



Archived at the Flinders Academic Commons:

<http://dspace.flinders.edu.au/dspace/>

Meyer, S., Luong, C.N., Ward, P.R., Tsourtos, G., & Gill, T.K., (2010, August). Investigating Australians' trust: findings from a national survey. In *Social Policy Innovation in the Era of Social Transformation. The 6th International Symposium and Lectures on Social Policy*, Chinese Sociological Association, University of Zhejiang, China, 939-963.

Copyright 2010 Chinese Sociological Association and the authors. Published version of the paper reproduced here with permission from the publisher and the authors.

- Weber, Max ([1958] 1991), *From Max Weber: essays in sociology*. Translated by H. H. Gerth and C. W. Mills. Routledge: London.
- White, Harrison C. (1970), *Chains of Opportunity: System Models of Mobility in Organizations*. Harvard University Press: Cambridge, MA.
- White, Harrison C. (1981), 'Where Do Markets Come From?', *American Journal of Sociology*, 87 517-547.
- White, Harrison C. (1992), *Identity and control: a structural theory of social action*. Princeton University Press: Princeton, N.J.
- White, Harrison C. (2002), *Markets from networks: socioeconomic models of production*. Princeton University Press: Princeton, N.J.
- White, Harrison C. (2008), *Identity and Control: How Social Formations Emerge*. Princeton University Press: Princeton, N.J.
- Whitehead, Alfred North ([1925] 1997), *Science and the Modern World*. Free Press: New York, NY.
- Whyte, William Foote ([1943] 1981), *Street corner society : the social structure of an Italian slum*. University of Chicago Press: Chicago.
- Wunderli, Richard M. (1992), *Peasant Fires: The Drummer of Niklashausen*. Indiana University Press.
- Zuckerman, Ezra W. and Kim, Tai-Young (2003), 'The Critical Trade-Off: Identity Assignment and Box-Office Success in the Feature Film Industry', *Industrial and Corporate Change*, 12 27-67.

Investigating Australians trust: Findings from a national survey

Samantha B Meyer Discipline of Public Health, Flinders University, Adelaide

Tini CN Luong Discipline of Public Health, Flinders University, Adelaide

Professor Paul R Ward Discipline of Public Health, Flinders University, Adelaide

Dr. George Tsourtos Senior Lecturer Discipline of Public Health, Flinders University, Adelaide

Dr. Tiffany Gill Senior Epidemiologist, Population Research and Health Outcome Studies, SA Health, Government Of South Australia

Abstract

Trust has been identified as an indicator within Social Quality theory. As an important component of social quality, trust has become increasingly important in modern society because literature suggests that trust in a number of democratic countries is declining. Modern technologies and specialties are often beyond the understanding of lay individuals and thus, the need for trusting relations between lay individuals and organisations/individuals has grown. The purpose of the study was to examine the extent to which Australians (dis)trust individuals and organisations/institutions. A national postal survey was conducted with 1044 respondents recruited using the electronic white pages directory. Findings from multivariate analyses suggest that income, age, sex, and health status are associated with trust in groups of individuals and trust in organisations/institutions. Respondents aged 55-74 are the most likely of respondents to trust individuals (OR

7.02). Females (OR 1.44), respondents without a chronic illness (OR 1.51), and respondents with an annual household income of \$0-49,999 are the most likely to trust organisations. The findings highlight populations where trust needs to be (re)built. Future government policy and practice should utilise these findings as a means of facilitating social quality.

Introduction

In a previous paper we argued that trust is of central importance for the development and maintenance of 'social quality' and ultimately, for the health and wellbeing of societies and communities (Ward and Meyer 2009). Within the mentioned paper, we argued that trust underpins all four quadrants of the Social Quality theory, rather than simply social cohesion as it stands in the current model. Central to our argument was the suggestion of the need for empirical research into the importance of trust in social quality. Therefore, this paper presents empirical findings on trust in Australia from a quantitative survey investigating social quality. Using social theories of trust, a module was developed and included as part of a national survey on social quality. The empirical investigation of trust adds to our determination of a level of social quality of life in the Australian population. The results from this survey are presented in this paper.

The paper is structured as follows. First, a brief overview of the importance of trust for social quality is provided. As our earlier paper has discussed this extensively with regards to the theoretical and political context of trust within social quality, this section includes a brief overview of the interplay between trust and social quality. We then turn to reiterate how social theories of trust can be used to frame social quality research. The third section provides a detailed account of our methods including pilot, sampling frame, recruitment, data collection and data analysis. We then move to a final discussion section which puts forward the argument that trust can be seen to underlie all four quadrants in the Social Quality theory. As this paper will demonstrate, trust underpins a number of the groups of individuals and social systems that play a role in the development and maintenance of social quality; therefore, social theories of trust underpin the Social Quality theory.

Literature Review

Background to the Social Quality theory

It is not the purpose of this paper to provide a detailed description and critique of the Social Quality theory, nor do we intend to provide an in-depth review of the concept of trust here, since this has been done admirably elsewhere (Simmel 1978; Gambetta 1988; Giddens 1990; Giddens 1991; Giddens 1994; Misztal 2001; Mollering 2001; Gilson, Palmer et al. 2005; Goudge and Gilson 2005). Instead, the focus of our attention is to provide a brief theoretical platform for arguing the centrality of trust in the Social Quality theory. Given the lack of empirical research in this area, applied empirical findings are the focal point of this paper. In brief, SQT is 'the extent to which citizens are able to participate in the social and economic life of their communities under conditions which enhance their well-being and individual potential' (Beck, van der Maesen et al. 1998:3).

The importance of the concept of 'trust'

There is a burgeoning wealth of literature on (dis)trust in a number of disciplines including sociology (Giddens 1994; Mollering 2001a; Mollering 2001b; Anon 2006; Ward and Coates 2006; Bjornskov 2008; Ward and Meyer 2008; Ward and Meyer 2009), public health (Lupton 1996; Rhodes and Strain 2000; Thom 2000; Thom, Kravitz et al. 2002; Gilson 2003; Wright, Holcombe et al. 2004; Gilson 2005; Gilson, Palmer et al. 2005; Tibandebage and Mackintosh 2005; Trachtenberg, Dugan et al. 2005; Gilson 2006; Taylor-Gooby 2006; Whetten, Leserman et al. 2006; Brown 2008; Ishikawa and Yano 2008), psychology (Miles and Frewer 2002; Silvester, Patterson et al. 2007), political science (Giddens 1994; Fukuyama 1995; Alexander 1996; Hardin 2006; Janssen 2006), philosophy (Baier 1986; Baily 2002; Hills 2002; Matravers 2002; Price 2002;

Wolff 2002), and social policy (Taylor-Gooby 2008; Taylor-Gooby and Wallace 2009). This reflects the growing awareness in both research and policy of the importance of trust for society's health and wellbeing. Although it may be questioned as to whether or not society can ever reach a state of wellbeing, at both an individual and societal level, trust remains important for health as it is 'fundamental to effective interpersonal relations and community living' (Mechanic and Meyer, 2000:657). Findings from a substantial body of literature across a broad range of disciplines suggest that trust is an important component for the smooth functioning of society and thus for the development, maintenance and sustainability of the social quality of people's lives (Ward 2006; Ward and Coates 2006; Meyer and Ward 2008; Meyer, Ward et al. 2008).

