



Social Exclusion and Digital Disengagement

Issues of Policy, Theory and Measurement

OxIS Discussion Seminar 2007 (OII)

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Agenda

- **Introduction**

Bill Dutton – Director OII & Principal investigator OxIS

- **Policy debates and issues**

Ewen McKinnon – Programme Manager Digital Inclusion Team, Communities and Local Government

- **Definitions, measurement and analyses**

Ellen Helsper – Survey Research Fellow OII & Coordinator OxIS

- **Panel comments**

Ben Anderson - Deputy Director Chimera, Essex University

Mike Cushman - Research Fellow & Information Manager, Department of Information Systems at the London School of Economics and Political Science

- **Round table discussion**

Definitions, Measurement and Analyses

Definitions of Social Inclusion

Definitions of Digital Engagement

Researching Links between Social and Digital Inclusion

Evidence for Relationships between Social exclusion and Digital Disengagement

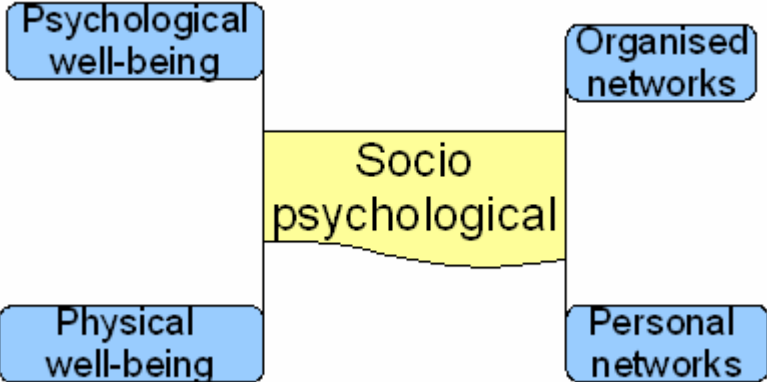
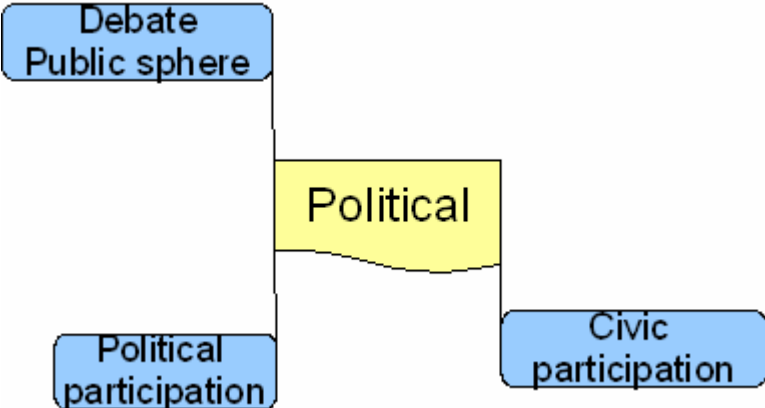
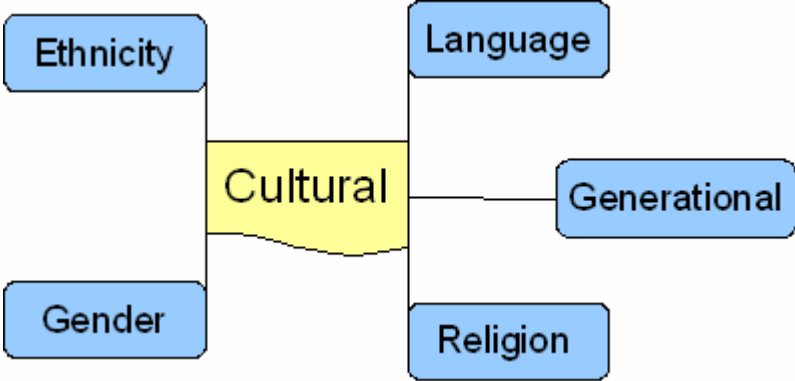
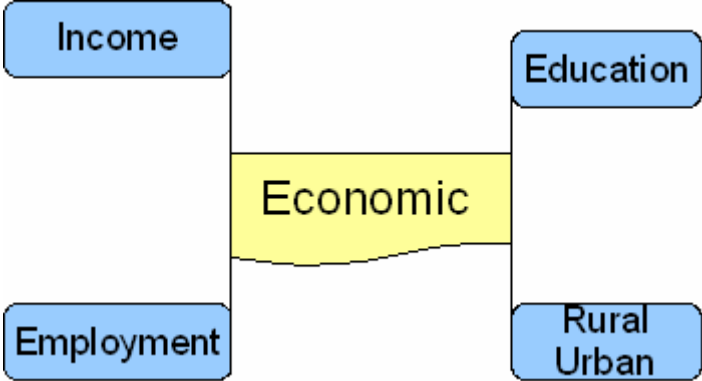
Definitions Social Inclusion

