

Market Research Society

People and Geography

The use and further development of OAC

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Customer profiling, market modelling, targeting people

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Bespoke systems

Access to the data

Super Groups 7	Groups 21	Sub-groups 52
1: Blue Collar Communities	1a: Terraced Blue Collar	3
	1b: Younger Blue Collar	2
	1c: Older Blue Collar	3
2: City Living	2a: Transient Communities	2
	2b: Settled in the City	2
3: Countryside	3a: Village Life	2
	3b: Agricultural	2
	3c: Accessible Countryside	2
4: Prospering Suburbs	4a: Prospering Younger Families	2
	4b: Prospering Older Families	4
	4c: Prospering Semis	3
	4d: Thriving Suburbs	2
5: Constrained by Circumstances	5a: Senior Communities	2
	5b: Older Workers	4
	5c: Public Housing	3
6: Typical Traits	6a: Settled Households	2
	6b: Least Divergent	3
	6c: Young Families in Terraced Homes	2
	6d: Aspiring Households	2
7: Multicultural	7a: Asian Communities	3
	7b: Afro-Caribbean Communities	2

Naming the sub-groups

Naming is difficult – virtually impossible

Use the census variables that were used to make OAC

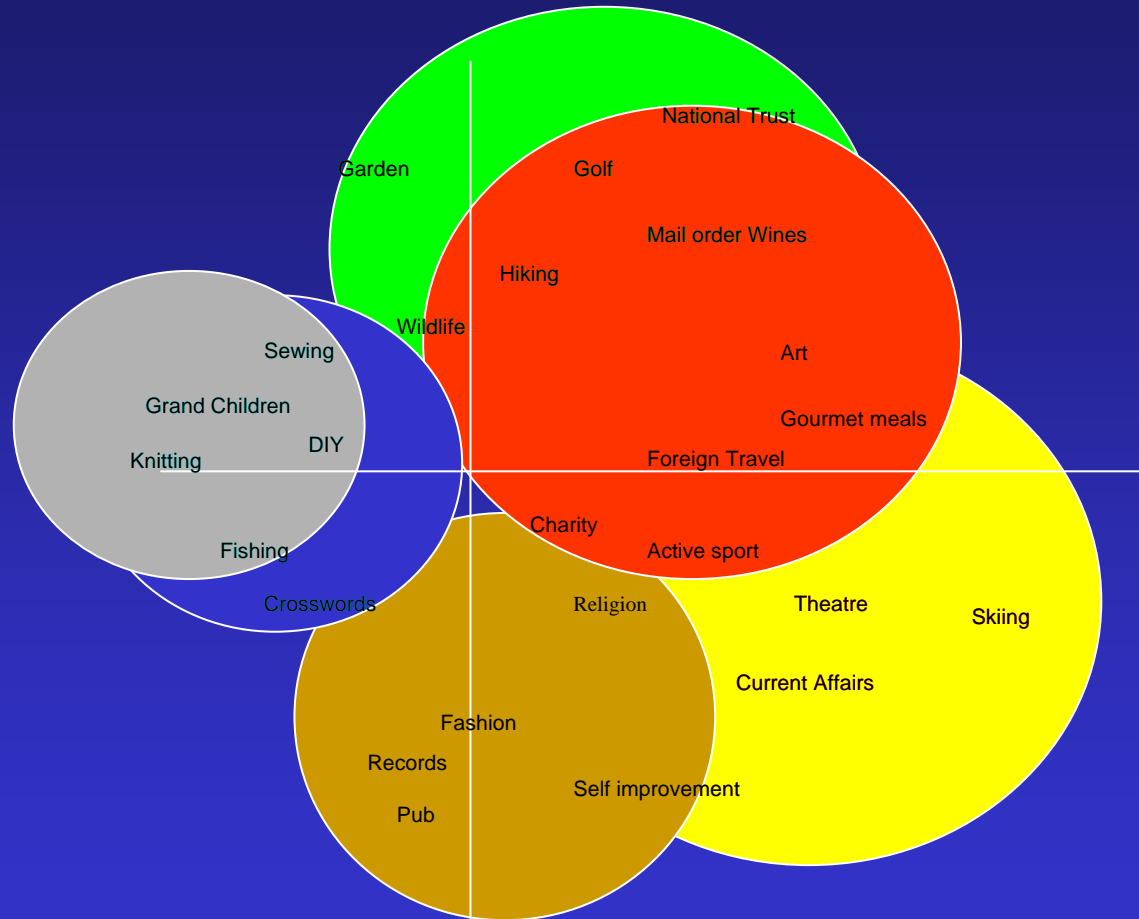
Use geographical properties of the OAC sub-groups

Use survey data where available

Use common sense and ground truth

BUT the names describe the areas not everyone in an area is the same

Representation of activities and OAC groups



Multi-dimensional scaling on lifestyle activity indices

Thoughts of some sub-group names

Student Bedsits
Young Cosmopolitan Professionals
Genteel Flatland
Professional Town Families

Working villages
Poorer Countryside
Not tied to the Land
In Contact with Nature
Well-off Rural Manufacturing
Pleasant Rural Retirement

Hard Working but Dull
Better-off Hard Working but Dull

Fading Middle Class

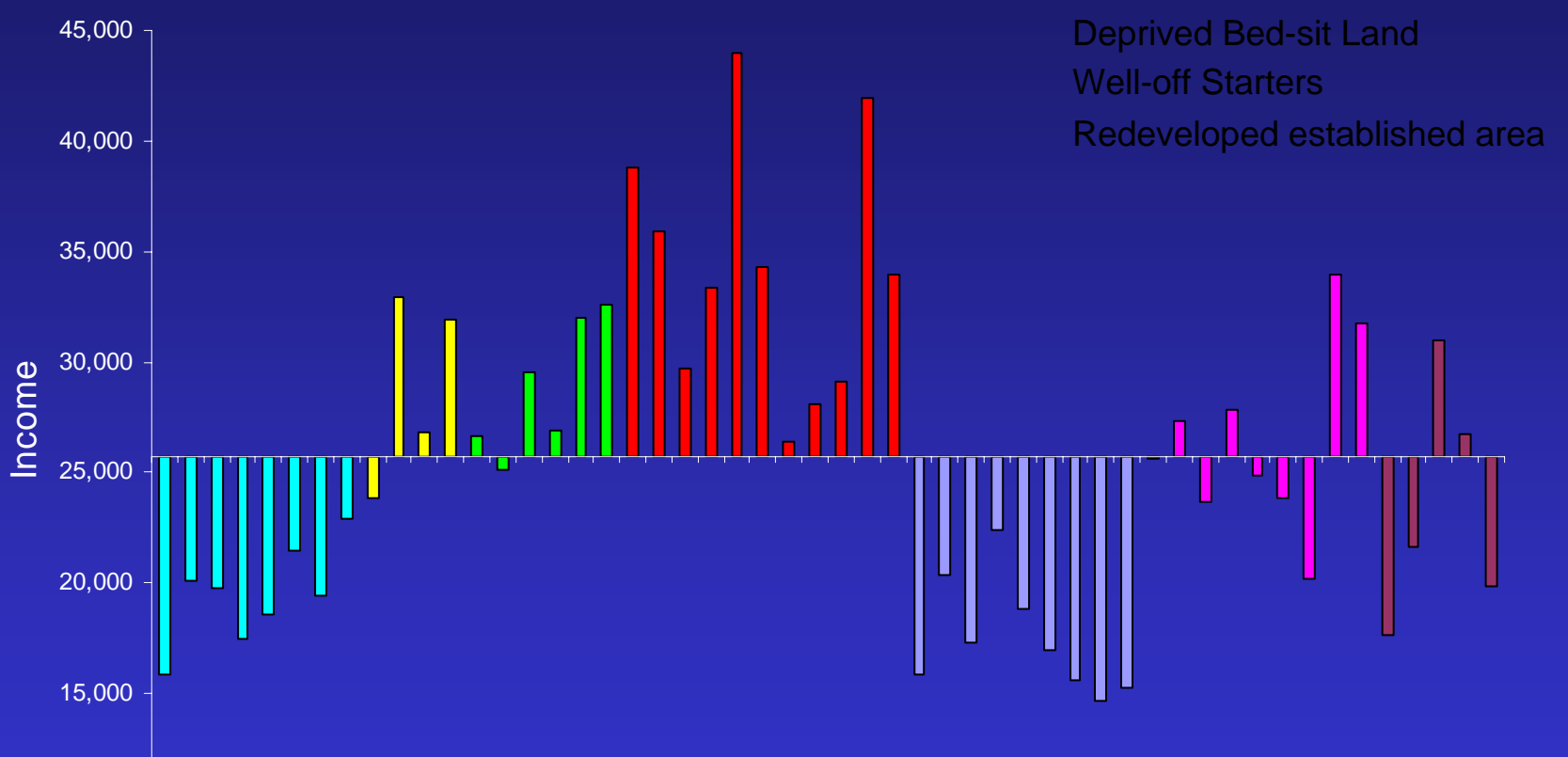
Bed-sit Land
Deprived Bed-sit Land
Well-off Starters
Redeveloped established area

Asian Ghettos
Impoverished Melting Pot
Successful Second Generation
Gentrification
Deprived Tower Blocks

Student Bedsits
 Young Cosmopolitan Professionals
 Genteel Flatland
 Professional Town Families

Hard Working but Dull
 Better-off Hard Working but Dull
 Fading Middle Class
 Bed-sit Land
 Deprived Bed-sit Land
 Well-off Starters
 Redeveloped established area

Mean Household Income



OAC 52

Working villages
 Poorer Countryside
 Not tied to the Land
 In Contact with Nature
 Well-off Rural Manufacturing
 Pleasant Rural Retirement

Asian Ghettos
 Impoverished Melting Pot
 Successful Second Generation
 Gentrification
 Deprived Tower Blocks

