Australia, 2000

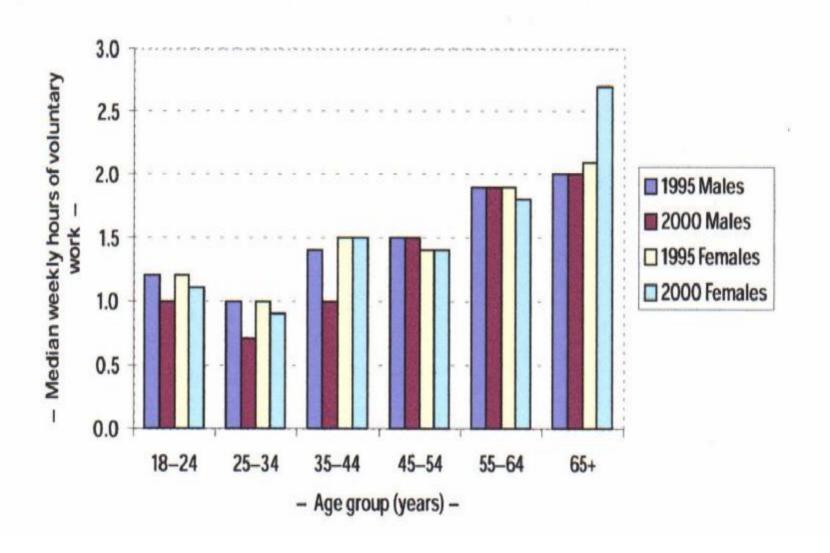
Selected type of organisation	Age group (years)					
	18-24	25-34	35-44	45-54	55-64	65+
	- % of population -					
Sport/recreation	40.0	37.5	42.5	36.1	22.0	15.3
Education/youth	16.8	32.7	46.4	27.5	13.7	6.7
Health	6.4	8.3	4.8	7.8	10.5	11.4
Community/welfare	21.3	23.7	27.7	34.5	52.9	64.3

⁽a) As people may volunteer for more than one organisation type, figures for individual categories may not add to 100%, and some over-reporting may occur. No significant changes were seen from 1995 survey.

Source: Australian Bureau of Statistics (2001), Voluntary Work, Australia, 2000, Cat. no. 4441.0, ABS, Canberra.

Community Capacity - Indicator 4.6 Voluntary work participation rates

Median weekly hours of voluntary work, by age group and sex, Australia, 1995 and 2000



Can Social Capital be harmful?

• How can something that "facilitates collective action for mutual benefit" be bad?

- 1. It could be coercive (interlocking ties)
- 2. It can "sink" fragile networks
- 3. It can inhibit free expression
- 4. It can distribute resources to a few

Bonding, Bridging, and linking

The strength of strong ties

- Bonding networks help those that are within the group.
- Characterized by intensity, reciprocity, intimacy, acknowledged obligations, density.
- People in bonded networks are often very similar to each other

The strength of weak ties: Bridging

- Bridges are ties between two networks
- people who do not share the same characteristics may have access to new resources and information
- People often find jobs from "weak ties" those that bridge across different groups
- Bridges are important for instrumental action and resources

Links

- Links are institutional ties between two or more networks.
- Resources embedded in several networks become accessible across networks.
- Bridges and links move individual groups to a socially cohesive society, beyond acting in each group's self-interest

Community Organizations have the power to improve population health

And..

In this case, what's good for community is good for you