Inclusion resources

- Economic
- Social
- Cultural
- Political/Civic
- Personal

A combination of the above can be called multiple deprivation. Existing multiple deprivation indexes measure mainly Economic resources.

Inclusion Resources



Definitions Digital Inclusion

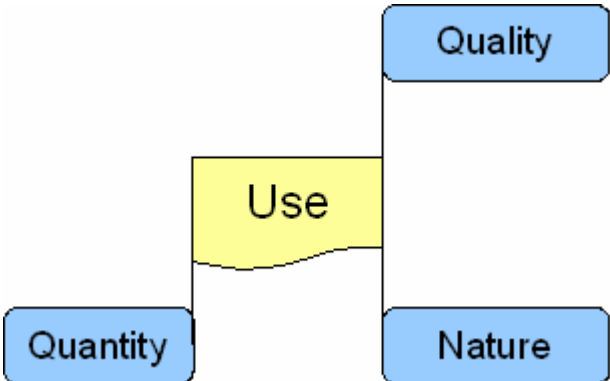
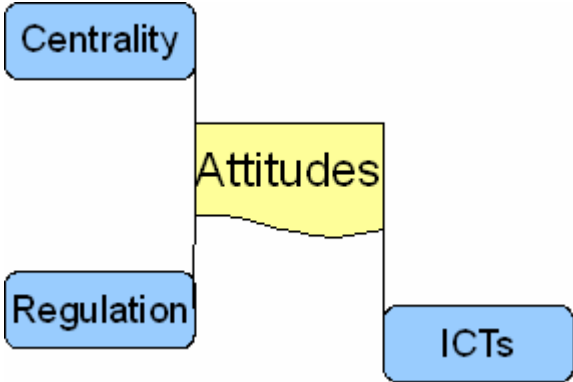
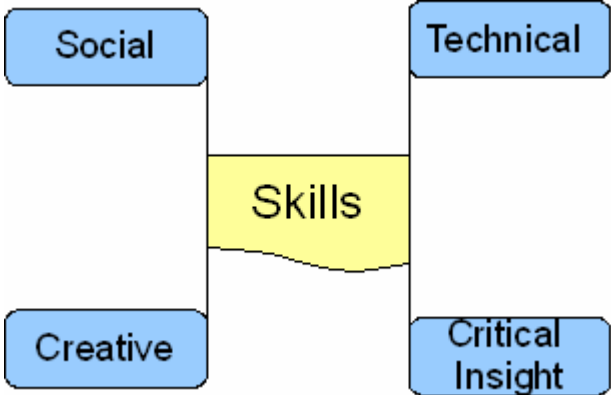
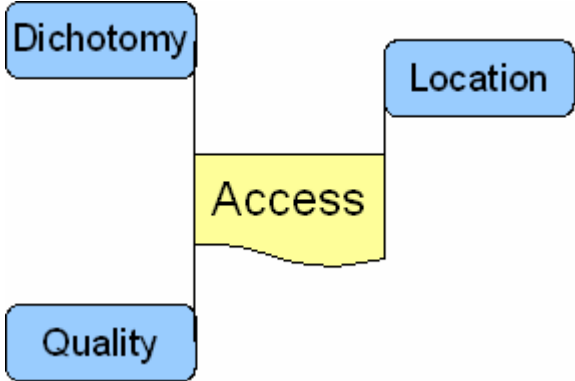
Digital resources

- Access
- Skills
- Attitudes
- Use

Combination of the above can be called an index of multiple digital deprivation.