There is a concern with the decline in trust in several democratic countries (Hardin 2006) and evidence suggests that modern social developments have led to the erosion of trust in these countries. It has been suggested that to compound the increasing levels of distrust, 'one should expect trust to be increasingly in demand as a means of enduring the complexities of the future which technology will generate' (Luhmann 1979:16). In other words, the whole notion of trust will become increasingly important.

The concern for both academics and policy makers is that this decline may lead to continuous vigilance and anxiety within society (Crawford 2004), impacting on individual and societal health, wellbeing and social quality. Overall, in order to develop and maintain social quality or wellbeing in society, we need to promote and maintain trust. This is not just a matter of focussing on the trustworthiness of individuals, but it is also essential to look at the trustworthiness of social systems and institutions, fitting in with the dualistic structure-agency focus of the Social Quality theory (Ward and Meyer 2009).

The interplay between trust and social quality

The current Social Quality theory is based around four main domains which comprise 50 sub-domains and 94 indicators (van der Maesen and Walker 2005). The four conditional domains are socioeconomic security, social cohesion, social inclusion, and social empowerment. Within these conditional factors, trust is located within social cohesion, and is therefore not seen as integral to the development of social empowerment, social inclusion or socio-economic security. However, we maintain that trust is embedded and is integral to social empowerment, inclusion and socio-economic security.

Overview of social theories of trust

Throughout the trust literature, two sociologists remain consistent; Niklas Luhmann, and Anthony Giddens (Lupton 1997a; Mechanic and Meyer 2000; Gilson 2003; Bordum 2004; Salvatore and Sassatelli 2004; Bordum 2005; Pearson, Crane et al. 2005; Andreassen, Trondsen et al. 2006; Gilson 2006; Rowe and Calnan 2006; Ward 2006). Giddens' and Luhmann's theories were chosen as the framework for this development of the trust module because their work builds on the early works of Simmel and have been applied and critiqued by the works of the other listed theorists. In addition, both theorists operationalise trust differently which presented an area of investigation.

Giddens and Luhmann specifically recognise two types of trust: institutional (also termed abstract or faceless) and interpersonal (facework) (Giddens 1991; Giddens 1994; Luhmann 1990) and view interpersonal trust as a learned personal trust that is negotiated between individuals (an individual's decision to trust someone or not). Institutional trust is the trust that is placed in the system or institution; for Luhmann trust in one social system is highly dependent on our trust in another social system (Luhmann 1979). It is important to acknowledge the distinction between institutional and interpersonal trust because 'Trust occurs in a framework of interaction which is influenced by both personality and social systems, and cannot be exclusively associated with either' (Luhmann, 1979:6).

What separates Giddens' and Luhmann's is that they argue that (mis)trust operates on different levels of society; Giddens maintains that interpersonal trust is necessary before there is potential for institutional trust, while Luhmann argues the reverse, that trust in the system is necessary before an individual can have trust in the system's representative. Both construct their theories in a unidirectional manner; ignoring the web of interactive relationships that may influence individual trust (Meyer and Ward 2008; Meyer, Ward et al. 2008). Upon our critique and analysis, trusting relationships should not be understood as operating in a linear, unidirectional manner; they can be understood as a complex 'web of interaction' (Meyer et al., 2008). Rather than arguing that trust originates at an individual OR systems based level, we argue that it may originate at either and that trust is multidimensional (Meyer, Ward et al. 2008). This differential operationalisation is crucial to investigating trust and its relevance to social quality. Both theories contribute to our investigation of trust in Australia. The framework used to investigate trust addresses trust at both an interpersonal and institutional level, but also the interaction between interpersonal and institutional trust. Trust underlies each of the four domains outlined in the current model of social quality (Ward and Meyer 2009) because trust is multidimensional affecting communication and interaction within and between individuals and organisations/institutions. Although our critique of the work of Giddens and Luhmann is much more comprehensive than what has been presented above (see Meyer, Ward, Coveney, & Rogers 2008), the differential operationalisation is central to our argument that trust is more extensive than the current Social Quality theory permits. We have used this differential operationalisation as a means of framing the development of a survey investigating Australians trust in both institutions and individuals.

Methods

Questionnaire Development

This data from the trust module presented in this paper is part of a larger survey developed by the Asia-Pacific Scientific Steering Group on Social Quality to make International comparisons regarding social quality. The instrument was developed by the Australian representatives of this steering group. The questions were developed based on the aforementioned theoretical framework and from pre-validated questionnaires such as the World Values Survey and the General Social Survey, which have been used and validated extensively (World Values Survey Association 2005/2006; National Opinion Research Center (NORC) 2006).

Pilot, reliability and validity

A pilot test was undertaken to assess the validity and reliability of the measuring instrument used for the research. The Australian survey was piloted on 33 Australian respondents (18 males and 15 females aged 19-63) residing in metropolitan Adelaide (South Australia) and recruited as a sample of convenience. The original survey (before testing for reliability and face validity) consisted of 58 questions (mostly nominal and ordinal levels of measurement) relating to the four domains of SQT, as well as demographic items. The analyses of the pilot focussed on reliability testing. Both test-retest and inter-item reliability analyses were conducted. If the results from the test-retest analyses (Kappa, or Spearman Correlation tests) and the inter-item reliability test (Cronbach α) were statistically non-significant ($p > 0.05$; $N = 10-33$) or the coefficients were < 0.70 for any of the questionnaire items then the questions were amended or removed. Questionnaire items were also removed if response rates for these items were found to be very low ($< 33\%$). This tool has been acknowledged by academics as a valid and reliable tool for measuring trust (Meyer, Luong et al. 2010).

Administration, recruitment and sampling

A structured postal questionnaire was chosen as the method of data collection. Respondents were randomly recruited for the national survey using the electronic white pages, which contains postal addresses for all households with a landline telephone.

The sample was stratified and selected based on the population within each Australian state and territory (Alreck and Settle 2004). States with the highest population had a larger sample selected (Table 1).

Table 1: Number of surveys distributed nationally according to State/Territory

State	Number of surveys posted
ACT	82
NSW	1650
NT	45
QLD	971
SA	389
Tas	120
VIC	1253
WA	490
Total	5000

Data collection

The surveys were sent out in early September 2009. A copy of the questionnaire, a letter of information, a letter of introduction, and a stamped return envelope was sent to each mail-out address. A postcard reminder was only sent out to those who had not returned the questionnaire after two weeks as a means of increasing the response rate (Bowling 2009).

Based on previous experience and the literature, the expected response rate was 20%. In order to obtain a final sample size of 1000, it was estimated that an initial sample of 5000 addresses was required. Out of the 5000 surveys that were sent out, 638 were returned due to invalid addresses making the number of valid surveys sent out 4362. From the remaining number of valid surveys posted, 631 surveys were returned successfully. Following the mailing out the reminder postcards, an additional 413 survey were returned, providing 1044 completed surveys, a response rate of 23.9%.

Data description and manipulation

Each variable was pre-coded and entered into an SPSS database. Surveys with missing or illegible responses were coded as missing data. In order to eliminate errors that occurred during data coding and input, univariate frequencies were used as a means of data cleaning (Bowling 2009).