Maps from OAC

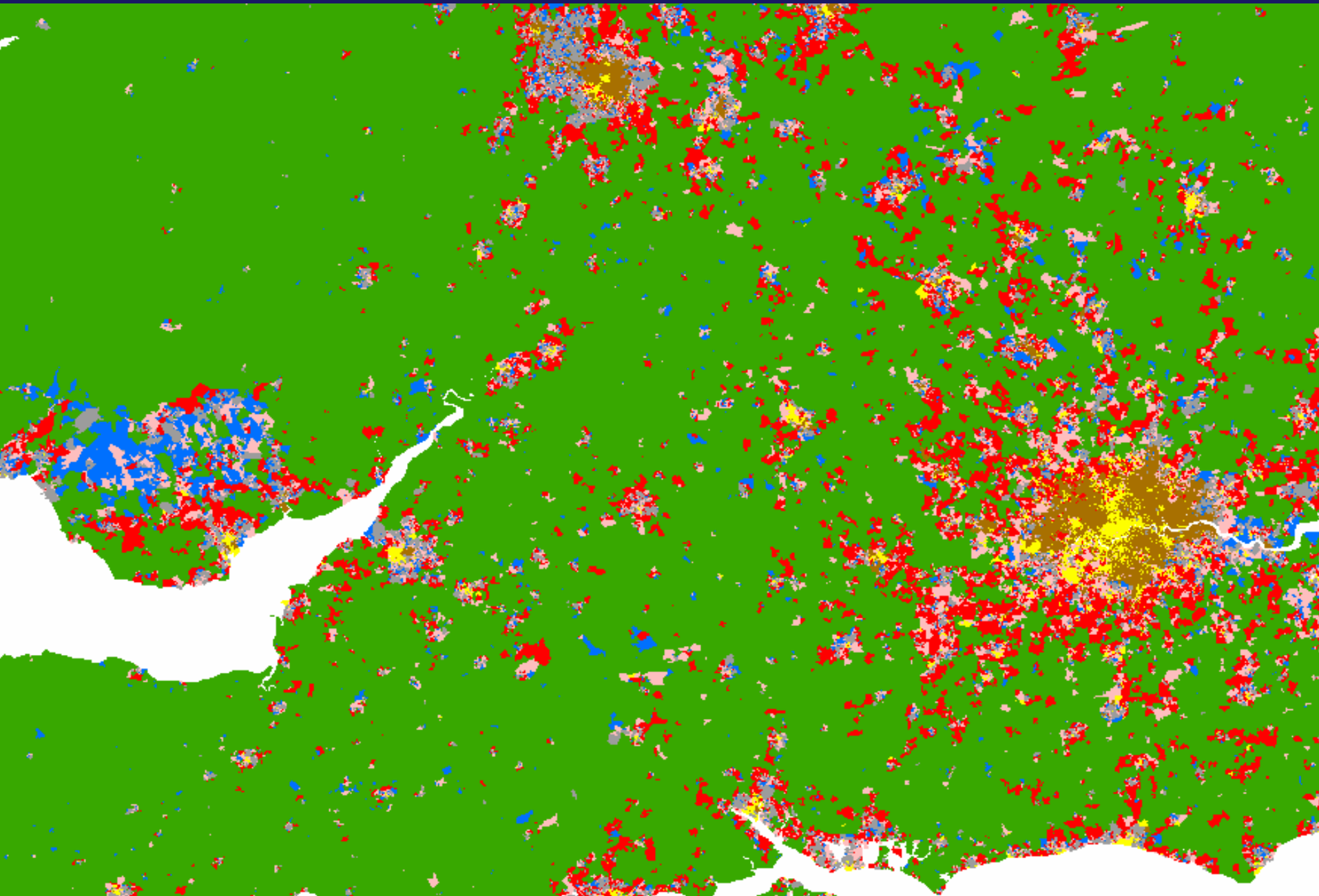
Map makes very good maps

Top level is 7 – and 7 colours can be perceptually resolved

The urban groups are distinct – so maps look sensible

AND geodemographics spatially autocorrelate

OAC Super Groups for southern Britain



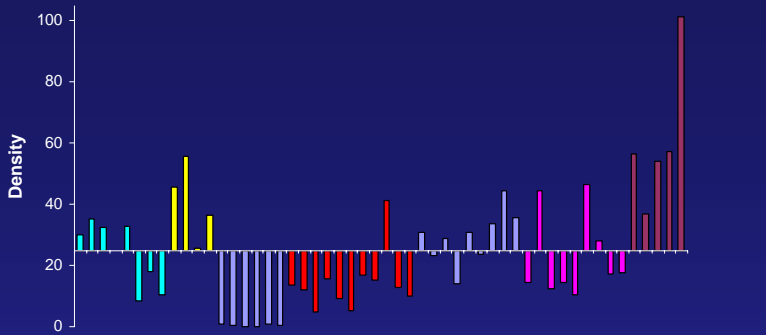
Geographical properties of OAC

The OAC types have some interesting geographical properties

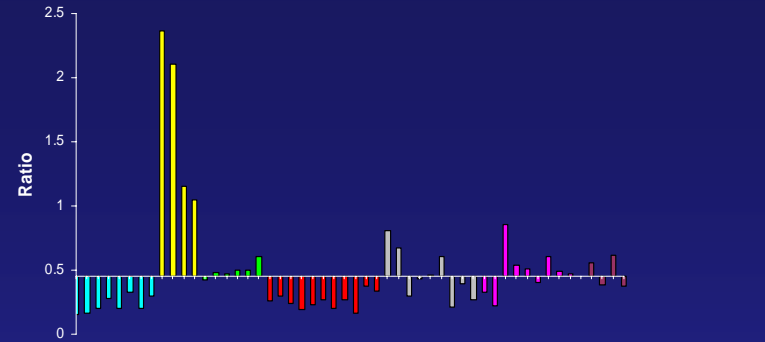
They vary by:

- Population density
- Worker to resident ratio
- Settlement size
- Relationship to the centre of the settlement
- Coastal index
- Elevation

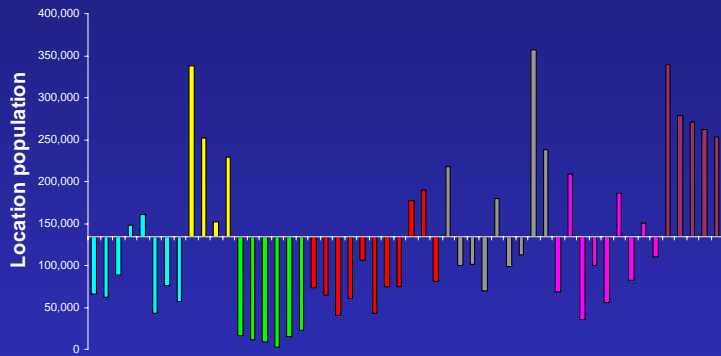
Population density



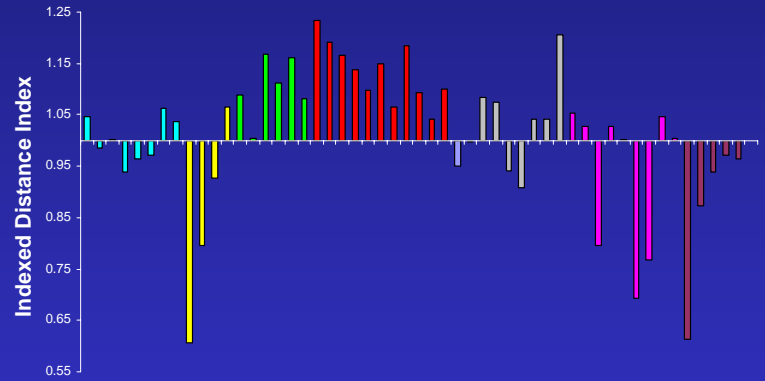
Worker to resident ratio



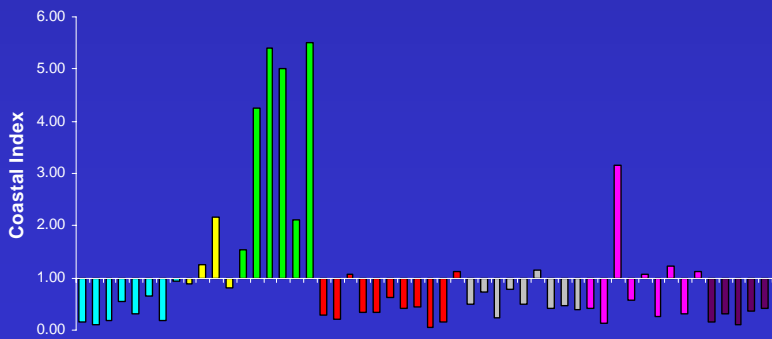
Mean population of locations containing the sub-group



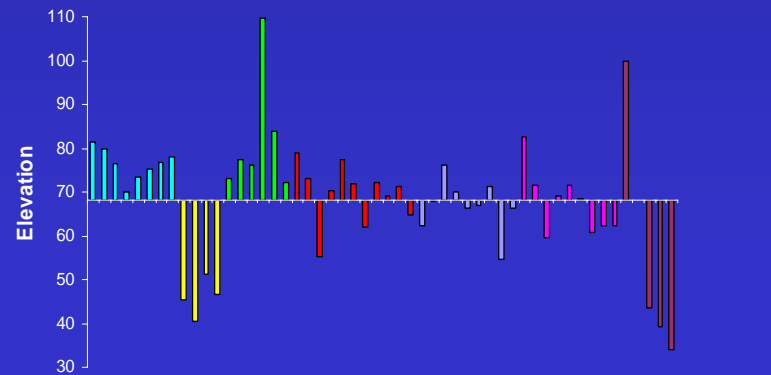
Distance index indexed on the mean for the relevant population size



