Gender Mobilities in Leh: A PPGIS Project

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November 05 2016

Summary

The project employed the use of PPGIS in the town of Leh, in the Ladakh region of the Indian Himalayas. A range of people in the town were interviewed and were asked to draw on the maps their response to the questions asked. These drawings were then uploaded to the system and maps produced. From this data, it was found that women had limited mobility compared to men in Leh. This was believed to be because there was a disparity between genders. However there were exceptions to this. Furthermore there were limitations with the data procured. As such this is seen as a pilot study for further research.

KEYWORDS: Gender mobilities, PPGIS, Leh, Indian Himalaya, Disparities

1. Introduction

This research project was conducted in the town of Leh, in the Ladakh region of the Indian Himalayas. Through the use of Paper2GIS PPGIS software, we were able to use paper maps in order to discover places that the people of Leh felt to be valuable. This then allowed the author to map their responses in different ways, so as to show different patterns and contrasts. In this paper the role of gender in the mobility of people in Leh will be analysed and discussed. The author argues that gender can play a huge role in the mobility of individuals and therefore results in disparities between the two sexes. However there are exemptions to this rule and these will be discussed in due course.

2. Literature Review

It is well acknowledged that gender and mobility are inseparable, and influence each other significantly (Hanson 2010). As Scott (1986) argues gender is linked to the perceived differences between men and women and the unequal power relations based on those perceived differences. Therefore with this in mind, as mobility can be dictated to a certain degree by gender; there will also be disparities in the mobility of each sex.

This however can be seen as something of a more reductionist view, and does not take into account other factors at work (McCall 2001). This is because there will undoubtedly be exceptions and differences throughout the world. In fact the mobility of an individual of either gender depends entirely upon the context of their livelihoods and their geographical situation, with all its cultural and social strappings (Uteng 2011). As a town in the largely rural northern part of India, Leh has significant cultural and societal differences to any other part of Asia and even India itself. Due to its close proximity to the Tibetan border and Nepal, Leh has a diverse cultural foundation; with a fusion of traditions and beliefs. Leh is a unique location unlike any other, which reinforces the notion that the context can significantly affect mobility itself. Therefore it is highly unreasonable to suggest that gender disparities

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and therefore mobilities are similarly different and to the same extent.

3. Methodology

PPGIS is a software that allows the collection of geospatial information from the public. It is commonly seen as a more people centred GIS compared to a technology, expert driven methodology (Schlossberg and Shuford 2005). Paper2GIS is a software that allows paper based PPGIS data collection.

The maps were generated using Paper2GIS including a QR code containing information about georeferencing and projection. Then interviews were conducted with a range of participants in Leh. The participants were asked to draw on the maps however they wish, with no restrictions. Photographs were then taken of each map and these were uploaded to the computer. The Paper2GIS software then extracts the map from each photograph and extracts the drawing by differencing the image against a blank map. Paper2GIS then georeferences the result and exports it as a Geotiff image. A contour algorithm can then be applied to convert the drawing into vector objects for more detailed analysis. These are then exported to shapefiles. The shapefile can then be put into QGIS and laid over a base map. This can be done with multiple files.
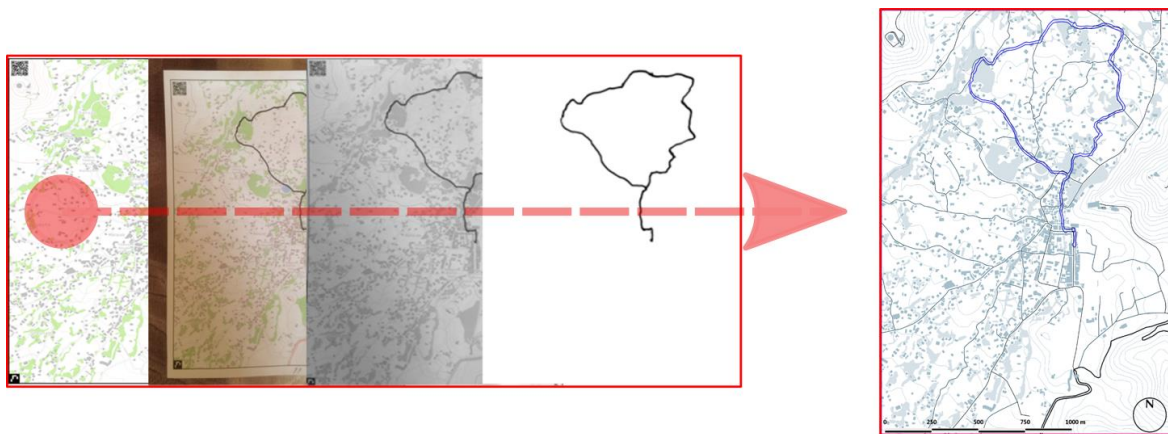
Figures 1. Stages of methodology using one of the male participant's data.