After data entry had been completed, IRSD (index of relative socioeconomic disadvantage) quintiles were matched to the data using postcodes. Each postcode in Australia was identified as fitting in to one of five IRSD quintiles. IRSD 1 is identified as a disadvantaged area and IRSD 5 is an advantaged area (ABS 2008).

Bivariate analyses were undertaken. During the bivariate analysis, some of the data was found to have expected cell counts less than five. As a result, many of the categories within the independent variables were collapsed in order to help the data meet the assumption. This was done by recoding the variables using SPSS. Data that could not be collapsed to help meet the assumption have not been included in the results section.

Multivariate analyses were conducted using binary logistic regression. As a result, the dependent variables had to be re-coded as dichotomous variables. This was done using the SPSS recoding function.

The data analysis was conducted using 7 independent variables (age, sex, annual household income, IRSD quintile, overall health and presence/absence of a chronic health conditions, length of time with current GP) and 20 dependent trust variables.

Analyses

Univariate analyses (frequencies) were conducted using SPSS descriptive statistics.

In order to investigate trust specifically, each of the 7 independent variables were analysed for association with the 26 dependent trust variables using Chi Squares (Cramer's V and Phi) as well as T-tests, one-way ANOVAs, Mann-Whitney U, and Kruskal-Wallis H. Each test produced a table which was subsequently analysed for statistically significant associations. At times, the data could not be collapsed to help satisfy the assumption. This data, along with the non-statistically significant data is not included in the results section.

Binary logistic regression analyses were performed and odds ratios (OR) were compared in order to explore associations between the independent variables (demographic characteristics) and the dependent variables. Any bivariate odds ratios with $p < 0.25$ were included in multivariate logistic regression analyses (Hosmer and Lemeshow 2000). All models were checked to see how well the chosen model fits the data using Hosmer-Lemeshow goodness-of-fit (Field 2005).

Findings

The following section presents the univariate, bivariate and multivariate analyses of the data according to the question asked. Data have been organised into two sections; institutional and interpersonal trust in Australia, and the operationalisation of trust.

Institutional and Interpersonal trust in Australia

Generally speaking, would you say that most people can be trusted?

Findings from univariate analysis suggest that most respondents have a high level of generalised trust with 79.5% (745) of respondents responding 'yes' generally speaking, most people can be trusted.

A statistically significant association was found between generalised trust and the independent variables age (p value=.001; Cramer's V=.162), presence of a chronic health problem (p value=.009; Phi=.085), and health status (p value=.018; Cramer's V=.104).

It was found that older people are significantly more likely than younger people to agree that most people can be trusted. 64.6% of respondents aged 18-34 years said that most people can be trusted and percentages of the response 'yes' increase as the age categories increase. 78.1% of respondents aged 35-44, 74.5% of respondents aged 45-54, 85% of respondents aged 55-64, and 83.9% of respondents aged 65-74 indicated that most people can be trusted. The cohort with the highest level of generalised trust (85.9%) was respondents over age 75.

Respondents with a chronic health problem (75.1%) were less likely than those without to think that generally speaking, most people can be trusted (82.3%).

Respondents with 'very good' and 'good' health were more likely to respond that most people can be trusted (83.9%; 81.2%) than people with 'fair' or 'bad/very bad' health (73.1%; 76.9%).

The variables used in the multivariate analysis were overall health, chronic health, IRSD quintile, age and length of time with GP. After adjusting for these variables it was found that age and general health were associated with generalised trust (Table 2).

Table 2: Multivariate odds ratios of factors associated with generalised trust in most people

		p value	OR (CI)
Age	18-34		1.00
	35-54	.020	1.9 (1.10 – 3.25)
	55-74	.000	3.5 (2-6.21)
	75-85+	.000	4.3 (1.90-9.52)
Overall health	Very good		1.00
	Good	.220	.75 (.47-1.19)
	Very bad/bad/fair	.001	.45 (2.8-.73)

Model stable, Hosmer and Lemeshow, Chi square 2.40, p = 0.94

Do you think that most people would take advantage of you if they had the chance?

Respondents were asked whether or not they thought that most people would take advantage of them if given the chance. Findings indicate that 72.7% of respondents feel that if given the chance, most people would not take advantage of them.

A statistically significant association was found between generalised trust with regards to thinking people would take advantage if given the chance, and the independent variables health status (p value=.000; Cramer's V=.169), the presence of a chronic health condition (p value=.005; Cramer's V=.100) and age (p value=.004; Cramer's V=.160).

There is a positive relationship between generalised trust and age. 62.3% of respondents aged 18-34 compared to 84.5% of respondents aged over 75 said that if given the chance, most people would not take advantage of them.

People from areas identified as being IRSD quintile 1 (most disadvantaged area) are the most likely to think people will take advantage of them (35.0% responded that people would take advantage of them). The percentage of people who responded that people would take advantage of them decreases as IRSD quintile moves from 1 → 5.

People who are in good health are much less likely to think people will take advantage of them than people with poorer health. 21.4% of those with very good health said that people would take advantage of them while 23.6% of people with bad health, 35.6% of people with fair health and 53.8% of those with bad/very bad health responded that people would take advantage of them.

People who have a chronic health problem are more likely to think people would take advantage of them (33.2% answering 'yes') compared to those without a chronic health problem (24.0%).

The variables used in the multivariate analysis were overall health, chronic health, IRSD quintile and age. After controlling for these variables it was found that overall health and age have statistically significant associations with thinking people would not take advantage of them.

Respondents aged 55-74 (OR 2.62; CI 1.45-4.73) and 75-85+ (OR 4.32; CI 1.76-10.61) are significantly more likely to say that people would not take advantage of them if given the chance. Respondents living in areas identified as IRSD quintile 4 are significantly more likely to say that people will not take advantage of them (OR 1.80; CI 1.01-3.22) than people living in an area identified as IRSD quintile 1. People with fair/bad/very bad health are significantly less likely to say that people will not take advantage of them (OR .39; CI .24-.64) than people with very good health. Respondents aged 75-85+, respondents living in an area identified as IRSD quintile 4, and respondents with very good health are the most likely to say that people would not take advantage of them if given the chance (Table 3).

Table 3: Multivariate odds ratios of factors associated with individuals who think most people would take advantage of them if given the chance

		p value	OR (CI)
Age	18-34		1.00
	35-54	.32	1.34 (.76-2.36)
	55-74	.001	2.62 (1.45-4.73)
	75-85+	.001	4.32 (1.76-10.61)
IRSD quintile	Low		1.00
	2	1.00	1.00 (.58-1.72)
	3	.06	1.75 (.97-3.15)
	4	.05	1.80 (1.01-3.22)
	High	.06	1.70 (.98-2.96)
Overall health	Very good		1.00
	Good	.37	.81 (.51-1.28)
	Very bad/bad/fair	.00	.39 (.24-.64)

Model stable, Hosmer and Lemeshow, Chi square 10.34, p = 0.09

How much do you trust various groups of people (all variables)?

Respondents were asked to what extent they trust various groups of people (family, people they meet for the first time, neighbours, their regular doctor, doctors in general, a doctor they are seeing for the first time, national political leader, local politician, people of another religion, people of another nationality, police officers). Listed below are the outcomes for multivariate odds ratios for each individual variable (Table 4).