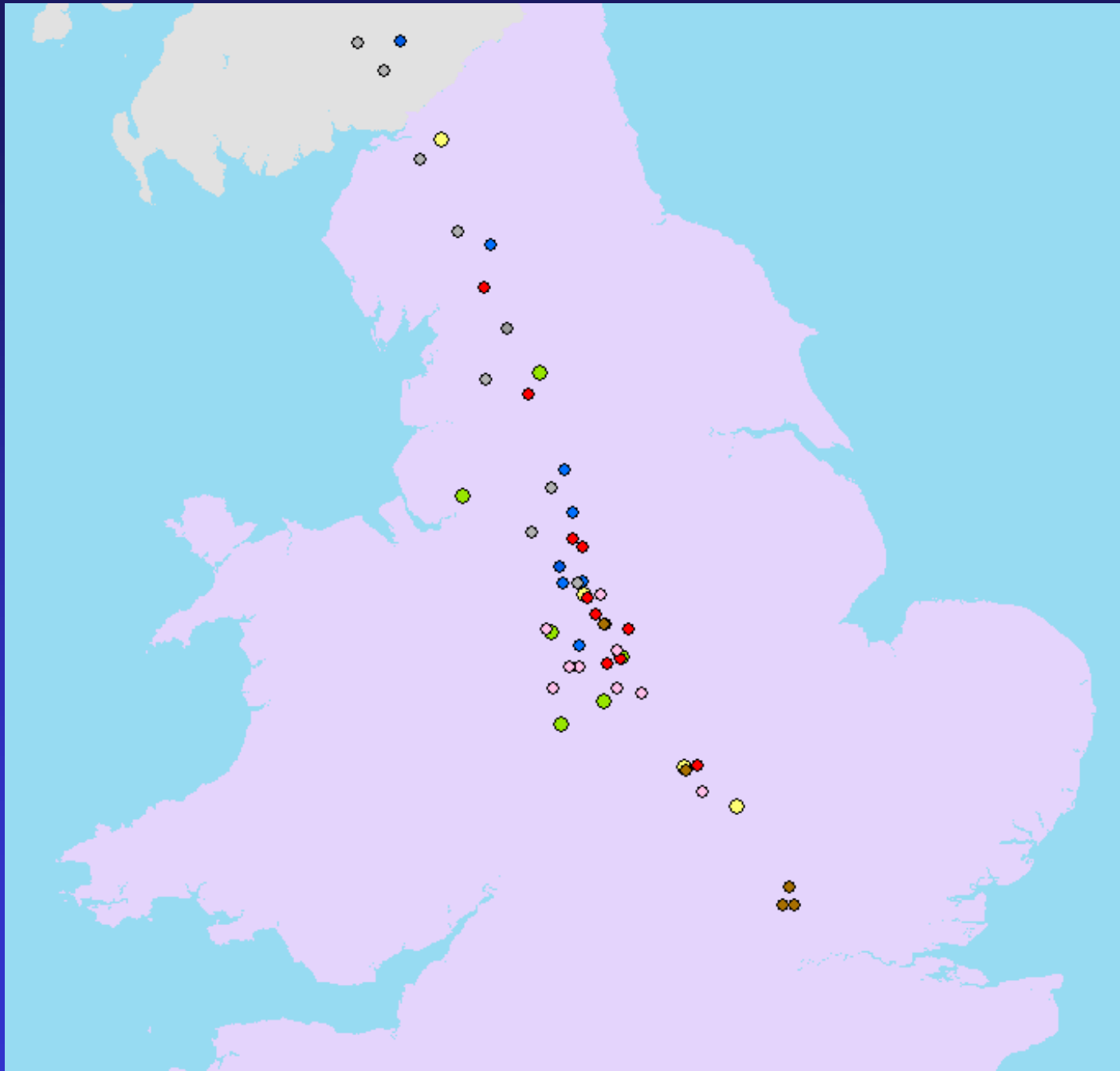
Coastal Index



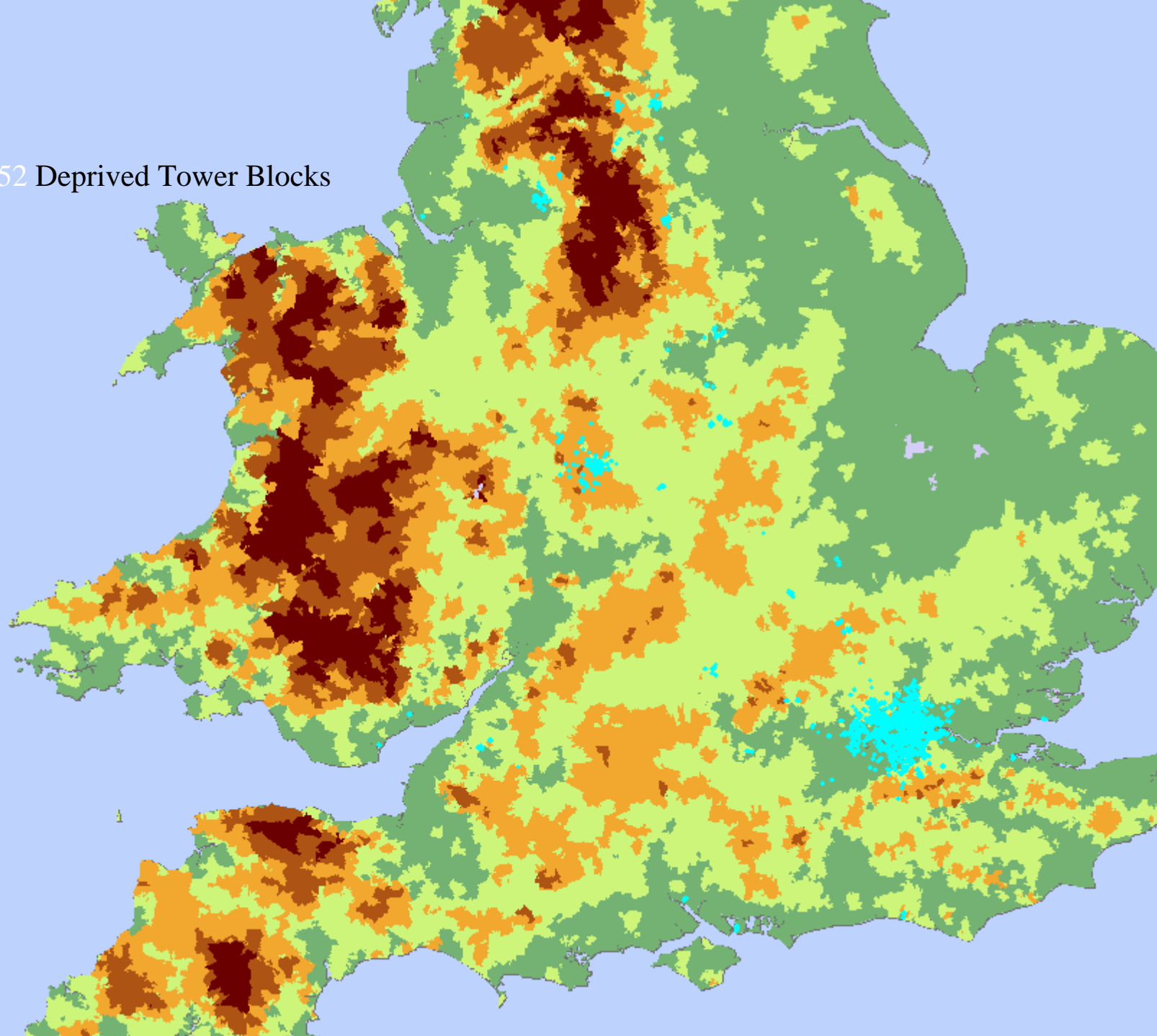
Elevation



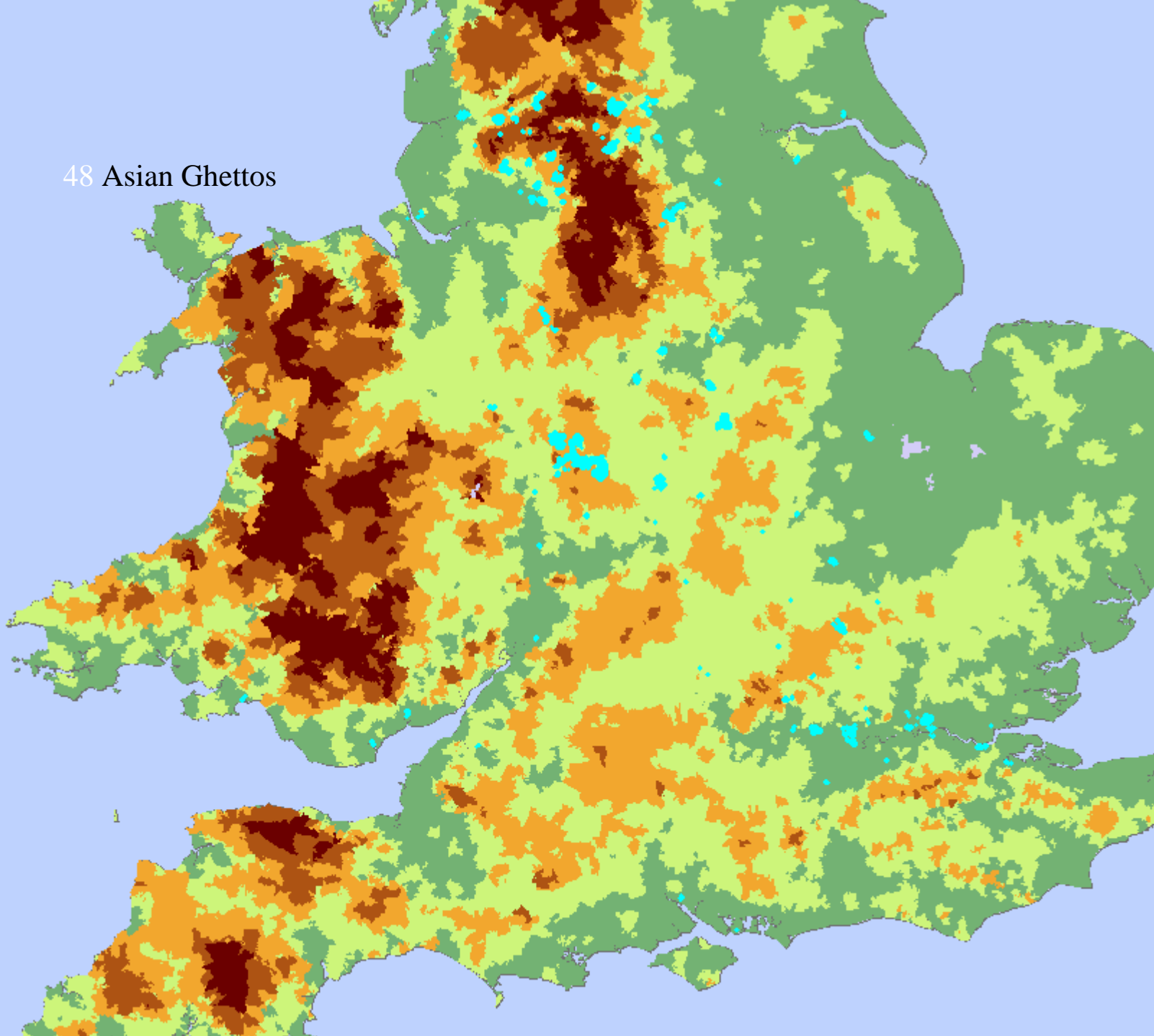
Centre of gravity of each OAC 52 sub-group