No index currently exist although could be based on e-classification model (UCL) and Media Literacy indexes (Ofcom).

Digital Resources



Linkages

Inclusion resources  Digital resources

Enablers and Barriers

Access

Skills

Attitudes

Digital resources as inclusion resources:

Communication, entertainment, information and learning, (commercial) services, civic engagement

Linkages

Digital resources  Social Inclusion

Enablers and Barriers

Relevance

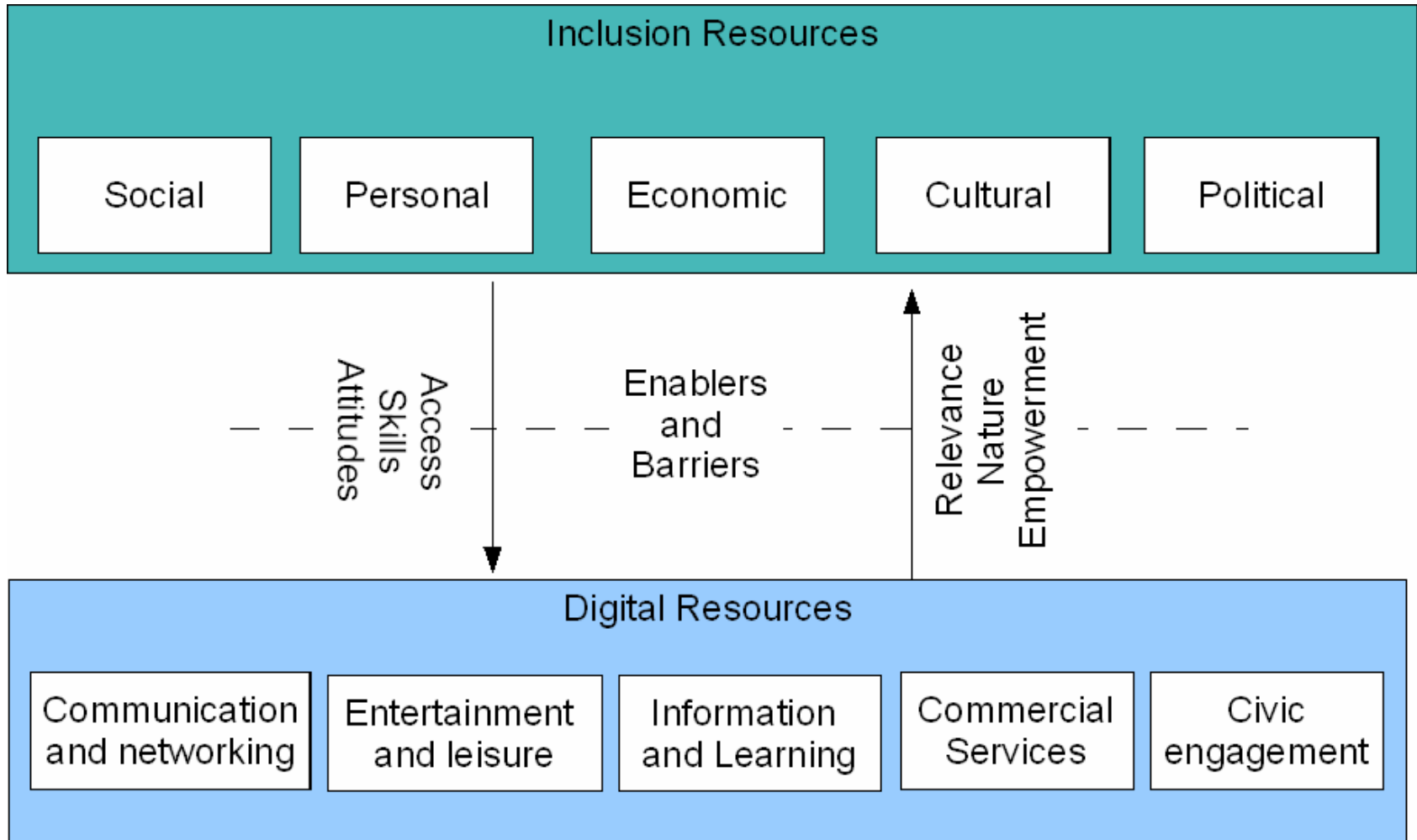
Empowerment

Nature

Inclusion resources:

Economic, Cultural, Political, Social, Psychological

Research Framework



Measurements

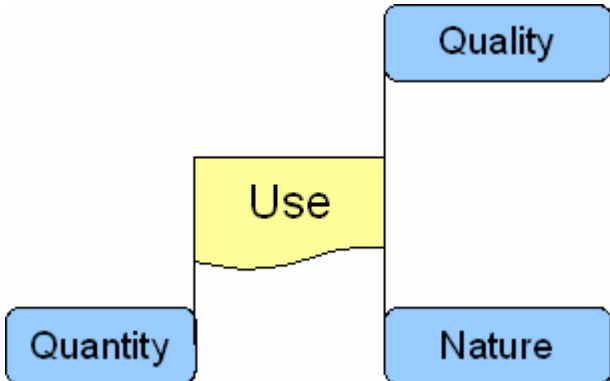
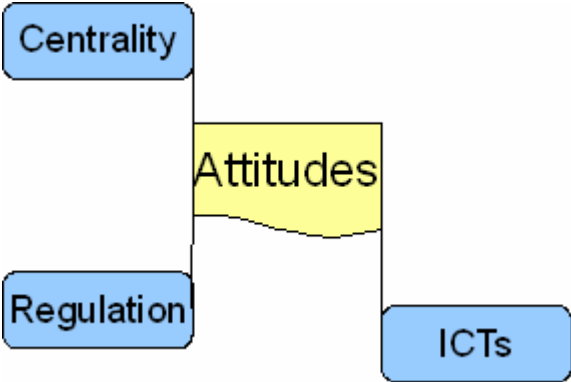
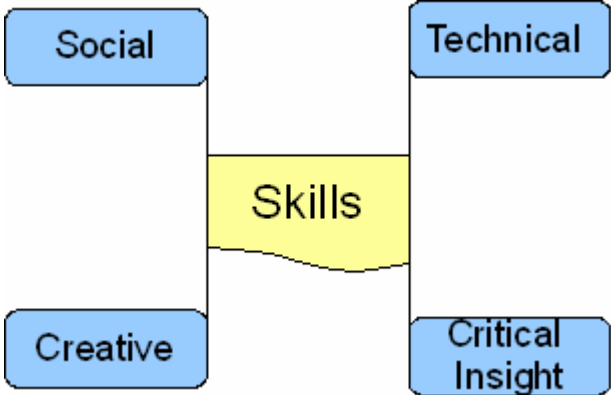
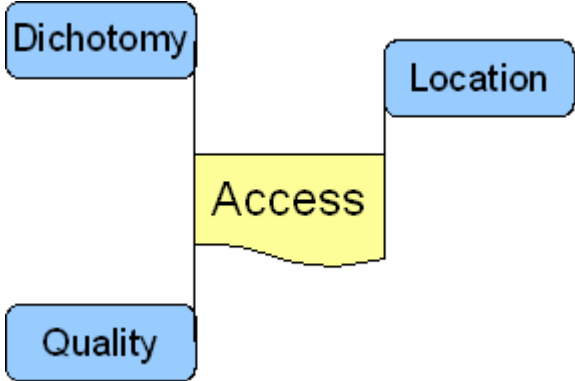
Broader framework can be applied to different databases with different variables.