Table 4: Multivariate odds ratios of factors associated with trust groups of individuals (all variables)

Group of individuals	Dependent Variables		p value	OR (CI)	Hosmer Lemeshow
Trust in doctors in general	Income	\$0-49,999		1.00	Chi square 3.13, p = 0.93
		\$50,000-104,999	.59	0.83 (0.43-1.62)	
		\$105,000-150,000+	.01	0.45 (0.24-0.84)	
	Length of time with current GP	< 1 years		1.00	
		1-5 years	.01	2.78 (1.31-5.90)	
		6-10 years	.09	2.03 (0.89-4.63)	
		> 10 years	.04	2.06 (1.02-4.13)	
Trust in a doctor the respondent is seeing for the first time	Age	18-34		1.00	Chi square 5.99, p = 0.65
		35-54	.03	2.06 (1.10-3.88)	
		55-85+	.00	4.78 (2.41-9.46)	
	IRSD quintile	Lowest		1.00	
		2	.24	0.60 (0.26-1.40)	
		3	.26	0.61 (0.26-1.44)	
		4	.75	1.16 (0.46-2.92)	
		Highest	.03	0.40 (0.18-0.89)	
Trust in family	Overall health	Very good		1.00	Only one association
		Good	.01	5.82 (1.59-21.36)	
		Very bad/bad/fair	.50	.76 (.33-1.71)	
Trust in	Age	18-34		1.00	Chi square

neighbours		35-54	.02	2.26 (1.16-4.39)	4.41, p = .62
		55-74	.00	8.71 (3.83-19.79)	
		75-85+	.00	16.01 (3.40-75.29)	
	Income	\$0-49,999		1.00	
		\$50,000-104,999	.003	2.72 (1.41-5.28)	
		\$105,000-150,000+	.02	2.21 (1.14-4.27)	
Trust in people you meet for the first time	Age	18-34		1.00	Only one association
		35-54	.02	1.85 (1.11-3.10)	
		55-74	.00	4.93 (2.87-8.47)	
		75-85+	.00	7.57 (3.24-17.67)	
Trust in people of another religion	Sex	Male		1.00	Chi square .53, p = .97
		Female	.02	1.89 (1.12-3.21)	
	Age	18-34		1.00	
		35-54	.24	1.54 (.75-3.14)	
		55-74	.00	4.14 (1.87-9.17)	
		75-85+	.00	7.33 (1.94-27.65)	
Trust in the national political leader	Overall health	Very good		1.00	Chi square 1.64, p = .95
		Good	.04	.70 (.49-.99)	
		Very bad/bad/fair	.02	.64 (.43-.93)	
	Age	18-34		1.00	
		35-54	.93	1.02 (.62-1.70)	
		55-74	.65	1.13 (.68-1.87)	
		75-85+	.05	1.88 (1.00-3.56)	
	Trust in their local politician	Overall health	Very good		
Good			.02	.68 (.49-.94)	
Very bad/bad/fair			.00	.51 (.36-.74)	

	Income	\$0-49,999		1.00	
		\$50,000-104,999	.01	.64 (.47-.88)	
		\$105,000-150,000+	.00	.51 (.36-.73)	
Trust in police officers	Age	18-34		1.00	Chi square .15, p = 1.00
		35-54	.04	1.88 (1.04-3.41)	
		55-74	.00	2.73 (1.47-5.06)	
		75-85+	.00	3.82 (1.54-9.48)	
	Sex	Male		1.00	
		Female	.00	2.19	

Respondents were given a score from 1-4 regarding their level of trust in each of the 11 groups (only 9 were found to be statistically significant in multivariate analysis) of people listed (1=trust them completely, 2=trust them somewhat, 3=do not trust them very much, 4=do not trust them at all). In order to determine generalised trust in groups of individuals, respondents were given a score of 11-44 with 11 being the most trusting with respondents answering 'trust them completely' to all 11 groups of individuals. While only .2% had complete trust, none of the respondents indicated that they had no trust (score of 44). Data were coded so that respondents scoring 11-27.5 are trusting and respondents scoring 27.6-44 are distrusting. A mean of 21.5 indicates relatively high levels of trust in groups of individuals.

A statistically significant association was found between trust in individuals and the independent variables income (p value=.000) and age (p value=.000).

Respondents within the lowest income bracket (\$0-49,999) were found to be more likely to trust in groups of people (mean score 20.5) than people with household incomes of \$50,000+ (mean score ≥ 22.02).

Younger people are less likely to trust groups of individuals. The mean score for people aged 18-24 was 25.5. This score decreases as age increases with the lowest mean score being 17.8 for those 85+.

The variables used in the multivariate analysis were age, income and length of time with GP. After controlling for these variables it was found that age has a statistically significant association with trust in individuals (Table 5).

The findings suggest that respondents aged 55-74 are more likely to trust individuals than respondents 18-34 (OR 8.63; CI 2.84-26.25).

Table 5: Multivariate odds ratios of factors associated with trust in individuals

	p value	OR (CI)

Age	18-34		1.00
	35-54	.078	2.30 (0.91-5.82)
	55-85+	.00	8.63 (2.84-26.25)

How much do you trust the following organisations or institutions (all variables)?

Respondents were asked to what extent they trust various organisations (religious organisations, the press, the legal system, the media, the national government, the United Nations, banks). Respondents were given a score from 1-4 regarding their level of trust in each of the organisations listed (1=trust them completely, 2=trust them somewhat, 3=do not trust them very much, 4=do not trust them at all). Listed below are the outcomes for multivariate odds ratios for each organisations/institutions (Table 6).

Table 6: Multivariate odds ratios of factors associated with trust organisations/institutions (all variables)

Organisation/institution	Independent variable		p-value	OR (CI)	
Trust in religious organisations	IRSD quintile	Low		1.00	Chi square 8.74, p = 0.37
		2	.05	.60 (.36-1.00)	
		3	.03	.56 (.34-.94)	
		4	.74	1.09 (.65-1.82)	
		High	.18	.71 (.43-1.17)	
	Age	18-34		1.00	
		35-54	.47	1.20 (.73-2.00)	
		55-74	.00	2.23 (1.32-3.76)	
		75-85+	.00	4.95 (2.34-10.50)	
	Sex	Male		1.00	
		Female	.00	1.95 (1.42-2.69)	
Trust in the press	Overall health	Very good		1.00	Chi square 1.72, p = 0.97
		Good	.08	.74 (.52-1.04)	
		Very bad/bad/fair	.02	.62 (.42-.92)	

	Income	\$0-49,999		1.00	
		\$50,000-104,999	.00	.58 (.41-.81)	
		\$105,000-150,000+	.07	.72 (.50-1.03)	
Trust the media	Income	\$0-49,999		1.00	Chi square 12.41, p = 0.13
		\$50,000-104,999	.00	.58 (.40-.84)	
		\$105,000-150,000+	.37	.84 (.58-1.23)	
	Presence of a chronic health condition	Yes		1.00	
		No	.02	1.47 (1.05-2.04)	
	Length of time with current GP	<1 year		1.00	
		1-5 years	.00	2.36 (1.36-4.10)	
		6-10 years	.11	1.67 (.90-3.11)	
		>10 years	.05	1.726	
Trust in United Nations	Sex	Male		1.00	Only one association
		Female	.000	1.88 (1.44-2.56)	
Trust in banks	Sex	Male		1.00	Chi square 4.04, p = 0.78
		Female	.02	1.44 (1.07-1.93)	
	Overall health	Very good		1.00	
		Good	.11	.76 (.53-1.06)	
		Very bad/bad/fair	.00	.52 (.35-.76)	
	Age	18-34		1.00	
		35-54	.14	1.47 (.89-2.44)	
		55-74	.00	2.35 (1.41-3.92)	

		75-85+	.00	4.70 (2.41-9.17)	
--	--	--------	-----	------------------	--

In order to determine generalised trust in organisations, respondents were given a score of 7-28 with 7 being the most trusting with respondents answering 'trust them completely' to all 7 groups of organisations. While only 0.2% had complete trust (score of 7), 1.8% of the respondents indicated no trust (score of 28). Data were coded so that respondents scoring 7-17.5 are trusting and respondents scoring 17.6-28 are distrusting. A mean of 18.7 indicates that overall, the level of trust in organisations across the participant group is not very high.