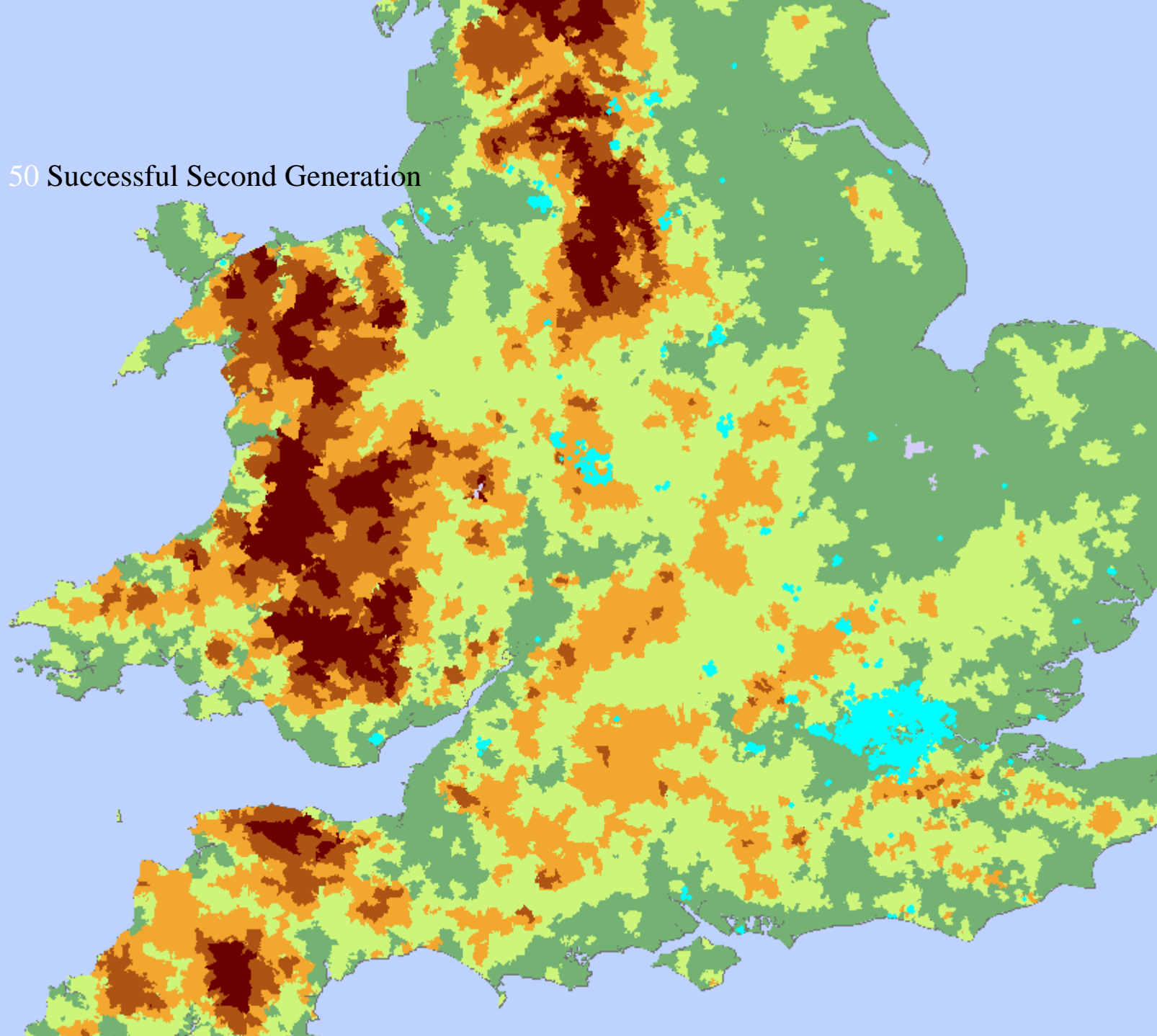
52 Deprived Tower Blocks



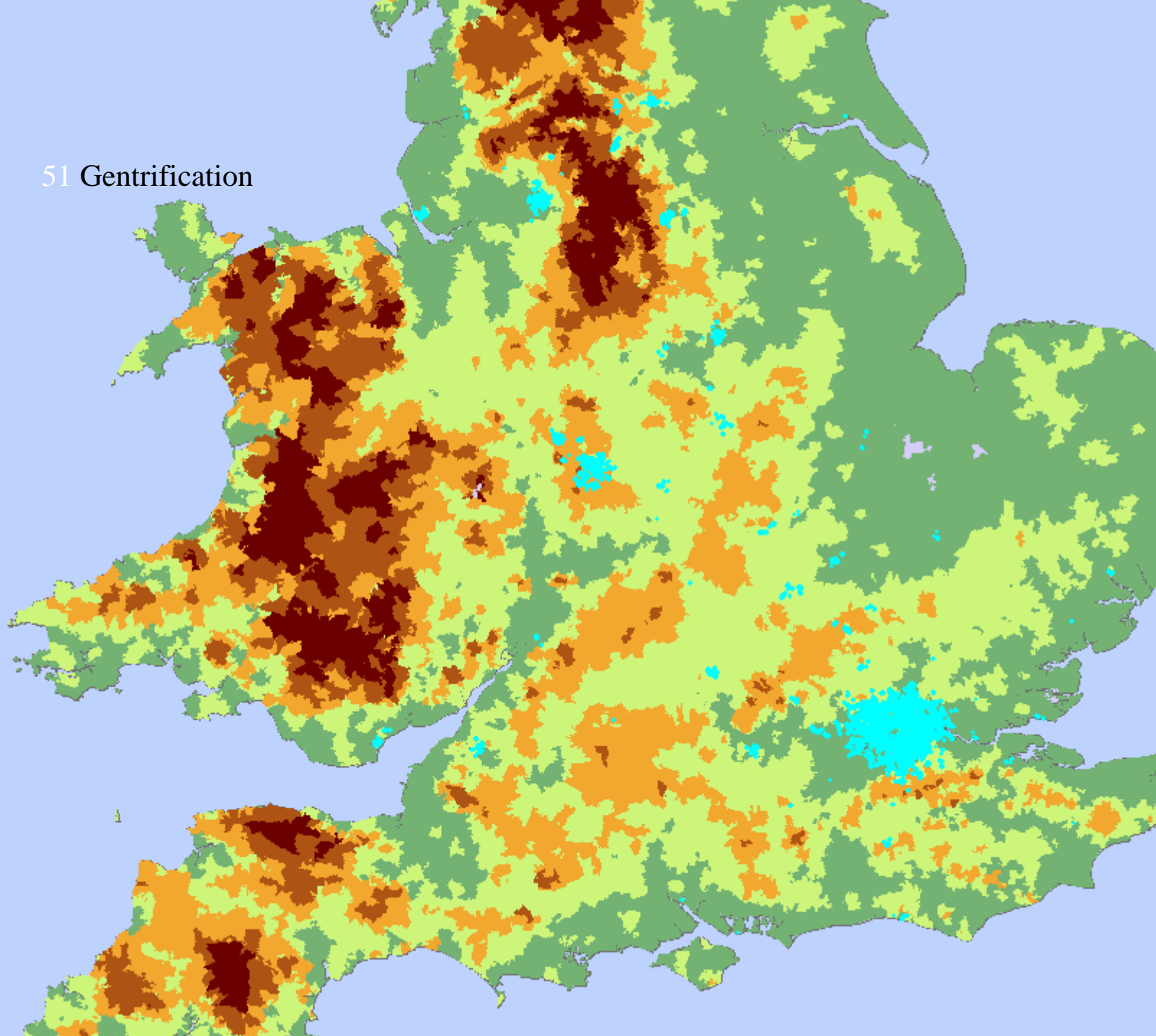
48 Asian Ghettos



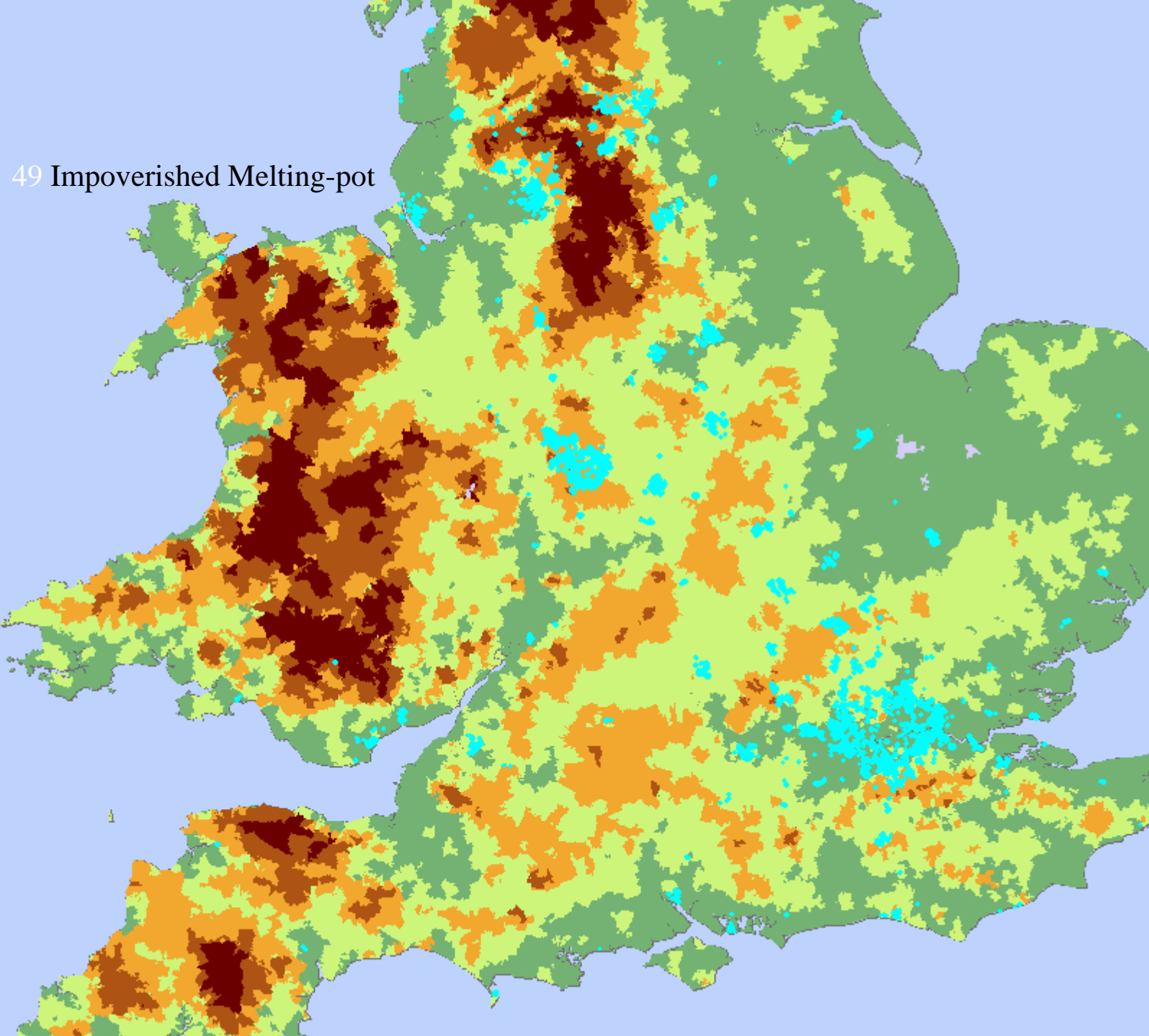
50 Successful Second Generation



51 Gentrification



49 Impoverished Melting-pot



Measuring propensities

People can be OAC coded from their postcode

This enables:

People to be profiled

Markets to be modelled

Groups to be targeted.

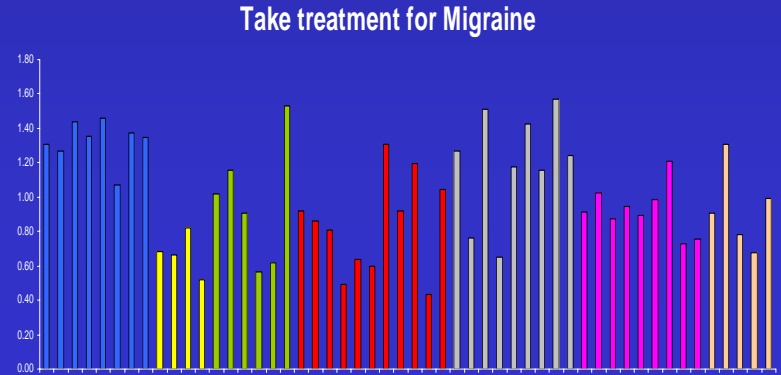
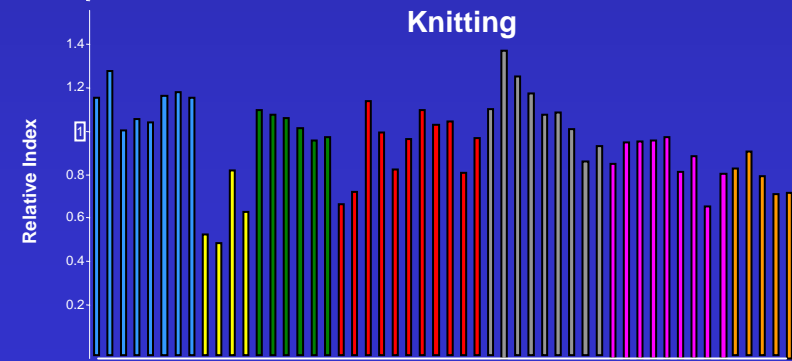
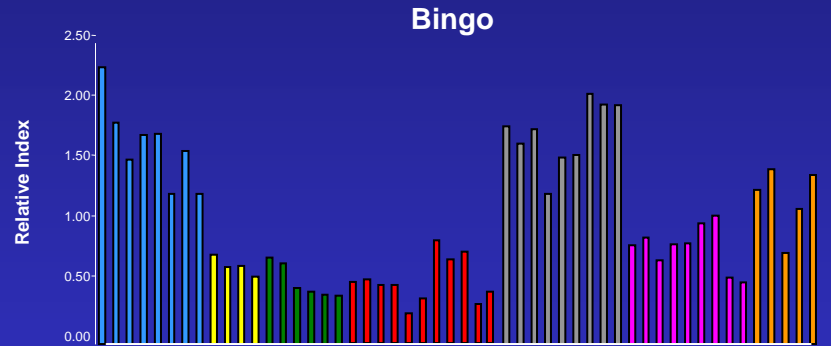
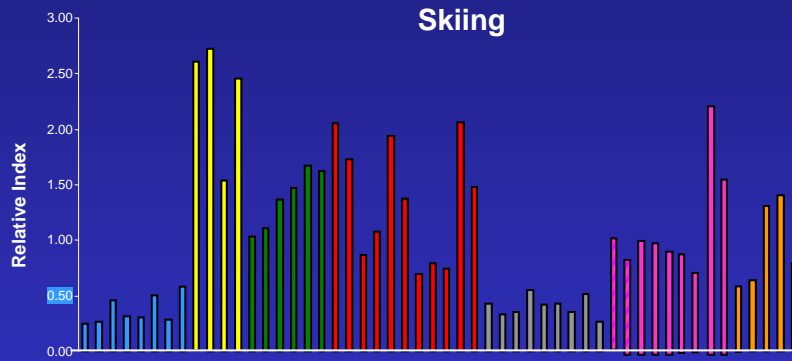
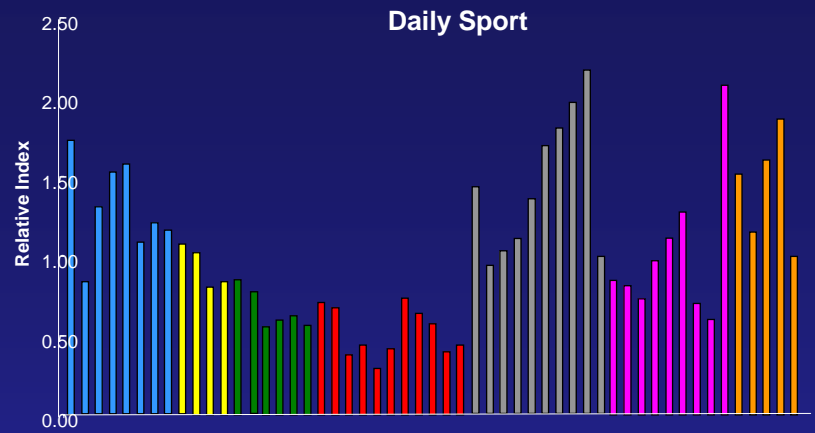
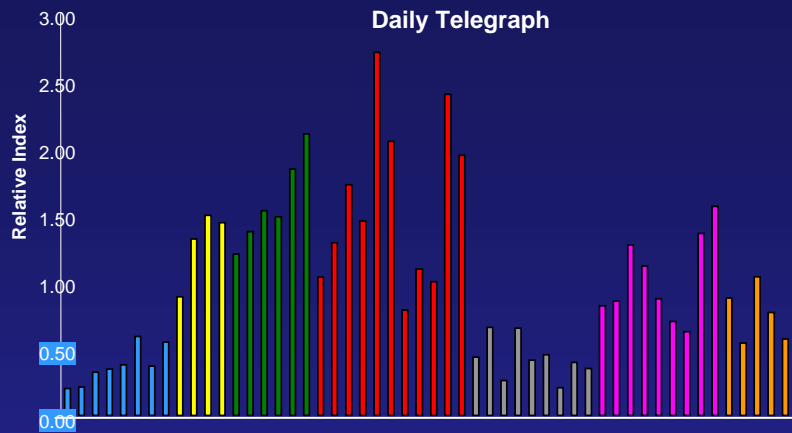
Propensity profiles by OAC

For example, people who:

Read the Telegraph or the Sport

Go Skiing or play Bingo or Knit

Or have treatment for migraine

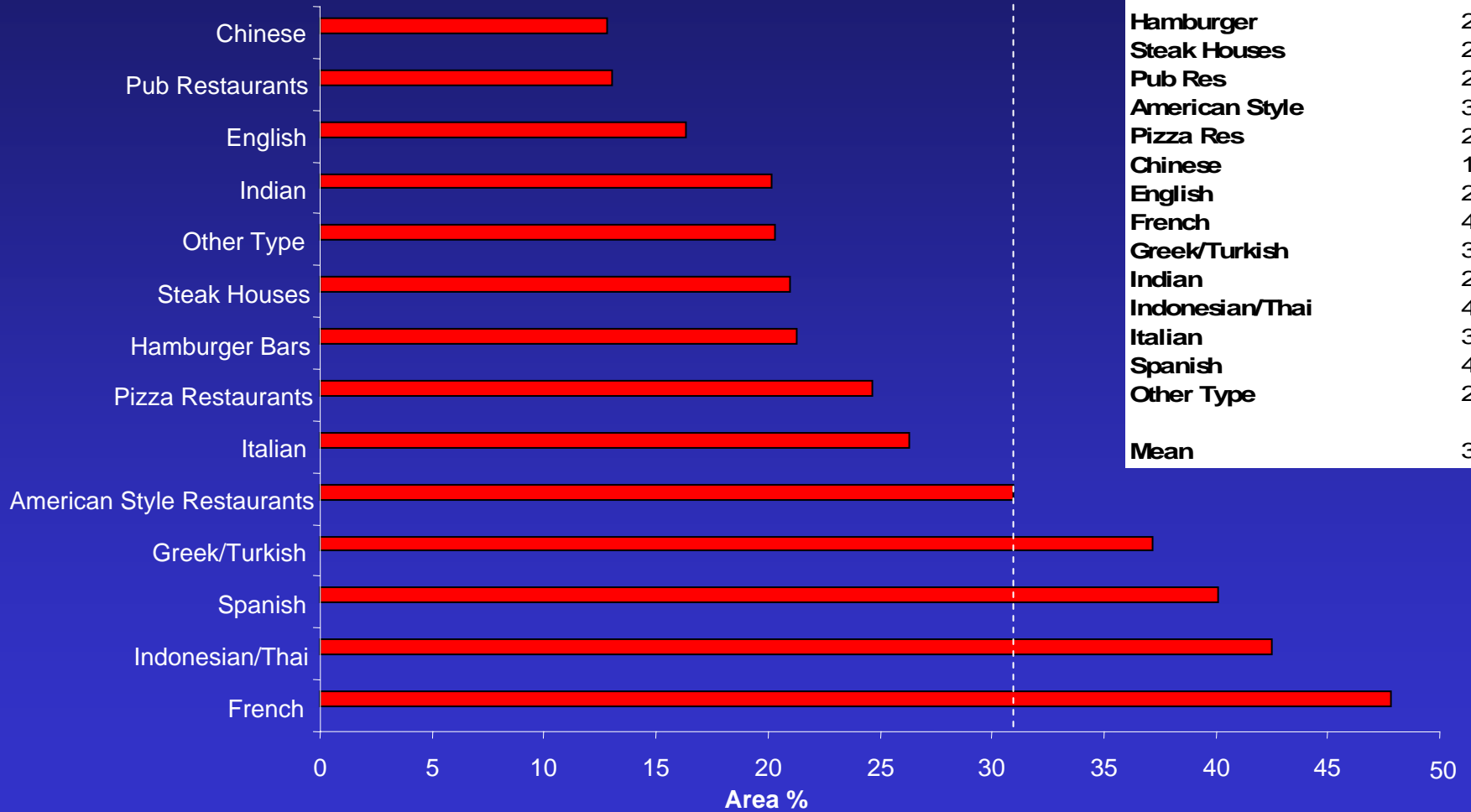


Discrimination of OAC

I calculated the **gain** for 14 eating out markets for two levels of propriety systems A and M – 56 calculations

Gain achieved in different markets by M 61

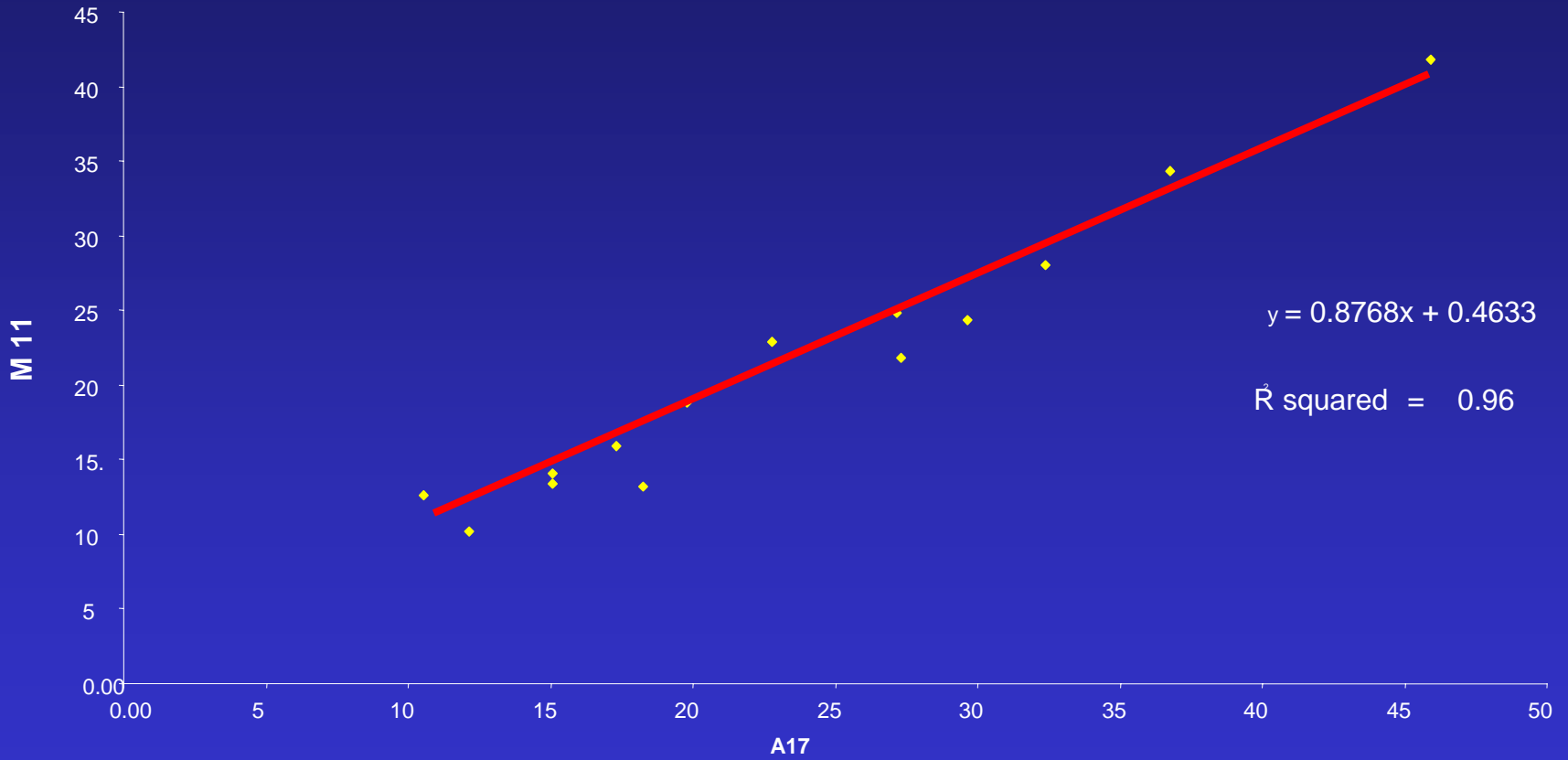
Area % for eating out markets with Mosaic 61



	Adj Area %
Hamburger	23.07
Steak Houses	23.18
Pub Res	22.17
American Style	32.90
Pizza Res	29.38
Chinese	16.44
English	20.16
French	49.98
Greek/Turkish	38.57
Indian	25.57
Indonesian/Thai	44.50
Italian	32.06
Spanish	41.58
Other Type	22.81
Mean	30.17

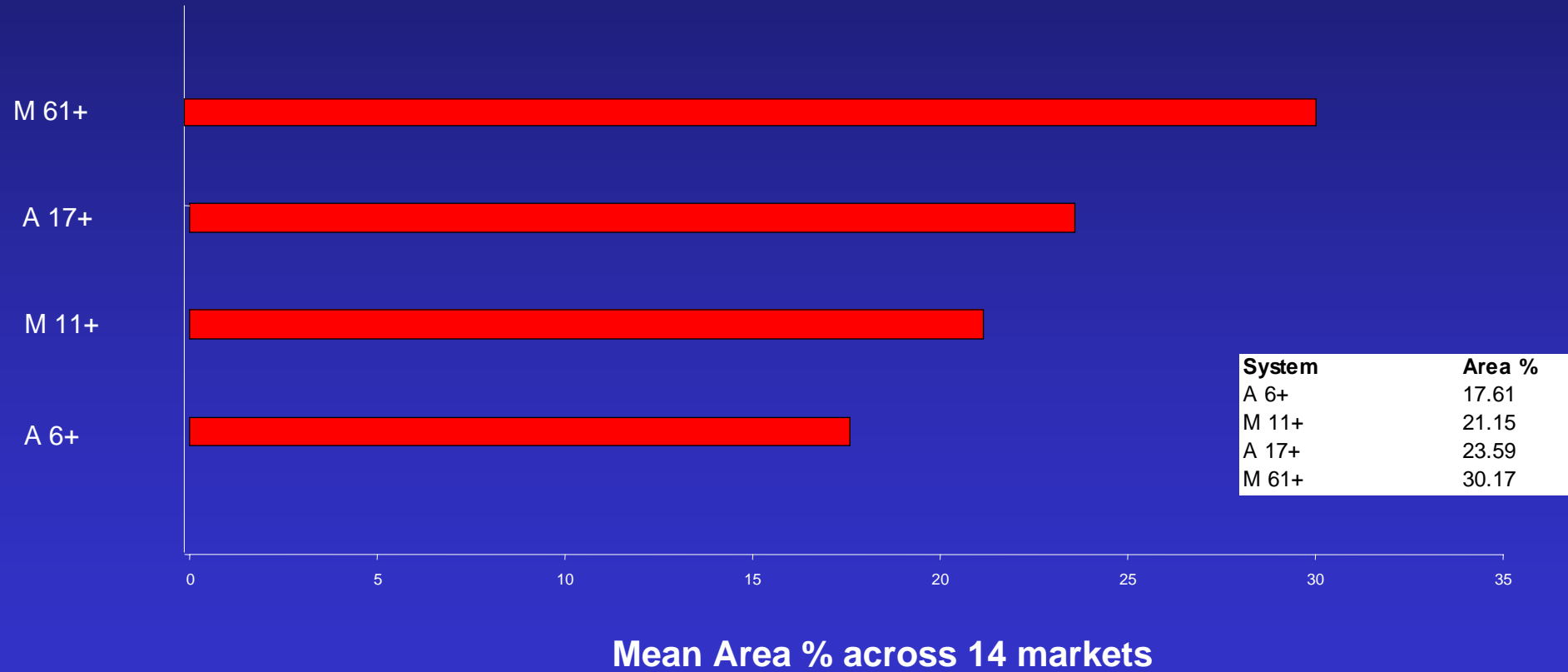
The systems discriminate in a similar way across markets