Multiple analyses possible at different levels of measurement

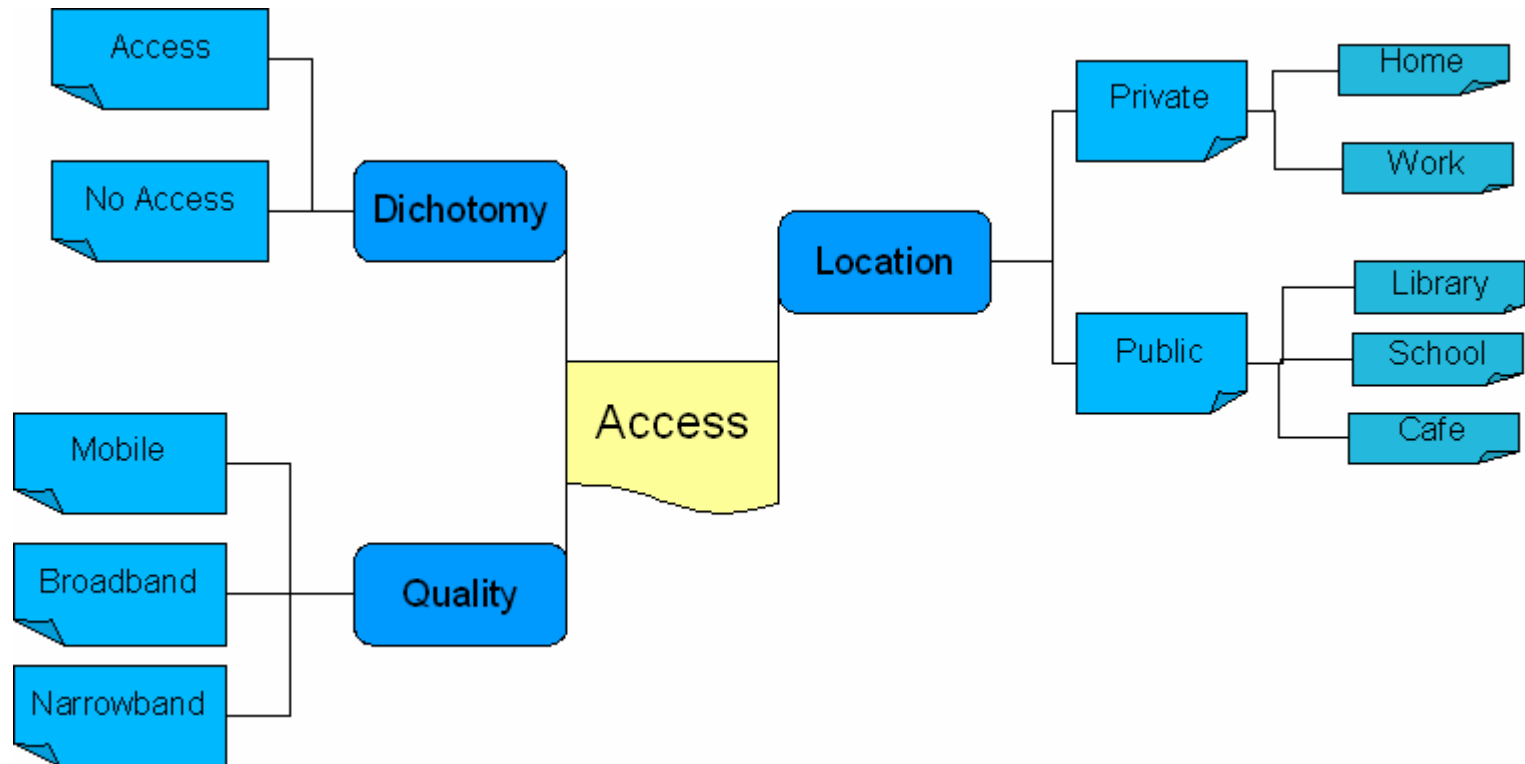
- Broadest level: One Index of Multiple Social Deprivation and one Index of Multiple Digital Deprivation
- Resource level: Indexes of Economic, Cultural, Political/Civic, and Socio-Psychological Resources and Indexes of Access, Skills, Attitudes, and Use
- Indicator level: Subcategories of indicators derived from the different social and digital resources
- Itemised level: Indicators can be further subdivided into smaller items that measure the indicators.

Latter especially important for 'Use quality'.

Digital Resources



Example of Itemised level measurement Access



Analytical Framework

Suggestions for analytical approaches with survey data

- Descriptives
- Predictive
- Patterning
- 'Case studies'

Analytical Strategy

Multivariate analyses and 'case studies' with survey data are options to create a more detailed and nuanced understanding of the links between social and digital inclusion.

OxIS examples: linear regression (predictive), correspondence analysis (patterns) and 'exceptions-to-the-rule' approaches (case studies)

Linear regression: What predicts Digital Resources?