A statistically significant association was found between generalised trust in organisations and the independent variables of sex (p value=.000) and the presence of a chronic health conditions (p value=.004).

Males are slightly less likely (mean=19.42) than females (mean=18.21) to trust in organisations. People with a chronic health problem are less likely (mean 19.02) than those without a chronic health problem (mean=18.55) to trust in organisations.

The variables used in the multivariate analysis were overall health, chronic health, sex, age and income. After controlling for these variables it was found that chronic health, income and sex have statistically significant associations with trust in organisations (Table 7).

People without a chronic health condition are more likely than those with a chronic health condition to trust organisations (OR 1.51; CI 1.11-2.07). Respondents with an income of \$50,000-104,999 are less likely to trust organisations (OR .66; CI .46-.93) than respondents with any other income. Females are more likely than males to trust organisations (OR 1.44; CI 1.07-1.94). Females, respondents without a chronic illness, and respondents with an annual household income of \$0-49,999 are the most likely to trust organisations (Table 7).

Table 7: Multivariate odds ratios of factors associated with trust in organisations/institutions

		p value	OR (CI)
Presence of a chronic health condition	Yes		1.00
	No	.010	1.51 (1.11-2.07)
Income	\$0-49,999		1.00
	\$50,000-104,999	.018	.66 (.46-.93)
	\$105,000-150,000+	.115	.74(.51-1.08)
Sex	Male		1.00
	Female	.017	1.44(1.07-1.94)

Model stable, Hosmer and Lemeshow, Chi square 2.41, p = 0.96

Operationalisation of trust

The following analyses were carried out as a means of investigating the operationalisation of trust. The association between interpersonal trust and institutional trust was examined as was the association between two or more institutions.

Analyses investigated the association between respondents' trust in doctors in general, and a doctor they are seeing for the first time (interpersonal trust). In order to determine the interrelationship between trust in individuals, the 7 demographic characteristics and trust in individuals were controlled for. In addition, the data was analysed for associations between trust in doctors and trust in organisations. As a means of investigating this, analysis was carried out investigating the association between respondents' trust in doctors in general, and a doctor they are seeing for the first time, controlling for the 7 demographic variables and trust all organisations/institutions.

Additional analyses were undertaken investigating trust in doctors in general and a doctor the respondents had never seen before, controlling for the 7 demographic characteristics, trust in individuals, and trust in organisations/institutions.

These analyses are relevant in that it has assisted in determining the relationship between trust in individuals and trust in other individuals/institutions as a means of investigating the operationalisation of trust (the one-dimensional or multidimensional nature of trust).

Although the intention was to use the variable of trust in the respondents' regular doctor as one of the dependent variables, the number of respondents who distrusted their doctor was too small to carry out the investigation. As a result, only the variables of 'trust in doctors in general' and 'trust in a doctor the participant is seeing for the first time' were used as dependent variables. In addition, the variable 'trust in regular doctor' was removed as one of the independent variables due to low cell count.

Investigating the association between the dependent variable of 'trust in doctors in general' and the independent variables (demographic and all groups of individuals).

Results indicate that respondents who trust their local politician (OR 2.98; CI 1.39-6.38), trust police officers (OR 2.95; CI 1.51-5.75) and trust doctors they are seeing for the first time (OR 28.99; CI 15.31-54.88) are the most likely of respondents to trust doctors in general (Table 8).

Table 8: Multivariate odds ratios of factors associated with trust in the doctors in general after controlling for trust in all groups of individuals and demographic variables

		p-value	OR (CI)
Trusts their local politician	No		1.00
	Yes	.005	2.98 (1.39-6.38)
Trust police officers	No		1.00
	Yes	.002	2.95 (1.51-5.75)
Trusts a doctor they are seeing for the first time	No		1.00
	Yes	.000	28.99 (15.31-54.88)

Model stable, Hosmer and Lemeshow, Chi square .65, p = .89

Investigating the association between the dependent variable of 'trust in a doctor the participant is seeing for the first time' and the independent variables (demographic and all groups of individuals).

The findings indicate that respondents who trust people they meet for the first time (OR 10.33; CI 4.61-23.14), trust doctors in general (OR 77.40; CI 29.19-205.19) and trust people of another religion (OR 3.09; CI 1.49-6.40) are the most likely respondents to trust in doctors they are seeing for the first time (Table 9).

Table 9: Multivariate odds ratios of factors associated with trust in a doctor the participant is seeing for the first time after controlling for trust in all groups of individuals and demographic variables

		p-value	OR (CI)
Trust in people they meet for the first time	No		1.00
	Yes	.000	10.33 (4.61-23.14)
Trusts doctors in general	No		1.00
	Yes	.000	77.40 (29.19-205.19)
Trusts people of another religion	No		1.00
	Yes	.002	3.09 (1.49-6.40)

Model stable, Hosmer and Lemeshow, Chi square .35, p = .84

Investigating the association between the dependent variable of 'trust in doctors in general' and the independent variables (demographic variables and all organisations/institutions).

The results show that respondents from the \$105,000-150,000+ income bracket are significantly less likely to trust organisations than respondents with an annual household income of \$0-49,999. Results indicate that respondents who have been seeing their GP for 1-5 years (OR 3.13; CI 1.23-7.96), respondents with an income of \$0-49,999 (OR 1.00), and respondents who trust religious organisations (OR 2.14; CI 1.15-3.99), the legal system (OR 2.99; CI 1.48-6.02) and the United Nations (OR 2.56; CI 1.30-5.08) are the most likely to trust doctors in general (Table 10).

Table 10: Multivariate odds ratios of factors associated with trust in doctors in general after controlling for trust in all organisations/institutions and demographic variables

		p-value	OR (CI)
Length of time with current GP	<1 year		1.00
	1-5 years	.02	3.13 (1.23-7.96)

	6-10 years	.07	2.55 (.92-7.07)
	>10 years	.24	1.65 (.72-3.80)
Income	\$0-49,999		1.00
	\$50,000-104,999	.64	.83 (.38-1.81)
	\$105,000-150,000+	.02	.42 (.20-.89)
Trusts religious organisations	No		1.00
	Yes	.02	2.14 (1.15-3.99)
Trusts the legal system	No		1.00
	Yes	.002	2.99 (1.48-6.02)
Trust the United Nations	No		
	Yes	.007	2.56 (1.30-5.08)

Model stable, Hosmer and Lemeshow, Chi square 7.36, $p = .50$

Investigating the association between the dependent variable of 'trust in a doctor the participant is seeing for the first time' and the independent variables (demographic variables and all organisations/institutions).