Area % by market of A 17 against M 11



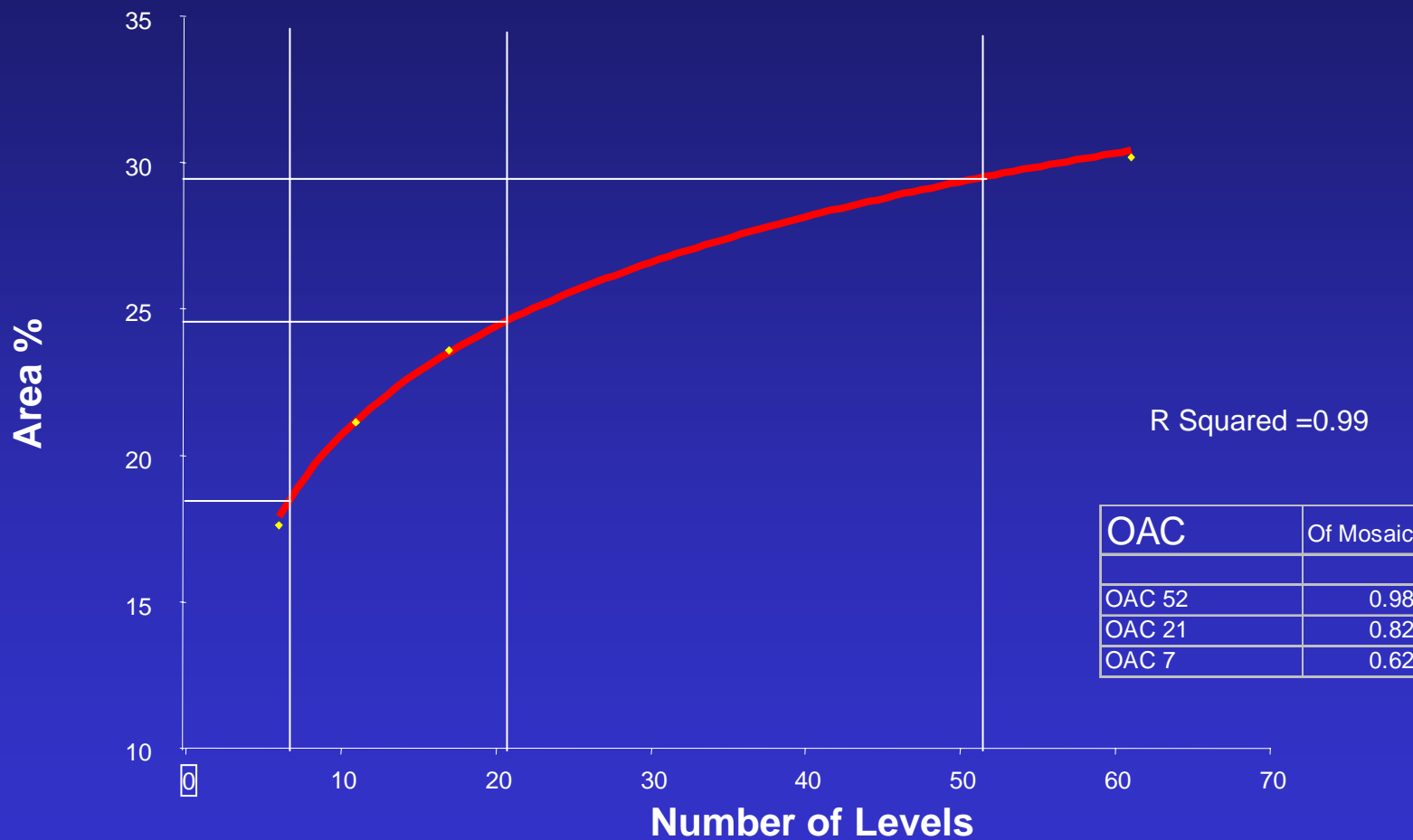
Average gain by each system

Area % for A and M systems across 14 eating out markets



Effectiveness of a system depends only upon the number of levels

Relationship between the levels in the system and mean Area %



Geodem		Weighted deviation
Mosaic 61		40.7
OAC 52		39.9
Bespoke		36.6
OAC 21		35.7
OAC 7		29.7
Mosaic 11		28.2
Bespoke		27.1
IMD		24.0
Social Class		19.0

GISRUK poster 2006

Geodem	Weighted deviation	Relative ot Mosaic 61
Mosaic 61	40.7	1.00
OAC 52	39.9	0.98
Bespoke	36.6	0.90
OAC 21	35.7	0.88
OAC 7	29.7	0.73
Mosaic 11	28.2	0.69
Bespoke	27.1	0.67
IMD	24.0	0.59
Social Class	19.0	0.47

Geodem	Weighted deviation	Relative ot Mosaic 61	Predicted
Mosaic 61	40.7	1.00	1.00
OAC 52	39.9	0.98	0.98
Bespoke	36.6	0.90	
OAC 21	35.7	0.88	0.82
OAC 7	29.7	0.73	0.62
Mosaic 11	28.2	0.69	
Bespoke	27.1	0.67	
IMD	24.0	0.59	
Social Class	19.0	0.47	

Summary of discrimination

OAC is as discriminatory as other geodemographic systems

I calculated the gain for 14 eating out markets for two levels of A and M – 56 calculations

This showed, in these markets, discrimination of the two systems differed only by the level of clustering. As M had the higher number, it discriminated the best.

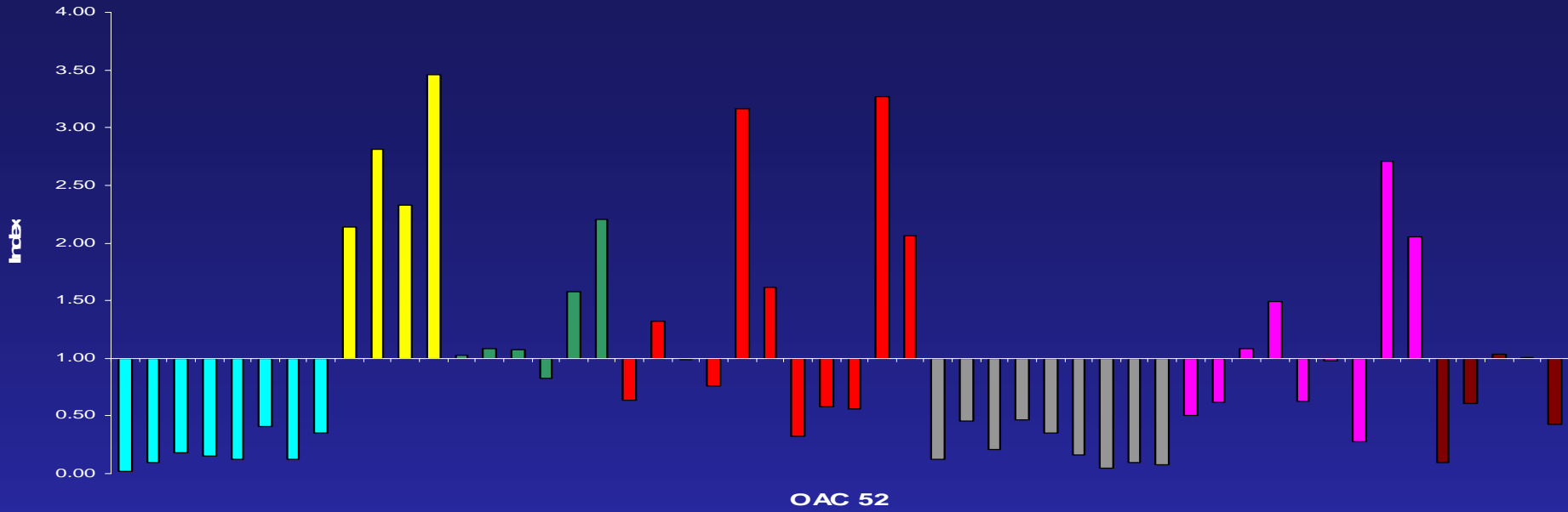
Comparison of the OAC to Mosaic at UCL with adjustment for cluster numbers showed that OAC performed comparably.

Extending OAC – increasing its discrimination

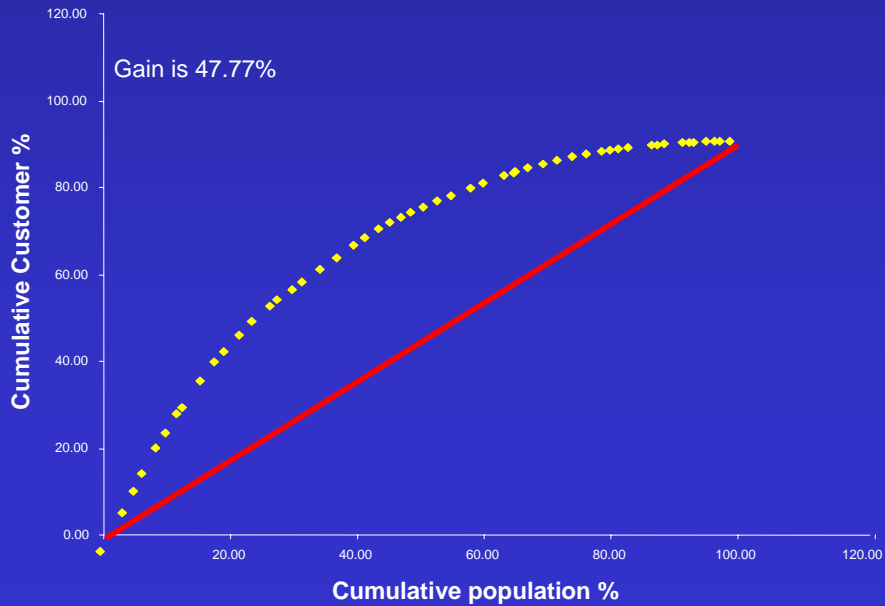
OAC was further sub-divided into 260, 1300 and 10,400 clusters

At 10,400 there are on average only 20 OAs per cluster.