	B	S.D.	p.	Exp(B)
Income	-0.24	0.10	0.02	0.79
Student	2.40	0.76	0.00	10.98
Employed	1.13	0.25	0.00	3.08
Not religious	0.52	0.25	0.04	1.68
Age	-0.25	0.07	0.00	0.78
Interest in Politics	0.34	0.13	0.01	1.41
Home access	4.94	0.26	0.00	139.05
Self attitude (the internet is good for me)	0.49	0.13	0.00	1.63
Society attitude (the internet is good for society)	1.45	0.22	0.00	4.26
Constant	-7.77	0.89	0.00	0.00

Logistic regression of use or no use
Base: All Users and Non-Users (N=2350)

LogLinear regression: to use or not to use

	Access quality (Public to Private)
Retired	-1.49
Unemployed	-0.86
Catholic	0.58
Other Christian	0.62
Interest in politics	0.31
Social participation	0.54
Internal locus of control	0.47
Quality of access	1.32
Skills: ICT richness	0.19
Self Attitude	0.51
Society Attitude	1.20
Constant	-8.21

	No access indicator
Student	2.43
Employed	1.26
Anglican	-0.56
Gender (women)	0.31
Participation in politics	0.15
Social participation	0.38
Parents responsible	1.13
Government responsible	0.11
Internal locus of control	0.48
Skills: ICT richness	0.51
Self Attitude	0.48
Society Attitude	1.40
Constant	-10.06

Logistic regressions of use or no use
Base: All Users and Non-Users (N=2350)

Linear regression: How much is enough?

Social resource	Digital resource					
	Entertain	Educate	Transact	Interact	Civic	Breadth
Economic	Income – SES +	Educ +	Educ +	Educ + Income –	Educ +	Educ + Urban +
Cultural	Women – Age – Not reli +	Student + Religious –	Student – Employed + Non reli +	Women – Age – Religious –	Student –	Employed + Non reli +
Political	Parental restriction +	Actions +		Actions +	Interest + Actions +	Interest + Actions +
Socio-Psy	Social Network + Internal locus of control +	Social Network + Internal locus of control –	Social Network +	Social Network +		
Access	Number + Home +	Number + Home +	Number + Home +	Number + Home +	Number + Quality +	Number + Home +
Skills	ICT +		ICT +	ICT +	ICT +	ICT +
Attitudes	Society + Self +	Society + Self +	Society + Self +	Society + Self +	Society + Self +	Society + Self +
<i>R</i> ²	<i>.67</i>	<i>.44</i>	<i>.65</i>	<i>.32</i>	<i>.32</i>	<i>.71</i>