Results indicate that respondents who trust religious organisations (OR 2.24; CI 1.36-3.67), trust the United Nations (OR 2.02; CI 1.22-3.35) and trust banks (OR 2.48; CI 1.40-4.39) are the most likely of respondents to trust a doctor they are seeing for the first time (Table 11).

Table 11: Multivariate odds ratios of factors associated with trust in a doctor the participant is seeing for the first time after controlling for trust in all groups of individuals and demographic variables

		p value	OR (CI)
Trusts religious organisations	No		1.00
	Yes	.001	2.24 (1.36-3.67)
Trust the United Nations	No		1.00
	Yes	.007	2.02 (1.22-3.35)
Trusts banks	No		1.00
	Yes	.002	2.48 (1.40-4.39)

Model stable, Hosmer and Lemeshow, Chi square .78, $p = .99$

Investigating the association between the dependent variable of 'trust in a doctor the participant is seeing for the first time' and the independent variables (demographic variables and all organisations/institutions and all groups of individuals).

Results indicate a statistically significant association between trust in a doctor the participant is seeing for the first time and trust in other groups of individuals. Respondents who trust people they meet for the first time (OR 8.83; CI 4.66-16.34) and respondents who trust doctors in general (OR 43.51; CI 20.77-91.15) are significantly more likely to trust a doctor they are seeing for the first time (Table 12).

Table 12: Multivariate odds ratios of factors associated with trust in a doctor the participant is seeing for the first time after controlling for trust in all groups of individuals, all organisations/institutions and demographic variables

		p value	OR (CI)
Trusts people they meet for the first time	No		1.00
	Yes	.000	8.73 (4.66-16.34)
Trust doctors in general	No		1.00
	Yes	.000	43.51 (20.77-91.15)

Model stable, Hosmer and Lemeshow, Chi square .21, p = .65

Investigating the association between the dependent variable of 'trust in doctors in general' and the independent variables (demographic variables and all organisations/institutions and all groups of individuals).

Results indicate that there is a statistically significant association between trust in doctors in general and trust in other groups of individuals. Respondents who trust their local politician (OR 3.24; CI 1.42-7.38), trust police officers (OR 3.93; CI 1.90-8.11) and trust doctors they see for the first time (OR 42.40; CI 18.82-95.54) are significantly most likely to trust doctors in general. Results also suggest that, contrary to findings regarding trust in a doctor the participant is seeing for the first time, people who trust doctors in general are significantly less likely to trust people they meet for the first time (OR .41; CI .18-.94), trust (Table 13).

Table 13: Multivariate odds ratios of factors associated with trust in doctors in general after controlling for trust in all groups of individuals, all organisations/institutions and demographic variables

		p value	OR (CI)
Trusts people they meet the first time	No		1.00
	Yes	.04	.41 (.18-.94)
Trust their local politician	No		1.00
	Yes	.005	3.24 (1.42-7.38)

Trust police officers	No		1.00
	Yes	.000	3.93 (1.90-8.11)
Trust doctors they see for the first time	No		1.00
	Yes	.000	42.40 (18.82-95.54)

Model stable, Hosmer and Lemeshow, Chi square 3.49, $p = .48$

Discussion

Empirical literature suggests that trust in a range of organisations and individuals are declining. This noted decline may be linked to decreased social quality and wellbeing in Australia. The results from data presented in this paper indicate that Australians are very trusting of individuals and some organisations, which may indicate high levels of social quality in Australia.

Australians' trust in groups of individuals

Generally, Australians are very trusting of groups of individuals. While it was found that trust in respondents regular doctor is higher than participant trust in any of the other groups of individuals, trust in other groups is also high. Trust in family and in neighbours may play a role in trust. However, the findings also indicate that the majority of Australians trust people they meet for the first time. This is supported by the findings regarding generalised trust whereby 79.5% of respondents said that most people can be trusted. This was further substantiated by findings which indicate that 72.7% of respondents do not feel that people would take advantage of them if given a chance. In addition, when analysing the data for overall trust in the 11 groups of individuals, results indicated high levels of trust across all groups of individuals.

High levels of respondent trust were also found in other individual groups. The majority of Australians trust people of another religion (70.8%), people of another nationality (88.8%) and police officers (86.4%). In contrast, levels of trust were found to be the low in politicians including both the national political leader (42.1%) and local politicians (47.3%).

Age was found to be the biggest predictor of trust in individuals. Respondents aged 55-74 were 7.08 times more likely to trust groups of individuals than respondents aged 18-34.

The overall findings suggest that Australians are trusting of individuals. However analyses suggest that respondents living in disadvantaged areas and people with poor health are the most likely to think people would take advantage of them. These population groups are identified as areas where trust needs to be (re)built. In addition to poor health and economic disadvantage, poor social quality is compounded by low levels of trust.

Australians' trust in organisations/institutions

Australians' trust in organisations/institutions is significantly lower than their trust in groups of individuals. These findings regarding low levels of trust were consistent across each of the listed organisations.

While respondents trusted people of another religion, trust in religious organisations was lower with approximately 55% indicating they trust religious organisations 'somewhat' and were similar to participant's low trust in banks (42.3%).

Consistent with findings regarding trust in politicians, trust in government is low with greater than 50% of respondents indicating they do not trust the government. Trust in the press and media was found to be

significantly lower than trust in any other organisation/institution with the majority of respondents (>70%) not trusting the media or the press. Trust is also low in the legal system with approximately half of respondents indicating that they do not trust the system.

The findings regarding Australians lower levels of trust in organisations than individuals may be explained by the fact that respondents are not familiar with all of the listed organisations and therefore, they are unsure of whether they trust them or not. Hardin (1998:16) suggests that individuals can and do trust specific institutions but in the absence of history or experience (familiarity), individuals cannot say 'confidentially one way or the other whether they [institutions] are trustworthy' (Hardin 1998). The finding that people only trust the government 'somewhat' compares with Hardin's (1998) argument which suggests that for a government to work properly, all that is required is that citizens do not actively distrust the government.

Trust in institutions, although low, is different across the population. Health status, income, length of time with current GP and sex are associated with trust in institutions. Poorer respondents, males, and respondents with a chronic illness are the most likely to distrust organisations. These findings suggest areas where trust needs to be (re)built to potentially increase social quality.

Summary of findings

The results indicate that social factors such as age, income, presence of a chronic health condition, sex, overall health, and IRSD quintile are all associated with trust in individuals and organisations. However, the predominant social factors affecting trust across all findings are age and sex. Overall, the findings suggest that older people are most likely to trust individuals and institutions. Wealthy respondents, young respondents, females, and respondents with chronic health conditions were found to be the least trusting respondents.

The operationalisation of trust

The objective of investigating the operationalisation of trust provides a means of identifying the centrality of trust in the Social Quality theory. The following discussion deals specifically with the origin of trust and the way in which interpersonal and institutional trust are interconnected and operationalised. As noted in the literature, Giddens and Luhmann operationalise trust differently. As a result, one of the questions (and initial critique) that drove this research is 'what is the relationship between trust in an individual and/or the social system(s) which they represent?' A secondary question asked: 'what is the direction of that relationship?' This information can be used as a means of determining what level trust needs to be (re)built on for populations with low trust. For example, if trust in individuals is found to be associated with trust in organisations, we know that trust need to be (re)built on both levels.

