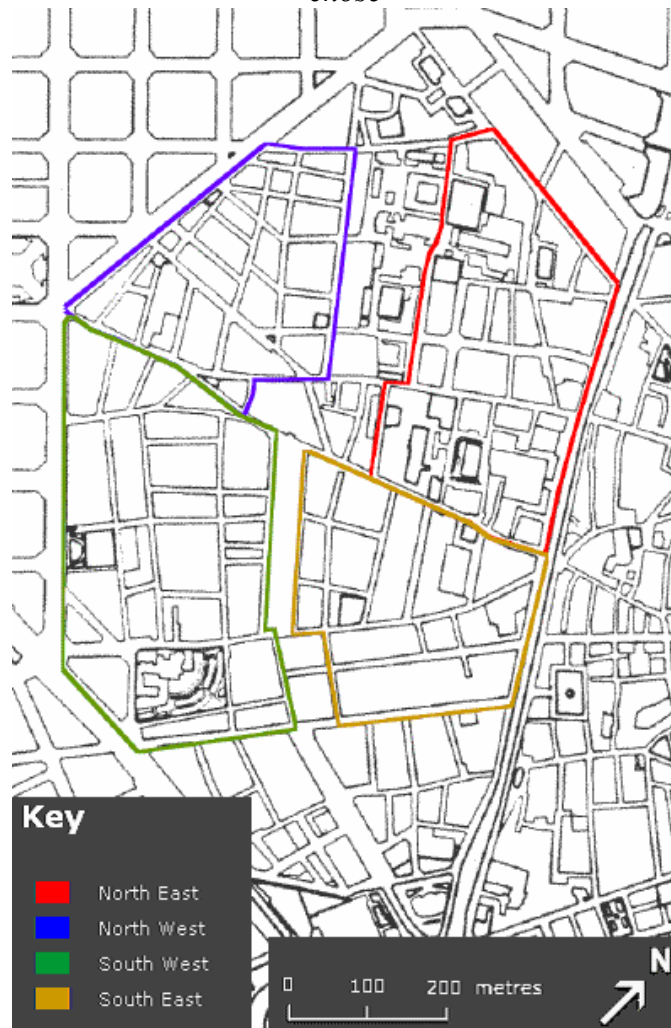


Data Collection

The method I will use to identify social, environmental and economic changes in particular areas of El Raval, is to take samples of representative areas, as explained in this chapter, within El Raval. I will do this rather than carry out a census, as there is only a limited amount of time in which I can carry out the study.

Based on a pilot study, I identified four representative areas, each differing socially, environmentally and economically. I was careful to ensure that each area was representative of different characteristics of El Raval and that they were all more or less the same size so as to avoid bias.

An enlarged map of El Raval showing the four classified representative areas, which I chose



After classifying or identifying the four representative areas, the samples need to be even more stratified, meaning that I needed to find a sampling zone within each of these areas. In order to avoid bias I used random sampling. I did this by first laying a grid overlay over each representative area and numbering it as shown in the map of the northeast representative area below.