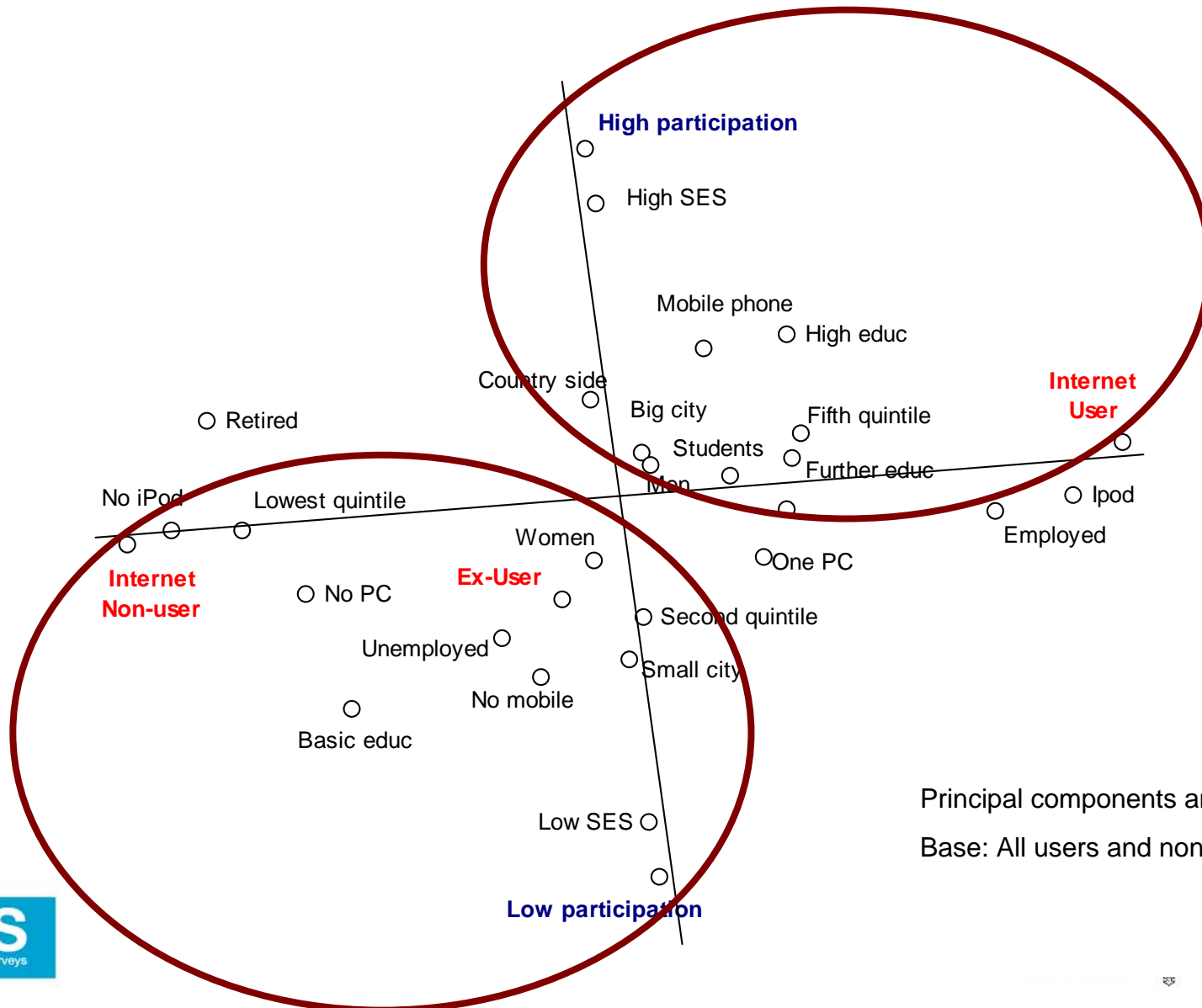
Linear regression Breadth of use (i.e. Quality)

Base: All Users and Non-Users (N=2350)