Link between interpersonal trust and institutional trust

The results were analysed as a means of determining the relationship between interpersonal and institutional trust. As a way of investigating this, two multivariate analyses were carried out identifying the associations between trust in individuals (doctors in general, a doctor the respondents have never seen before) and trust in organisations.

The results indicate that respondents who trust doctors in general are more likely to trust specific organisations. After controlling for the seven listed demographic factors, the findings indicate that respondents who trust doctors in general are more than twice as likely to trust religious organisations, the legal

system, and the United Nations. This finding is of interest because overall trust in these three specific organisations was found to be low for the general population, which show that 38.2% of people do not trust religious organisations, 44.3% do not trust the legal system, and 43.5% do not trust the United Nations¹.

These findings are similar to those regarding the association between trust in organisations and trust in a doctor the respondent is seeing for the first time. Respondents who trust a doctor they are seeing for the first time are also more than twice as likely to trust religious organisations, the United Nations, and banks. Trust in banks was also found to be low in the overall respondent group.

It remains unclear whether trust is initiated at an interpersonal or institutional level. The institutions that were found to be associated with trust in doctors are systems that are arguably not associated with the healthcare (the United Nations, religious organisations, banks, and the legal system). These findings suggest that respondents who trust are generally trusting of individuals/institutions and may suggest that trust in one group of individuals and/or institution is likely to influence participants trust in other areas. It may be that participants are either generally trusting or distrusting and that in order to (re)build trust in specific populations, trust in both individuals and institutions needs to be addressed.

Link between interpersonal trust and interpersonal trust

Neither Giddens nor Luhmann, in their operationalisation of trust, discussed the interconnection between interpersonal trust in one individual and interpersonal trust in a secondary individual. While Luhmann discusses trust within and between social systems, there is no theory discussing this at an interpersonal level. The data in this study were analysed to investigate the association between trust in two or more individuals. Multivariate analyses indicate that there is an association between trust in doctors in general and trust in other groups of individuals. Respondents who trust doctors are almost three times more likely to trust their local politician and to trust police officers. In addition, it was found that people who trust doctors are 29 times more likely to trust a doctor they are seeing for the first time. Similarly there is an association between trust in a doctor the respondent is seeing for the first time and trust in groups of individuals. People who trust a doctor they are seeing for the first time are 10 times more likely to trust people they meet for the first time, 77 times more likely to trust doctors in general, and 3 times more likely to trust people of another religion. There is a multidirectional relationship between interpersonal trust in one individual and interpersonal trust in a secondary individual.

In order to further investigate the association between interpersonal trust/interpersonal trust and interpersonal trust/institutional trust, two additional multivariate analyses were carried out. These investigated respondents' interpersonal trust in doctors (a doctor they are seeing for the first time and doctors in general) and trust in other individuals/organisations. After controlling for the seven demographic variables, trust in the eleven groups of individuals, and trust in the seven organisations, the results indicate that there is a strong association between trust in doctors and trust in other individuals. People who trust doctors in general are over 3 times more likely to trust their local politician and police officers. They are also over 42 times more likely to trust a doctor they are seeing for the first time. In addition it was found that people who trust a doctor they are seeing for the first time are over 8 times more likely to trust people they meet for the first time and over 43 times more likely to trust doctors in general. People who trust certain individuals are also more likely to have trust in organisations/institutions. Trust is multidimensional.

er

.DSMT4 I is an identity matrix and $\mathbf{1}$ is a column vector of ones.
426 Percentages shown

These findings suggest that people who trust one individual are significantly more likely to trust other groups of individuals, and analogous to the findings above, respondents may be generally (dis)trusting. In order to (re)build trust in specific populations, trust in several groups of individuals must be addressed.

Conclusion

Of importance to social quality, the mistrusting relationships noted above may result in 'conflict' and poor social quality and subsequently lead to inequalities in health. Mistrust may lead to continuous vigilance and anxiety within society and therefore has the potential to impact social quality and wellbeing. We have identified target populations where trust needs to be (re)built in Australia. In addition, we have identified an association between (dis)trust in one individual/institution and (dis)trust in other individuals/institutions. These findings suggest that (dis)trust may be generalised and consequently, in order to improve trust in one area, trust in other groups of individuals/institutions must be considered. Overall, our analysis presents the first attempt in Australia to map trust as a component of social quality of life in a nationally representative sample. Future government policy and practice should utilise these findings as a means of facilitating social quality.

References

- ABS (2008). An Introduction to Socio-Economic Indexes for Areas (SEIFA) 2006. Canberra, ABS.
- Alexander, J. (1996). "Critical reflections on reflexive modernization." *Theory, Culture and Society* 13(4): 133-138.
- Alreck, P. L. and R. B. Settle (2004). *The Survey Research Handbook*. New York, McGraw-Hill.
- Andreassen, H. K., M. P. E. Trondsen, et al. (2006). "Patients who use e-mediated communication with their doctor: new constructions of trust in the patient-doctor relationship." *Qualitative Health Research* 16(2): 238-248.
- Baier, A. (1986). "Trust and antitrust." *Ethics* 96(2): 231-260.
- Baily, T. (2002) "On Trust and Philosophy." BBC Reith Lectures
- Beck, W., L. van der Maesen, et al., Eds. (1998:3). *The Social Quality of Europe*. Bristol, Policy Press.
- Bordum, A. (2004). *Trust as a Critical Concept*. Working Draft. Copenhagen, Center of Market Economics Copenhagen Business School.
- Bordum, A. (2005). *Trust and Leadership on The Value Laden Concept of Trust*. Working Draft. Copenhagen, Center of Market Economic Copenhagen Business School.
- Bowling, A., Ed. (2009). *Research Methods in Health*. New York, Open University Press.
- Brown, P. R. (2008). "Trusting in the new NHS: instrumental versus communicative action." *Sociology of Health & Illness* 30(3): 349-363.
- Crawford, R. (2004). "Risk ritual and the management of control and anxiety in medical culture." *Health, An Interdisciplinary Journal for the Social Study of Health, Illness and Medicine* 8(4): 505-528.
- Field, A. (2005). *Discovering Statistics Using SPSS*. London, Sage Publications.