A map to show the way I placed a number grid over the representative areas



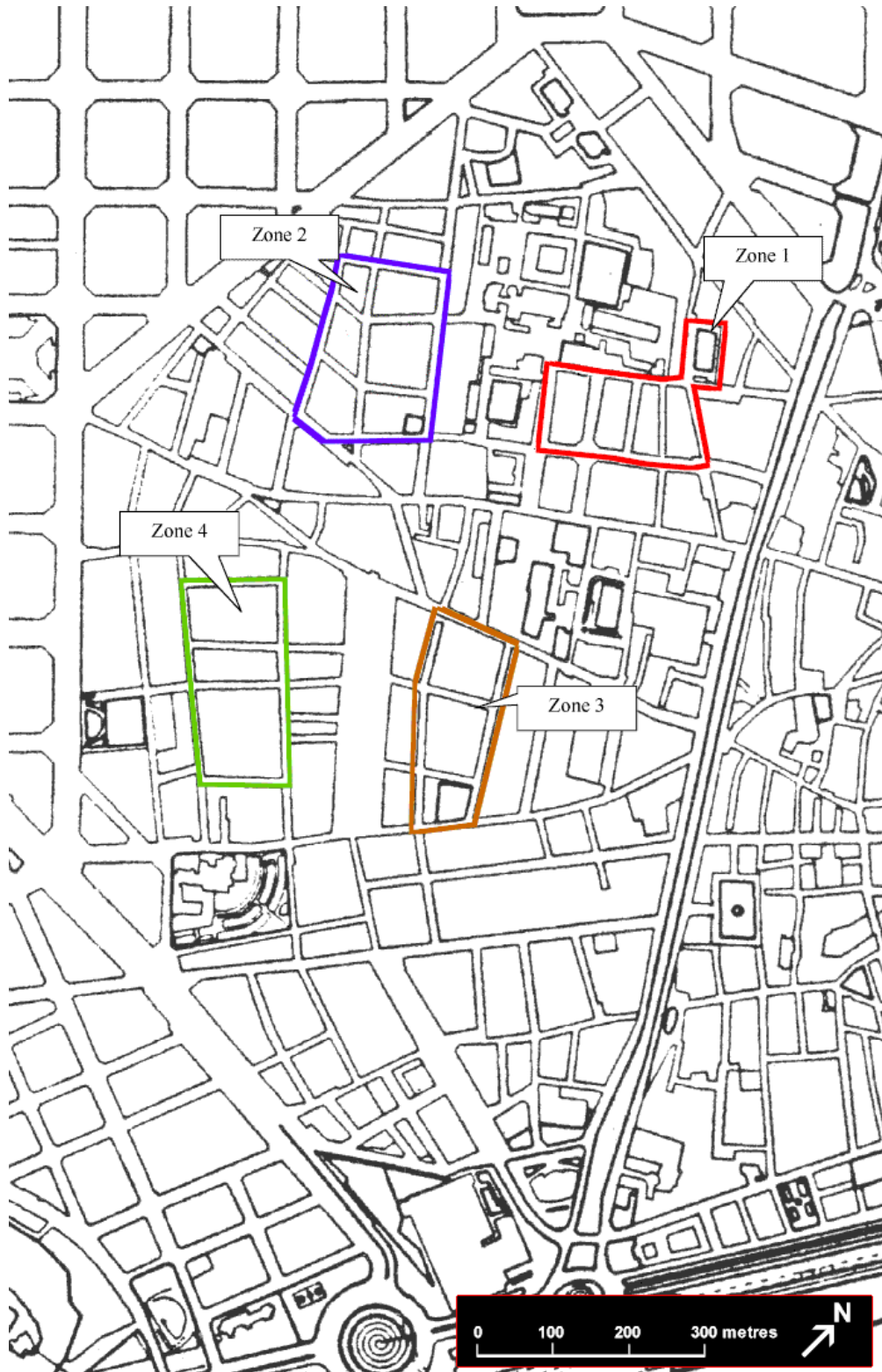
Then I need to choose a random number, I can do this by either using the random number button on my calculator or by using a random number generator.

A table to show an example list of random numbers

44	13	91	88	31
54	54	74	07	53
56	61	65	25	15
98	83	74	70	02
28	77	13	81	81
37	80	63	87	12
12	38	20	76	76
43	54	19	49	80
20	78	06	07	57
68	70	60	31	21
80	60	19	44	72
96	85	97	27	26
87	27	09	07	69
24	99	51	49	51
03	60	26	55	82
02	45	93	90	25

Then by using these random numbers and correlating them with my map with the numbered grid overlay placed over it, I can select my sampling zones, it is important that each sampling zone is approximately the same size or my results could be affected.