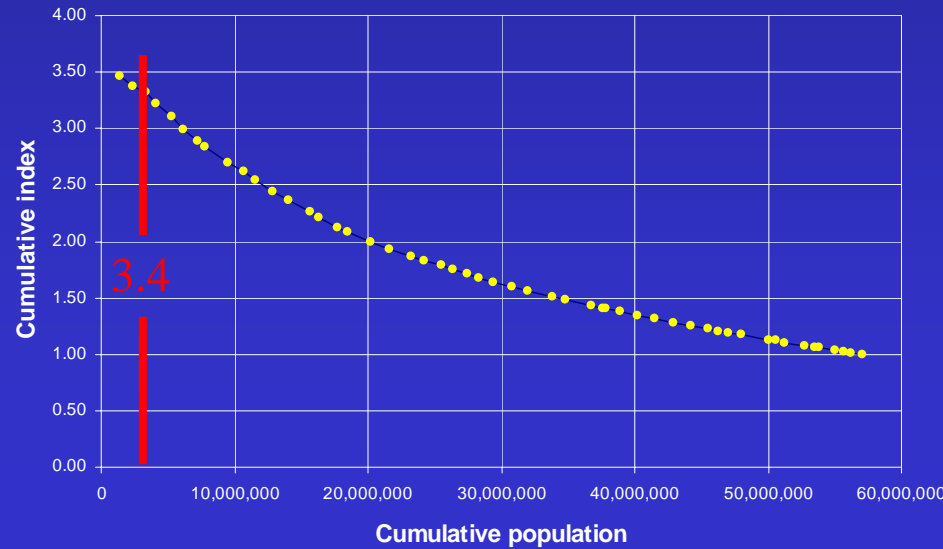
Propensity (index) by OAC 52



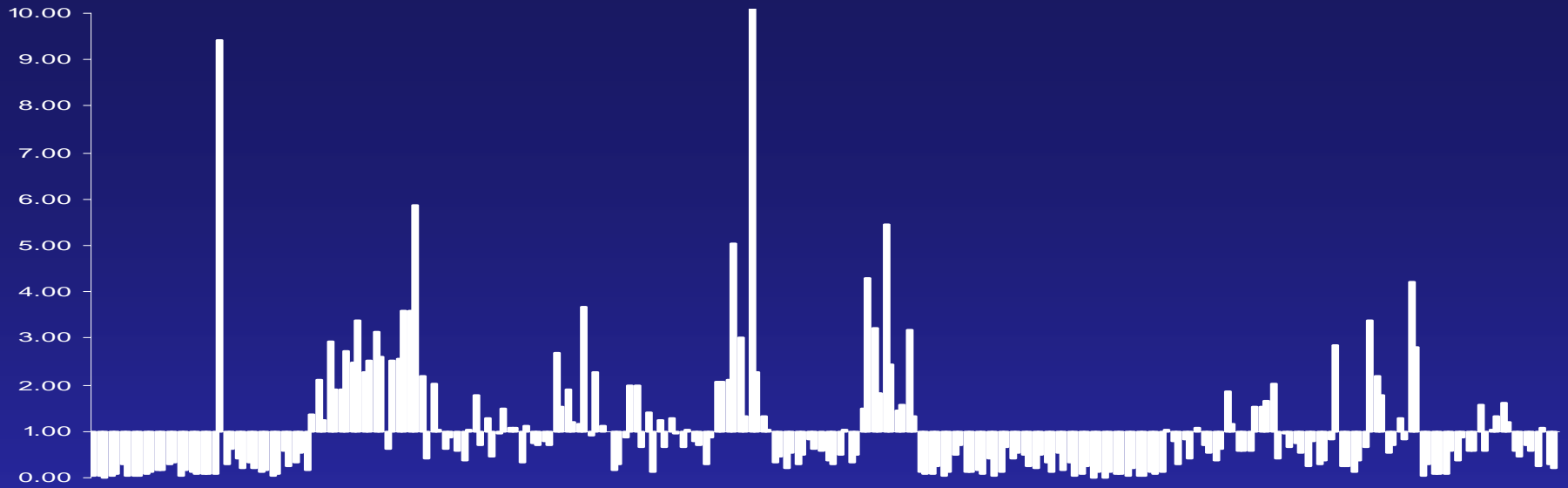
Analysis of Gain OAC 52



Cumulative index versus cumulative population

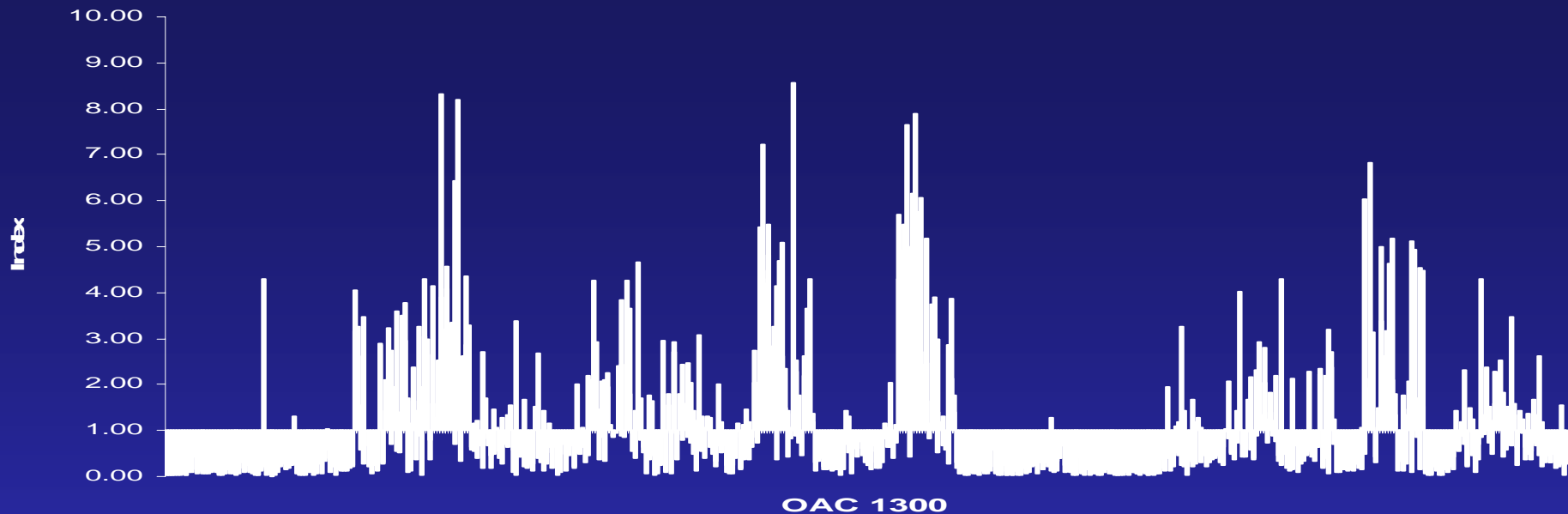


Index OAC 260



Level	Gain	2 Million index
52	48%	3.38
260	53%	4.26

Index for OAC 1300



Level

Gain

2 Million index

52

48%

3.38

260

53%

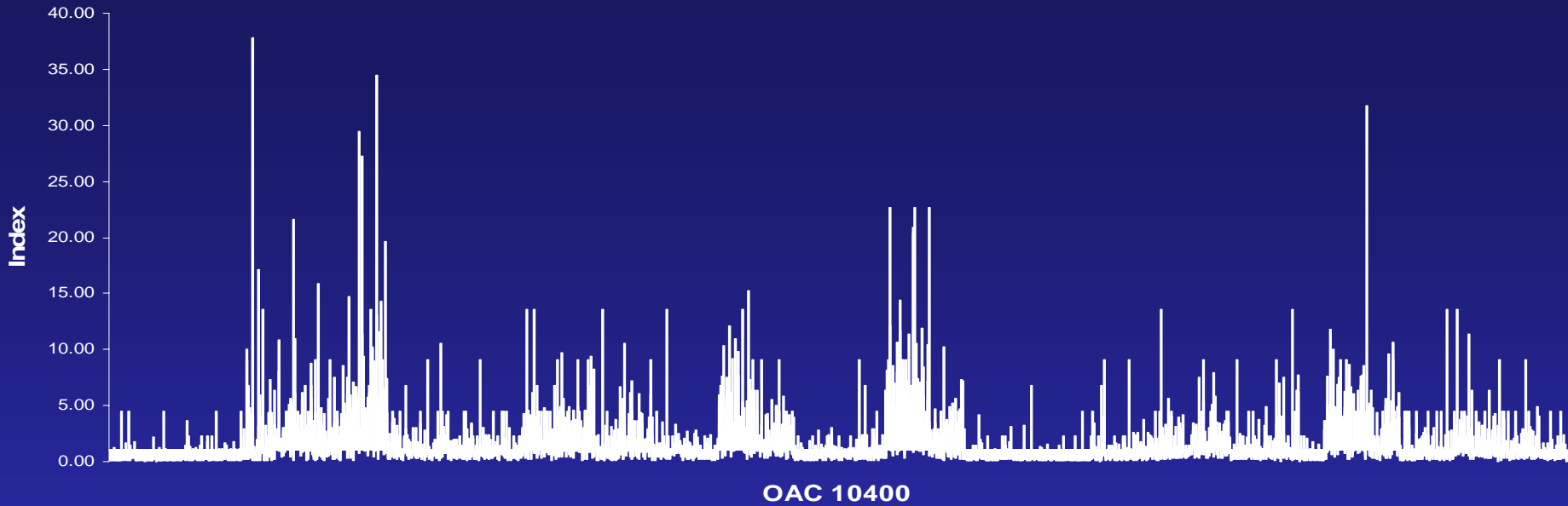
4.26

1,300

56%

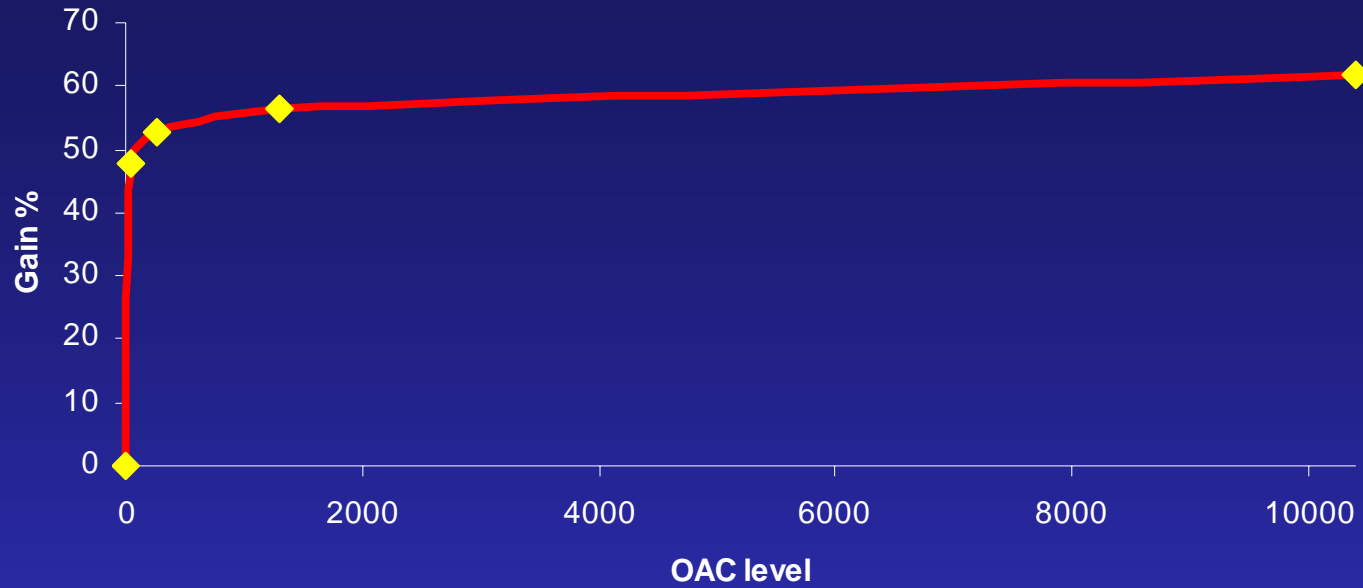
4.85

OAC 10400 index



Level	Gain	2 Million index
52	48%	3.38
260	53%	4.26
1,300	56%	4.85
10,400	62%	5.57

Gain versus OAC level



OAC levels	Code included %	Gain %	2 million Cum Index	Advantage over OAC 52
1	100	0.00	0.00	
52	100	47.7	3.38	1
260	98	52.6	4.26	1.23
1300	81	56.31	4.85	1.40
10400	44	61.61	5.57	1.61

Making a bespoke classification

Because geodemographics types concentrate, it means that in any area there is likely to be only a sub-set of types that apply