Linear regression: What is enough

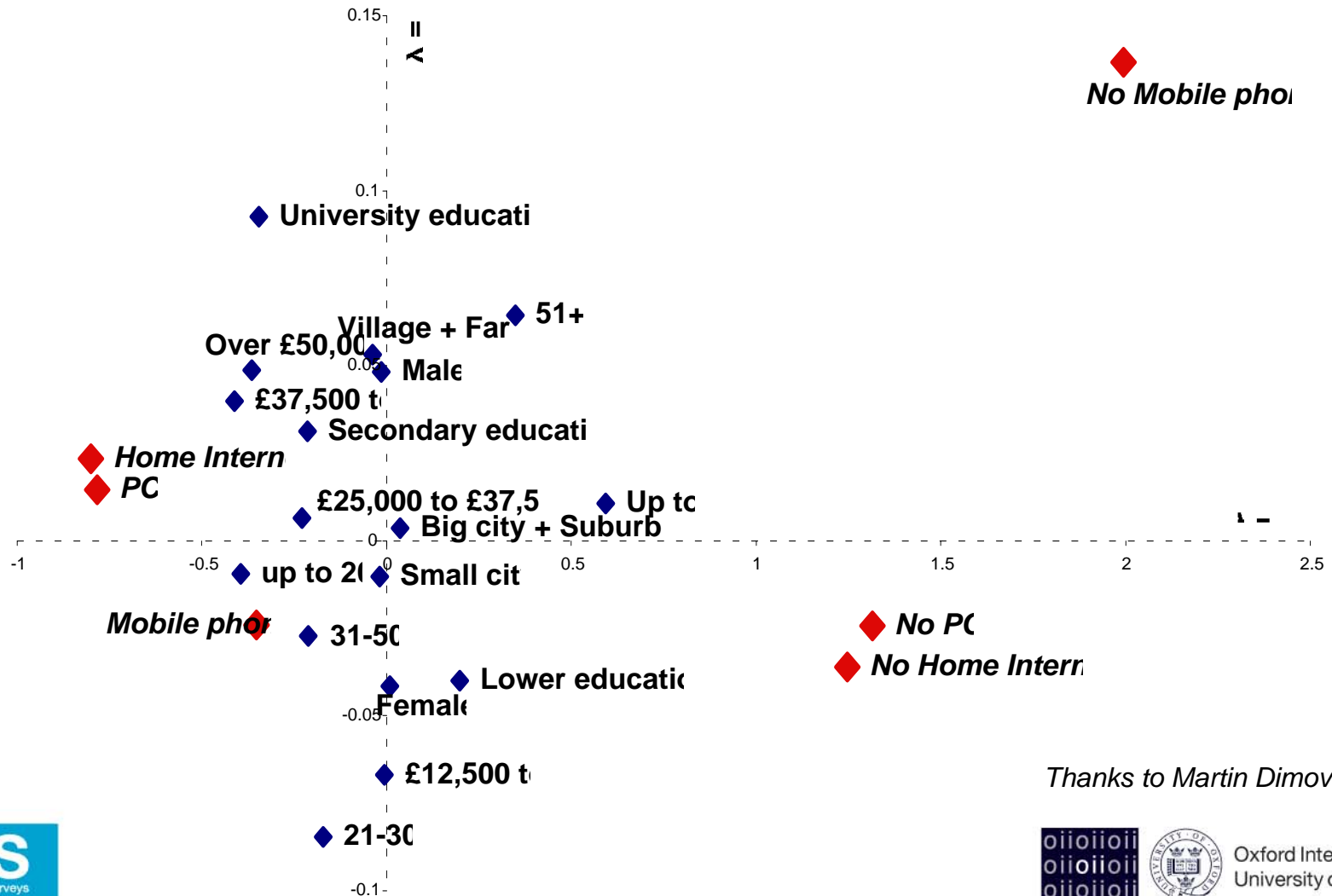
Social Resource	Digital resource					
	Entertain	Educate	Transact	Interact	Civic	Breadth
Economic	SES + Income -	Educ +	Educ + Income +		Educ +	Educ+ Urban +
Cultural	Age - Women - Asian + Not reli +	Student + African Carribean +	Age + Student - Not reli +	Anglican -	Student -	Women - Unempl + Employed +
Political	Interest -	Actions +			Interest + Actions +	Interest + Actions +
Socio-Psy	Social network + Internal locus of control +	Social network + Organised + Internal locus of control -	Social network +	Social network +		Organised +
Access	Number + Quality +	Number + Dial up +	Quality +	Number +	Number +	Number + Quality + Privacy +
Skills	Self Effic + Website +	Self Effic + Problem solving + Program + Risk awareness +	SE + Website +	SE + Website + Filter + Problem solving +	Website + Program +	SE + Website + Technical Program + Risk awareness +
Attitudes	Society +	Depend +	Depend +	Depend +	Depend +	Depend + Self +
<i>R</i> ²	.33	.39	.31	.45	.29	.46

Patterns Social and Digital Inclusion 2007



Principal components analysis
Base: All users and non-users (N=2350)

Patterns Social and Digital Inclusion 2005



Thanks to Martin Dimov

Case studies: Social and Digital inclusion

Scottish Household Survey

Socially Included	24%	56%
Socially Excluded	15%	5%
	Non-Internet User	Internet User

OxIS 2007

ABC1C2	23%	49%
DE	10%	18%
	Non internet user	Internet user

How are these people different?

Analytical Strategy also...

Can we study the 'effect' of digital inclusion on social inclusion with survey data?

- Investigating levels in 'changeable' social (social psychological, economic and political) resources based on independent effects of access, skill, attitudes and uses in groups with similar backgrounds as regards non-changeable social (cultural and economic) resources

BUT....

Really necessary are panel studies and well constructed intervention research

Summary

- What do we want to predict?
 - (Which) Inclusion resources?
 - (Which) Digital resources?
 - Barriers and enablers
- What needs to be done?
 - Scale/Measurement construction
 - Study at different levels to judge diverse impacts

Thank you.



Oxford Internet Surveys

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