- Fukuyama, F. (1995). *Trust: The Social Virtues and the Creation of Prosperity*. New York, Free Press Paperback.
- Gambetta, D. (1988). *Trust: Making and Breaking Co-operative Relations*. Oxford, Basil Blackwell.
- Giddens, A. (1990). *The Consequences of Modernity*. Stanford, Stanford University Press.
- Giddens, A. (1991). *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Stanford, Stanford University Press.
- Giddens, A. (1994). Risk, trust, reflexivity. *Reflexive Modernization: Politics, Tradition, and Aesthetics in the Modern Social Order*. U. Beck, A. Giddens and S. Lash. Cambridge, Polity Press: 194-197.
- Gilson, L. (2003). "Trust and the development of health care as a social institution." *Social Science and Medicine* 56(7): 1453-1468.
- Gilson, L. (2005). "Editorial: building trust and value in health system in low-and middle-income countries." *Social Science and Medicine* 61(7): 1381-1384.
- Gilson, L. (2006). "Trust in health care: theoretical perspectives and research needs." *Journal of Health Organization and Management* 20(5): 359-375.
- Gilson, L., N. Palmer, et al. (2005). "Trust and health worker performance: exploring a conceptual framework using South African evidence." *Social Science and Medicine* 61(7): 1418-1429.
- Goudge, J. and L. Gilson (2005). "How can trust be investigated? Drawing lessons from past experience." *Social Science and Medicine* 61(7): 1439-1451.
- Hardin, R. (1998). *Trust in Government. Trust and Governance*. V. Braithwaite and M. Levi. New York, Russell Sage Foundation.
- Hardin, R. (2006). *Trust*. Cambridge, Polity Press.
- Hills, A. (2002) "Kantian trust." BBC Reith Lectures
- Hosmer, D. W. and S. Lemeshow (2000). *Applied Logistic Regression*. New Jersey, John Wiley & Sons.
- Ishikawa, H. and E. Yano (2008). "Patient health literacy and participation in the health-care process." *Health Expectations* 11(2): 113-122.
- Janssen, M. A. (2006). "Evolution of cooperation in a one-shot Prisoner's Dilemma based on recognition of trustworthy and untrustworthy agents." *Journal of Economic Behavior & Organization* 65(3-4): 458-471.
- Luhmann, N. (1979). *Trust and Power: Two works by Niklas Luhmann*. Brisbane, John Wiley and Sons.
- Lupton, D. (1996). *You live in their hands: trust in the medical encounter. Health and the Sociology of Emotions*. J. V. Gabe and J. Gabe. Oxford, Blackwell Publishers: 157-172.
- Lupton, D. (1997a). "Consumerism, reflexivity and the medical encounter." *Social Science and Medicine* 45(3): 373-381.
- Matravers, M. (2002) "Hume on trust." BBC Reith Lectures Volume, DOI:

- Mechanic, D. and S. Meyer (2000). "Concepts of trust among patients with serious illness." *Social Science and Medicine* 51(5): 657-668.
- Meyer, S. B., C. N. Luong, et al. (2010). "Operationalising the theory of social quality: analysis of the reliability of an instrument to measure social quality." *Development and Society* 39(2): In print.
- Meyer, S. B. and P. R. Ward (2008). "Do your patients trust you?: a sociological understanding of the implications of patient mistrust in healthcare professionals." *Australasian Medical Journal* 1(1): 1-12.
- Meyer, S. B., P. R. Ward, et al. (2008). Operationalising trust in food, food systems and dietary recommendations: what can social theory add? *Thinking in Synergy*, Adelaide, SA.
- Meyer, S. B., P. R. Ward, et al. (2008). "Trust in the health system: an analysis and extension of the social theories of Giddens and Luhmann." *Health Sociology Review* 17(2): 177-186.
- Miles, S. and L. J. Frewer (2002). "Trust, perceived risk, and attitudes toward food technologies." *Journal of Applied Social Psychology* 32(11): 2423-2433.
- Misztal, B. A. (2001). "Normality and Trust in Goffman's Theory of Interaction Order." *Sociological Theory* 19(3): 312-324.
- Mollering, G. (2001). "The nature of trust: from Georg Simmel to a theory of expectation, interpretation and suspension." *Sociology* 35(2): 403-420.
- National Opinion Research Center (NORC). (2006). "General Social Survey Questionnaire." Retrieved July 2009.
- Pearson, S., S. Crane, et al. (2005). *Persistent and Dynamic Trust: Analysis of Trust Properties and Related Impact of Trusted Platforms*. Trust Management. L. P. Hewlett-Packard Development Company. Bristol, Springer Berlin: 355-363.
- Price, C. (2002) "Trust in Plato's Republic." BBC Reith Lectures
- Rhodes, R. and J. J. Strain (2000). "Trust and transforming medical institutions." *Cambridge Quarterly of Healthcare Ethics* 9(2): 205-217.
- Rowe, R. and M. W. Calnan (2006). "Trust relations in health care: the new agenda." *European Journal of Public Health* 16(1): 4-6.
- Salvatore, A. and R. Sassatelli (2004). *Trust and Food: A theoretical discussion*. Consumer Trust in Food - A European Study of the Social and Institutional Conditions for the Production of Trust. Bologna, University of Bologna.
- Silvester, J., F. Patterson, et al. (2007). "Trust: psychological and behavioral predictors of perceived physician empathy." *Journal of Applied Psychology* 92(2): 519-527.
- Simmel, G. (1978). *The Philosophy of Money*. London, Routledge & Kegan Paul.
- Taylor-Gooby, P. (2006). "Trust, risk and health care reform." *Health, Risk & Society* 8(2): 97-103.
- Taylor-Gooby, P. (2008). "Trust and welfare state reform: the example of the NHS." *Social Policy & Administration* 42(3): 288-306.

- Taylor-Gooby, P. and A. Wallace (2009). "Public values and public trust: responses to welfare state reform in the UK." *Journal of Social Policy* 38(3): 401-420.
- Thom, D. H. (2000). "Training physicians to increase patient trust." *Journal of Evaluation in Clinical Practice* 6(3): 245-253.
- Thom, D. H., R. L. Kravitz, et al. (2002). "Patient trust in the physician: relationship to patient requests." *Family Practice* 19(5): 476-484.
- Tibandebage, P. and M. Mackintosh (2005). "The market shaping of charges, trust and abuse: health care transactions in Tanzania " *Social Science and Medicine* 61(7): 1385-1395.
- Trachtenberg, F., E. Dugan, et al. (2005). "How patients' trust relates to their involvement in medical care." *The Journal of Family Practice* 54(4): 344-352.
- van der Maesen, L. J. G. and A. Walker (2005). "Indicators of Social Quality: Outcomes of the European Scientific Network." *European Journal of Social Quality* 5(1/2): 8-24.
- Ward, P. R. (2006). "Trust, reflexivity and dependence: a 'social systems theory' analysis in/of medicine." *European Journal of Social Quality* 6(2): 121-133.
- Ward, P. R. and A. Coates (2006). "'We shed tears, but there is no one there to wipe them up for us': narratives of (mis)trust in a materially deprived community." *Health: an Interdisciplinary Journal for the Social Study of Health, Medicine and Illness* 10(3): 283-301.
- Ward, P. R. and S. B. Meyer (2009). "Trust, social quality and wellbeing: a sociological exegesis." *Development and Society* 38(2): 339-363.
- Whetten, K., J. Leserman, et al. (2006). "Exploring lack of trust in care providers and the government as a barrier to health service use." *American Journal of Public Health* 96(4): 716.
- Wolff, J. (2002) "Trust and the state of nature." BBC Reith Lectures
- World Values Survey Association (2005/2006). World Values Survey. <http://www.worldvaluessurvey.org/>.
- Wright, E. B., C. Holcombe, et al. (2004). "Doctors' communication of trust, care, and respect in breast cancer: qualitative study." *British Medical Journal* 328(7444).

Indicators of Socio-economic Security in Taiwan: the Role of Family

Lih-Rong Wang Department of Social Work, National Taiwan University

Bih-Hearn Lee Graduate Institute of National Development, National Taiwan University

Yitzhak Berman School of Social Work, Bar Ilan University, Ramat Gan, Israel

Indicators of Socio-economic Security in Taiwan: The Role of Family

Abstract