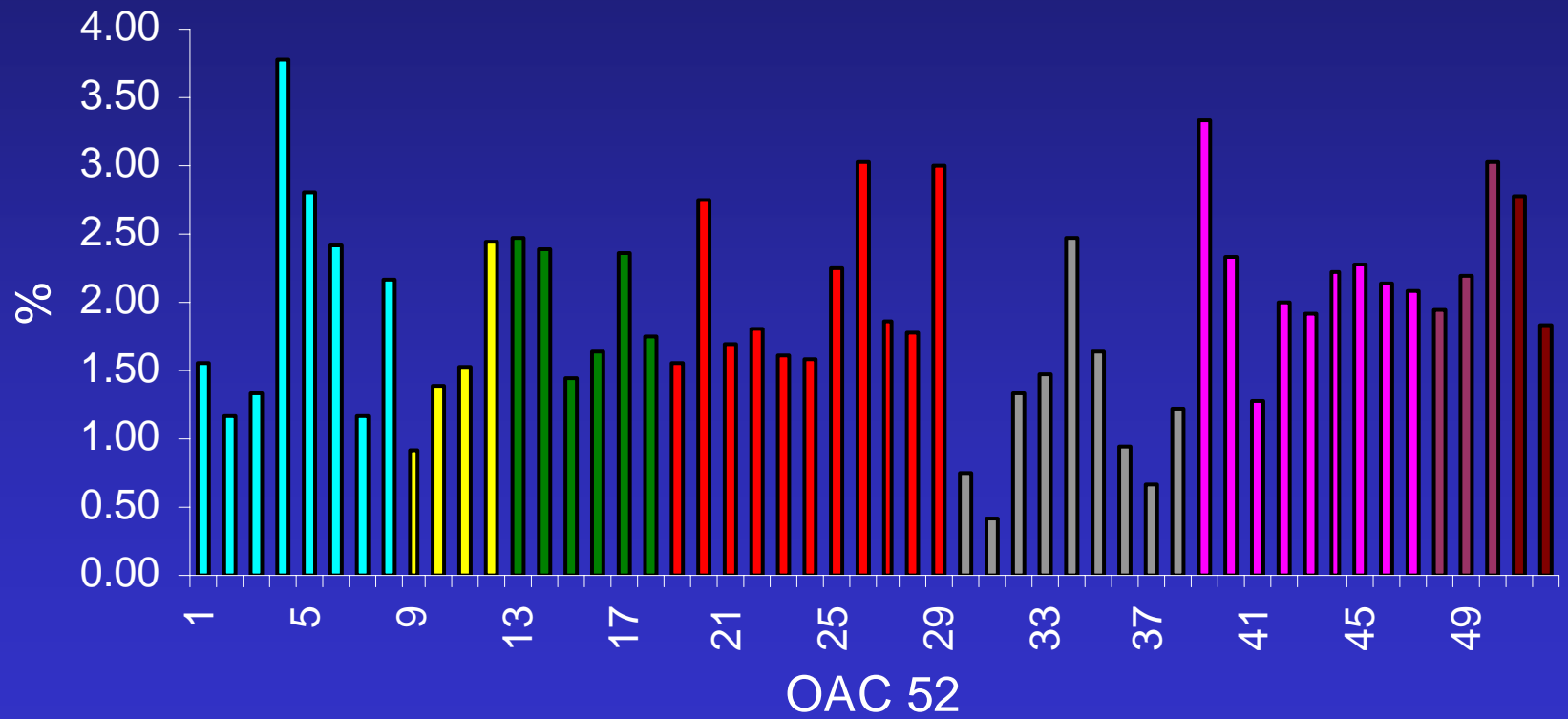
This can occur in a Local Authority

For example Newham only has 6 types out of OAC 52

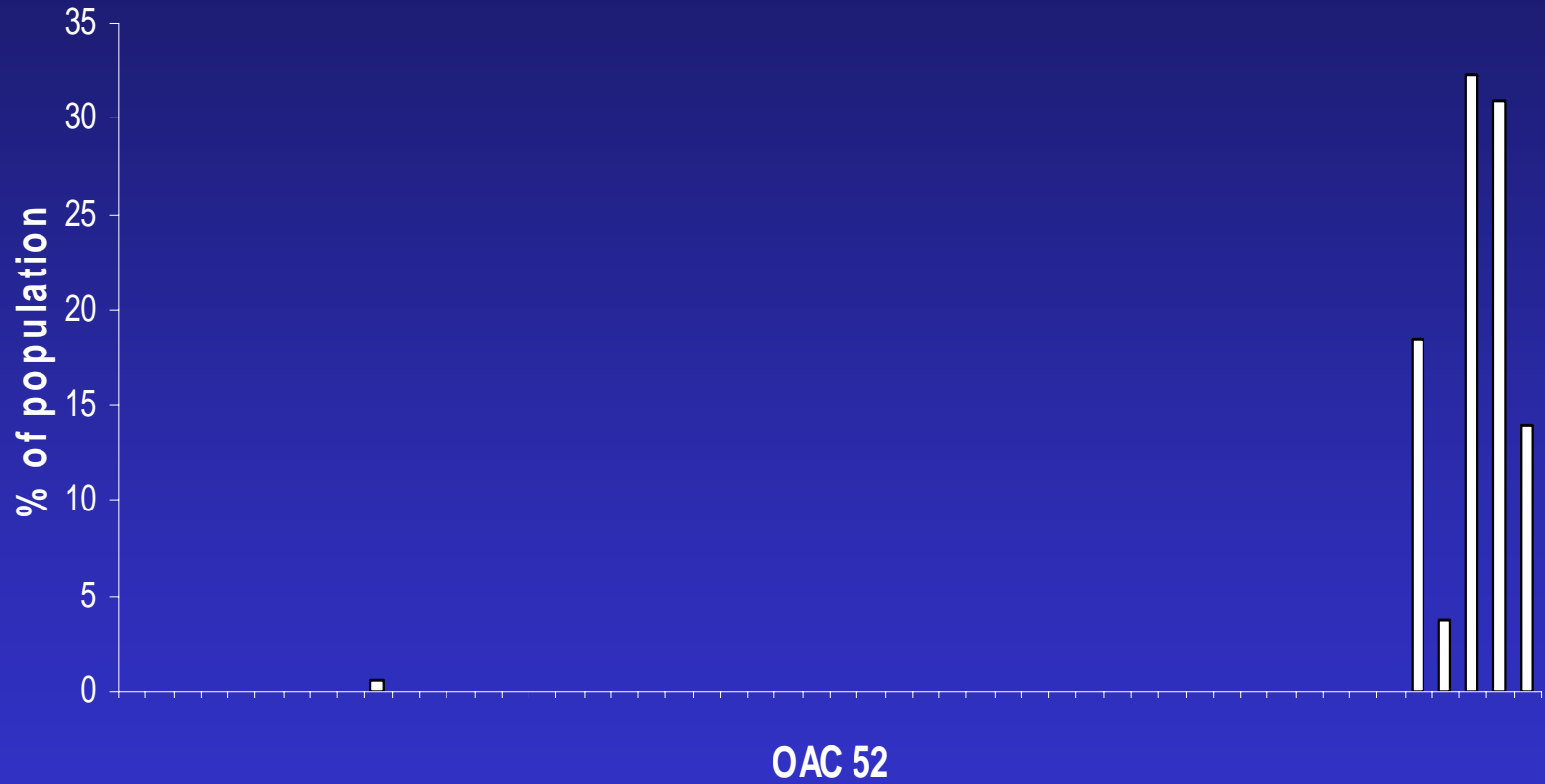
This means that the use of current systems of geodemographics is severely limited in such areas.

The same is true for niche markets.

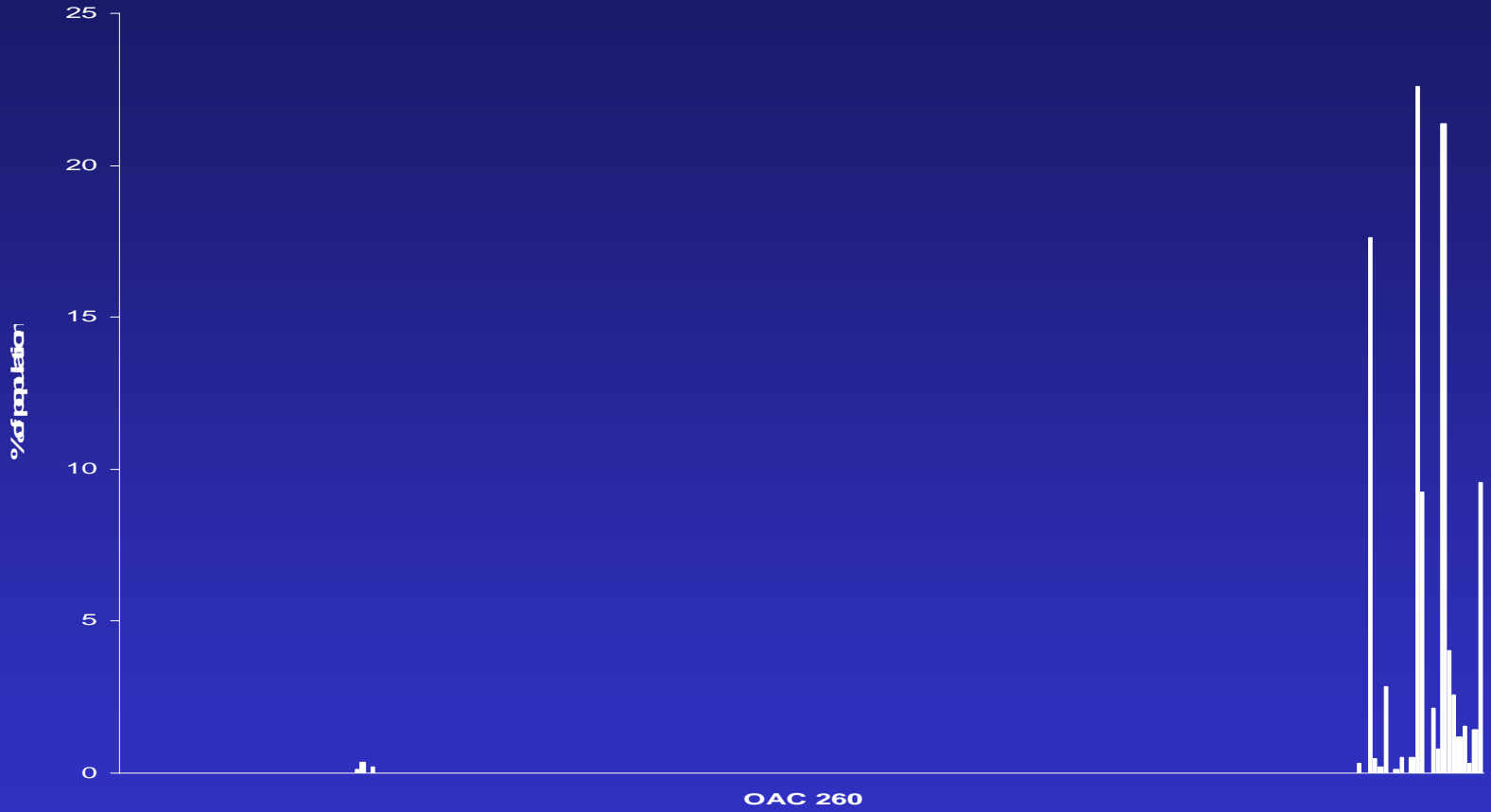
Percentage spread nationally (pop)



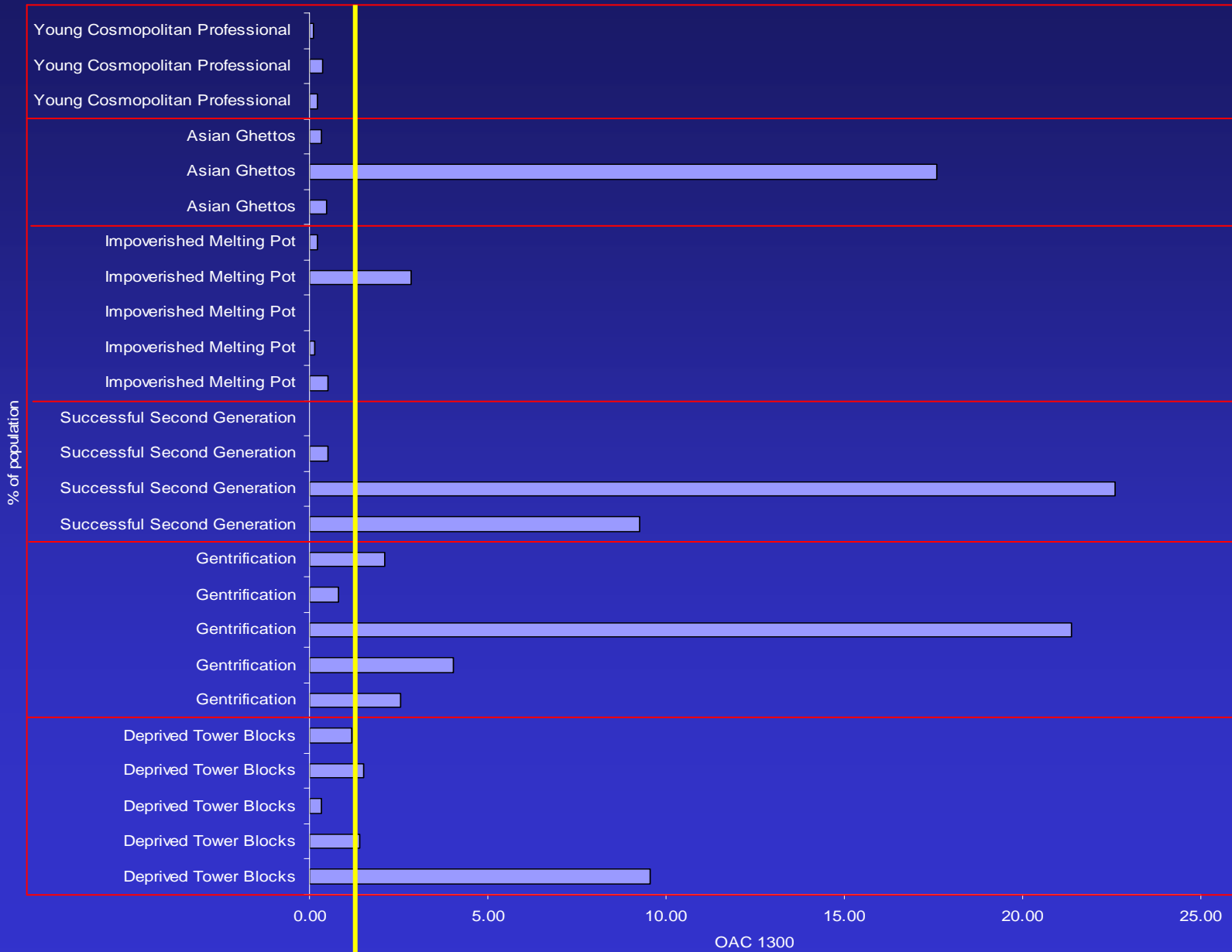
Percentage spread in Newham



Newham OAC 1300



Newham OAC 1300



Bespoke geodemographics

It is possible to make a bespoke geodemographic with sensible sizes and number of groups:

Combine the the smaller groups within the hierarchy

Split the larger groups by going up the hierarchy

BUT the bespoke system would still fall within OAC

Summary

OAC:

Maps well

Has interesting geographical properties

Can be used to customer profile from a list of postcodes

Can be used to attribute market/behavioural values to an area from surveys

Can be used to target areas for resource allocation and marketing

Can be extended to give enhanced discrimination

Can be extended to give a bespoke system within the OAC framework

Is a publicly available and free government system

Access

OACA description of OAC is given at:

http://www.statistics.gov.uk/census2001/cn_139.asp

The classification can be downloaded free as regional files or obtained on disc (2001 Census Area Classification of Output Areas) from their customer services people (01329 813800) or by e mailing info@statistics.gov.uk .

It is better to get the disk, as it has the click use license and lots of additional information including files of the variables used in OACs making and other supporting information. The files comprise an output area - to - areal classification look-up table at the GOR and (as a txt file - Oaclass.txt) national level.

ONS also provide a 'postcode to output area look-up table' (also available free for ONS customer services on a separate disc).

A more up-to-date file post coded file can be obtained for modest cost from their customer services as an extract from the National Statistics Postcode Directory (NSPD) - although it has a rather strange (and irritating) postcode format. This is how you can get the most up to date version of OAC.

A combination of the two files therefore enables customer or respondent files to be given the appropriate classification of the output area in which they live. This opens up the opportunity to profile customers on this system and to model market propensity at the census output area level.

Detailed spider diagrams are published to explain the meaning of each of the classifications as a series of PDF files at:

http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/oa/cluster_summaries.asp

Convenient names have been generated for the classifications OAC 7 and OAC 21 only at:

<http://www.geog.leeds.ac.uk/people/d.vickers/OAclassinfo.html>

This web site contains many other things of interest

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The End