A map to show the sampling zones which I will use in my study



I planned to complete a land use map in each of the sampling zones, as well as making some observations to complete an environmental survey, perception survey and a residential decay survey which I had all prepared earlier. Before completing anything I made a walk around each zone, block by block, so that I was more familiar with each of the zones. I then completed the worksheets, and finally reviewed the area and checked my results to see if they were accurate.

Residential decay survey

For the residential decay survey I categorized the main qualities into six features:

- Deterioration of wall
- Part peeling
- Broken glass in windows
- Structural damage (e.g. unsettling cracks)
- Rotting timber
- Broken gutters, etc

These features describe the physical state of the buildings in each zone. Each feature is given a score, the lower the score the worse the physical state of the building. The maximum score of each feature varies depending on its contribution to the state of the buildings. If the feature is given the maximum score it means that it is not present in the physical state of the building. Once each feature has been scored I will calculate the sum of the scores. The higher the score the better the physical state of the buildings is, and the reverse is also true. If the zone is given a low score this means that the area is poorly kept and may be in need of demolition or reconstruction. I think that comparing residential quality data is important, since the social changes within El Raval are directly linked with land use of a particular area.

Environmental survey

The environmental quality of each zone will be described by the following, and will be scored for whether the area has certain characteristics or not.

- Landscape quality
 - Trees and well-kept grassed spaces
 - Few trees and/or unkept grassed spaces
 - No trees or grassed spaces
- Derelict (waste) land
 - None
 - Small area
 - Large area
- Litter/vandalism
 - No litter, no vandalism
 - Some litter or vandalism
 - Very untidy, much vandalism
- Industrial work shop premises
 - All residential properties
 - Some workshops
 - Mainly industrial workshops
- Noise
 - Normal residential standard-quiet
 - Above residential standard-with some noise
 - Main street standard-very noisy
- Air pollution
 - No offensive smells or obvious air pollution
 - Offensive smells and/or obvious air pollution
- Access to recreational amenities
 - Nearby park visible
 - Some street seating but no visible park
 - No street seating or visible parks
- Traffic flow
 - Normal residential traffic
 - Above normal residential traffic
 - Heavy vehicles and through traffic

The higher the score the better the environmental quality of the zone, and the lower the score the poorer the environmental quality.

It is important to look at the environmental quality in my survey as Barcelona's urban regeneration scheme consists of 'changing the area to change the people'. The environmental quality reflects on the environmental changes in the area, demonstrating how successful the regeneration schemes have been.

Perception survey

The perception survey will be based on my personal perceptions and opinions on the sampling zones. I will judge each sampling zone by looking at both positive and negative aspects of the area. The positive features will be the following and will be given positive scores, the higher the score the more present the quality.

- Rich
- Safe
- Friendly/relaxed
- Improving
- Community atmosphere
- Attractive area

Whereas the negative features will be given minus scores, which will be higher the more present they are.

- Poor
- Dangerous
- Declining
- Risk of crime
- Unattractive area
- Vandalised

The total score will be the positive score from the positive qualities minus the score from the negative qualities. The higher the total score the better my perceptions are of the area. I can then compare the total scores of each sampling zone with each other. The perception survey will give an idea on the outsiders' impression of each sampling zone as well as giving a subjective impression of the economic characteristics. Therefore by comparing the scores from each sampling zone, we can detect the economic changes within El Raval.

