Understanding digital inequality in the smart city: a psychological model.

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The Challenge

“Our challenge is to build an information society for all…this is a historical opportunity we cannot miss”
Brisbane - The Smart City!

A “smart city [that] actively embraces new technologies…Brisbane should seek to be a more open society where technology makes it easier for people to have their say, gain access to services and to stay in touch with what is happening around them, simply and cheaply. All residents will have access to the Internet, and the ability to use it” (BCC, 2001)
The Digital Divide

• Term first introduced in 1995 by the US Department of Commerce’s National Telecommunications and Information Administration (NTIA).

• Describes the existence of those with access to information and communication technology (‘the haves’) and those without (‘the have-nots’).

• Numerous studies have taken place throughout the world trying to measure the Digital Divide:
  – Several interlocking factors heighten the digital divide: race and ethnicity, geography, income, education level, employment status and physical disability.
  – Individuals belonging to these groups are more likely to represent the ‘have-nots’ in the Digital Divide.
Limitations to Current Digital Divide Studies

• Several commentaries have emerged in the recent years commenting on these studies (Yung, Qiu & Kim, 2000; Harper, n.d).
  – They measure the Digital Divide in terms of *dichotomous comparisons* (computer owner v’s non-computer owner) or *time spent online* or activities performed online (with a focus on e-commerce)
  – Studies all primarily take a socio-economic perspective to the Digital Divide.
  – Studies do not consider the *psychological, social or cultural barriers* barriers.
Digital Divide or Digital Divides?

Harper (2000) taking on this critique theorises the existence of two types of Digital Divide:

- **Access Digital Divide:** which is based on cost factors and is frequently discussed in terms of the presence of computers or Internet access in the household.

- **Social Digital Divide:** which is a product of an individuals' psychological, social and cultural differences.
The Vision for the Current Study

• Few studies to date have attempted to explore the Social Digital Divide i.e. the social, cultural and psychological factors that contribute to this information gap.

• The current study seeks to explore the psychological aspect of the Social Digital Divide.

• More specifically is will explore the Digital Divide from the Perspective of the Social Cognitive Theory by Bandura (1986).
Social Cognitive Theory
(Bandura 1986)

Internal Forces

Behaviour

Environment
• **Self efficacy**: a person’s belief about his or her ability to perform a given behaviour.

• **Outcome expectancy**: a person’s belief about the consequences that result from a given behaviour.
Sources of Self Efficacy

- **Enactive attainment** – actual experience in a behaviour provides the best source of self efficacy

- **Vicarious experiences** – seeing other people perform a behaviour

- **Verbal persuasion** – most used source because it is the easiest

- **Physiological states** – stress reactions and emotional states of the individual
Digital Divide and Self Efficacy: Studies To Date?

- Eastin and La Rose (2000) US college students
- Foster (2001) US African American high school and college students
- Ringold (2001) US African American college students
- Lam and Lee (2005) Hong Kong senior citizens
The Brisbane Study

Self administered surveys: (i) demographic – gender and age; (ii) socio economic – income, employment, education, ethnicity; and (iii) psychological – internet self efficacy, outcome expectancy; (iv) internet use.

398 useable surveys were obtained Dec 2005 – Jan 2006: 36.2% males and 61.6% females; ages 17-80 (31-40 most represented age group)

Data gathered from: BCC Libraries, gyms and fitness centers, Accor hotel staff; play groups, local transport
Findings in Brief

socio economic

psychological
So, what?

What do the findings of this research mean for library and information services?
Let's revisit the sources of self-efficacy.

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- **Vicarious experiences** – seeing other people perform a behavior.

- **Verbal persuasion** – most used source because it is the easiest.

- **Physiological states** – stress reactions and emotional states of the individual.
Any Questions?

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