4. Analysis
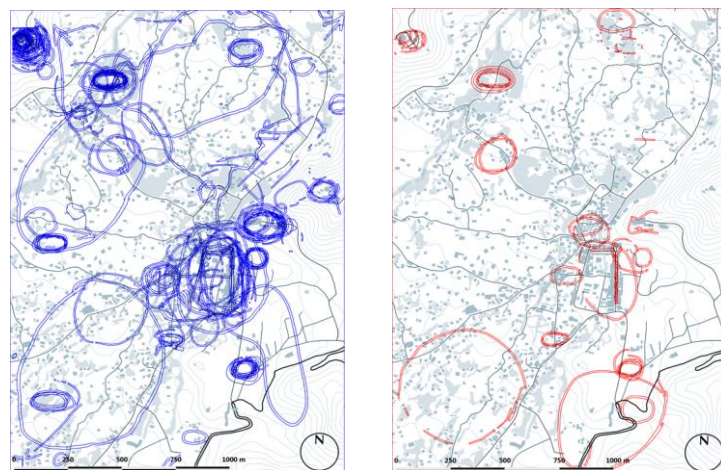
Figures 2 and 3. Male participants and female participants respectively.

As figures 2 and 3 show there were significantly more male drawings than female ones. This reflects a larger number of male participants. Some women chose not to draw on any of the Leh map as they did not like any areas in particular and preferred the surrounding less urban areas. As figure 2 shows

male participants went to a slightly greater range of places in Leh than the female participants. These places were largely for leisure, such as Shanti Stupa on the top left corner. As figure 3 shows women also went here, but to a lesser extent. In figure 3 we can see that man women noted that there trips into Leh town were functional, as in they went there for groceries and other essentials. Hence why there is a cluster of drawings around market areas, especially the main high-street. Also on figure 3, two circles can be seen at the southern end of the map. This is where one woman believed it was unsafe for women, especially at night.

Figures 2 and 3 show that the male participants have greater mobility in Leh than the female ones. Furthermore the male participant's perception of Leh was much more positive than the women's. For example one woman believed certain parts of Leh were less safe than others and some did not even enjoy visiting the town at all. Instead they saw going to Leh as a necessity and for reasons purely functional. What this does show is that there seems to be a disparity between men and women in Leh. Men seem to have much more free time to explore and enjoy Leh, whereas women are either working or looking after the family and as such go into Leh because they have to.

There are exceptions. One of the women loved living in Leh and frequently was in Leh for leisure and socialising. She was very much a modern woman, who was educated in Delhi and did not follow traditions in the same way as the other women who participated. This then shows how the context of a place can affect the mobility of women (Uteng 2011) and thus create disparities even amongst women. Furthermore as Leh becomes more accessible to outsiders and interacts more with the outside world, we may see more women like the one above emerging in Leh society. Women who do not want to limited in what they do, where they go and how they enjoy the town of Leh.

5. Conclusion

As can be seen, gender has a significant effect on the mobility of individuals in Leh. Women do not have the same opportunities or amount of time as men to enjoy and as such are not as mobile in Leh. This limited mobility also means their perceptions of Leh are more negative than the men. However there are obviously exceptions to this and these show that gender mobilities can vary significantly between individuals even within the same society. This project has shown that PPGIS can be used to collect data effectively from the public of Leh. However there were still issues surrounding the accessibility of the software to some people in Leh and getting them to interact with the maps. There were a few issues with understanding the purpose of the software and how to use it. However as Brown and Kytta (2014 pp.134) argue "a focus on PPGIS technology rather than the engagement process, will not achieve the broad, idealistic purposes that inspired early advocates of PPGIS". Therefore the overall benefits of PPGIS; of an immersive and individualised dataset, outweigh the difficulties faced by the engagement process. Due to these issues and the smaller scale of our data collection, this project can be seen as a pilot study for future projects. Such projects can take on a greater scale and spend more time in Leh collecting a wider range of participants. Thus creating a data set that can be thoroughly analysed and discussed.

6. Acknowledgements

7. Biography
Thomas Lowe is a Geography undergraduate at the University of Manchester. He is in his final year of studies.

8. References

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