Land use mapping

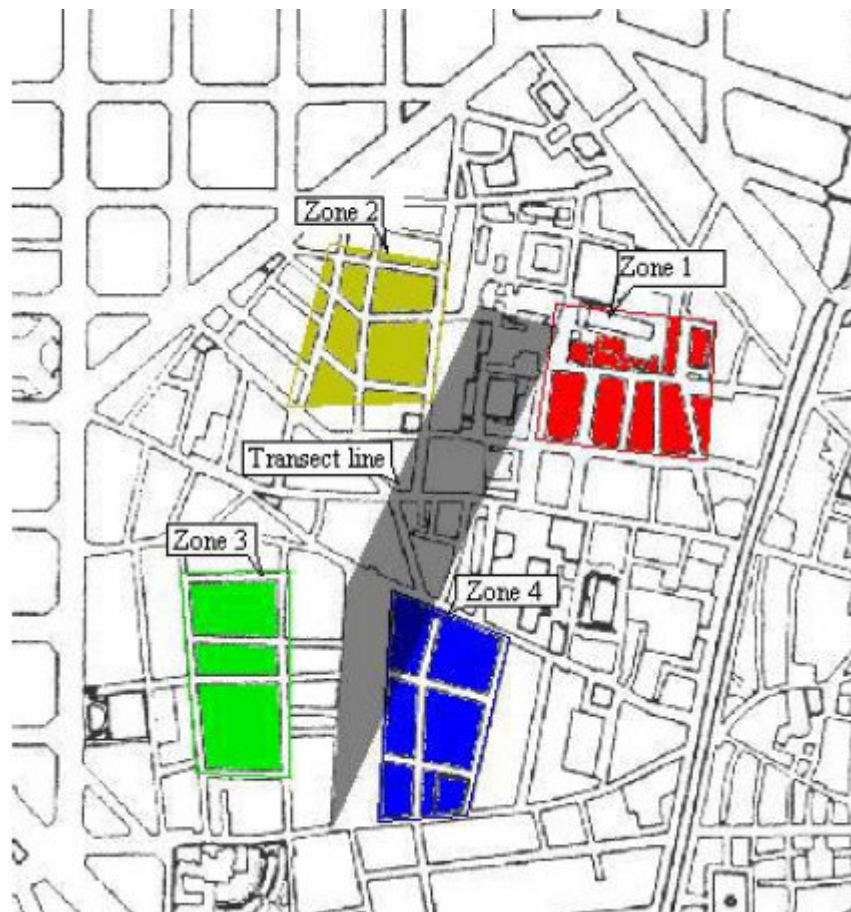
Before the study I prepared four enlarged maps of each sampling zone. After completing the environmental survey, residential decay survey and the perceptions survey, I made yet another walk around each area and colour coded the maps according to how I classify the land use and the types of services present, which followed the following categorisations:

- Services mainly for local residents
- Immigrant services
- Training centres
- Workshops
- Services of poverty
- Professional services
- Derelict (waste) land

The land use mapping will be the main objective of my investigation, as it will directly show the changes in land use. I will then be able to go on to explain the social and economic changes by using information from the other surveys. The signs for improvement will be a higher density of gentrified services and professional services, whereas if there is a high density of immigrant services, poverty services, workshops and training centres the area is more of an indicator of decline. However a training centre could also indicate improvement but the area is still likely to be bad quality.

Change in price of a convenience item across El Raval

Unlike the other surveys, this survey is not based around the four sampling zones, but on a transect line, therefore it is known as systematic sampling. It is important for me to identify a transect line which is on an environmental gradient, so that I can get clear results. To avoid bias, and to obtain accurate results it will be important to be consistent throughout the investigation, meaning that prices must be collected of the same type of convenience item and that the same retail outlet must be maintained. I choose to put my transect line between the Contemporary Art Museum and the now Rambla of the Raval, as each is in a different representative area meaning that both areas will have different social, economical and environmental qualities. The transect line is shown on the map below.



A map to show the four sampling zones and the transect line in-between the Contemporary Art Museum and the new Rambla of the Raval

As the renting prices of housing decreases as you move away from the Contemporary Art Museum, I predict that the price of a convenience item will also decrease the further away from the Contemporary Art Museum you go. From my results I will be able to identify economic changes within the Raval.

Secondary data

I will use secondary data from census data of El Raval from the past few years. As the census data will be different to mine, not all of the information will be relevant to my study, so I will only use data for land use value and origin of the population. The census data for land use value, which consists of the renting price of buildings for commercial services, will illustrate the effects that the urban regeneration schemes have had on each sampling zone. The census data for the origin of the population, will show me the total immigrant percentage of each sampling zone and may help me to explain the difficulties in carrying out the regenerations schemes in the core of El Raval. I will get the secondary data from previous studies of the area.

Problems associated with data collection

- **Problems of random sampling**

When randomly sampling from a representative area, the danger is that the sampling zone is not entirely representative of the chosen area. In order to try and avoid this problem I primarily carried out a pilot study to classify four representative areas from which I chose the four sampling zones. The danger is that the sampling zone consists of large areas of derelict wasteland, as we saw was the case in zone three, which had huge areas of demolished land in order to make way for a new hotel.

Another difficulty is keeping each sampling zone to the same size, as the layout of the buildings is always slightly different in each zone.

Quadrants do not enable the identification of environmental gradients across an area, nor the identification of transition lines. However this is overcome by using a transect line which is better suited to these requirements.

- **Problems in selecting a transect line**

It is easy to completely miss representative areas when choosing the sampling line since you are constricted to following the streets, therefore it is important to be extremely careful when identifying the transect line.

One solution to irregular results would be to take more than one transect line.

However, careful planning needs to go into choosing the position of the transect lines, and will need to be justified in terms of the expected environmental gradient. The problem in having more than one transect line is that it is very time consuming.

Using a transect line is not as accurate as using a transect belt, which covers a larger area of land, and gives a clearer picture of the densities of the individual features.

However for my particular investigation a transect line was sufficient for me to collect the data I needed, and a transect belt would have been more time consuming.

- **Problems of the collection of data**

Some of the areas were not safe enough to walk around in and casually make a study of the area and complete the worksheets. To relieve this situation I completed the surveys in groups, of a minimum of four people. It is important to be careful not to intimidate the inhabitants while studying the area and discussing possible improvements for the area.

To complete the entire study can be extremely tiresome, tedious, cumbersome and time consuming. To try and relieve the situation you could split the work up between a group of people. However, some of the studies, especially the perceptions survey, are extremely subjective, and depend heavily on the person who is completing them. Therefore it is better and more accurate for the same person to complete the entire study, else it might have a serious impact on the results.

It is also important to go over the scores you give each area as they may change once you have seen another area. As it is a comparative study it is easy to make mistakes at first in your results, as you may not have a clear picture of the other zones yet.

Most of the shops and businesses in El Raval close around midday, as it is traditional to do so in Spain, known as a siesta. Therefore it is important to collect the data while the shops are open in the morning or the afternoon, or you might not get an accurate impression of the area. This is especially important when completing the land use maps.

As this is largely a subjective survey the results can be easily influenced by small factors such as mood. This is difficult to control, and the surveyor could, for example, be hungry, tired or bored, which could have a major effect on the results. Also the weather may change the atmosphere and environment of a particular area. For

example if it is cold and rainy the area may look considerably more dingy and unattractive than if it were a warm, sunny day. However if all the surveys are completed on the same day it is likely that the weather will be more or less the same and will not fluctuate dramatically. Fortunately when I completed the study it was a warm, sunny day.

When I take samples of prices of a convenience item along the transect line, it is important to be consistent in the type of retail outlet, or the results may be affected. Although this appears to be a completely objective study, it is partly subjective, as some retail outlets have different prices for the same item depending of the purchaser, for example if he or she is a tourist or a local. Also retail outlets near by main roads may charge more than retail outlets located in back streets, due to the higher rent prices in more desired locations. The trend may not be consistently increasing, and may fluctuate slightly due to the positive spread effects from other nearby area of gentrification or from competing areas of tourist attraction, and the reverse is also true, for areas of urban decay. Seasonal comparisons may be inappropriate in this study as higher prices may be charged during the summer when demand is less flexible. Lastly, cumulative sampling may distort the expected price-distance gradient if several shops cluster within a short area along the transect line followed by a considerable gap before the next group of retail outlets.

The problems associated with using secondary data can be that, if the study has a subjective aspect the results could be affected, as the information will have been collected by another person, therefore possibly resulting in data sets which do not correspond with each other.