

**Psychology Research Centre**

**Bournemouth University**

**Poole House**

**Participant Information Sheet**



**Ageing, Landmark Recognition, Attention, and Route Learning:**

This study investigates psychological processes involved in learning unfamiliar routes.



Dr Ramona Grzeschik is funded by the Economic and Social Research Council (ESRC) to do this research. She is supported by a team at Bournemouth University.

You are being invited to take part in a research project. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

**What is the Purpose of the Project?**

When you are learning a route many mental processes are involved. One major process is visual attention, which allows you to select relevant areas and objects that you encounter along the route. However, the amount of attention you use while travelling the route is not constant. It may be influenced by how informative the area is. How informative an area is can be defined by either: decision points – where there is more than one possible direction of movement, so information here is important, and non-decision points - straight movements or turns with only one movement direction which would be considered less informative. The connection between how much attention is used and how informative the scene is during route learning are the purpose of this study. One way to look at visual attention is to record eye movements to see what you are looking at. If you focus on specific objects in the environment then your viewing is more 'selective' than someone who focuses less on specific areas (broader viewing). This information reveals specific attention patterns while you learn a novel route. We are interested how this pattern will be changed along the route over several attempts and if there are age related effects on this change of attention.

**What are the advantages of taking part?**

Whilst there are no immediate benefits for those people participating in the project, it is hoped that this work will foster our understanding of human route learning abilities and may provide explanations for age related changes in navigation and route learning.

## **What would taking part involve?**

Experiment: In this experiment you will be shown videos of short routes on a monitor in front of you. Each of the routes is comprised of four intersections. Please learn the route as well as possible.

Testing: After each video, you will be shown pictures of the four intersections in a random order and you will be asked to recall the route. Please indicate the direction required to follow the route shown in the video by pressing the corresponding button (“left”, “up” or “right”) on the computer keyboard.

This procedure will be repeated depending on how well you were able to learn the route.

You can take a break whenever you want.

To obtain measure of gaze behaviour and visual attention, eye movements will be recorded during the entire experiment using an established eye-tracking system. An eye tracker is a device (like a camera) for measuring eye movement and eye positions. Depending on preparation time, breaks, etc., the experiment will last between 30 and 45 minutes.



Example of an eye tracking system used in our experiments (EyeLink II, SR research;  
[http://sr-research.jp/products/images/eyelink2\\_head.jpg](http://sr-research.jp/products/images/eyelink2_head.jpg))

## **Do I have to take part?**

Your participation is voluntary. If you do decide to take part, you will be given this information sheet to keep (and be asked to sign a participant agreement form). You are free to withdraw up to the point of anonymisation, without giving reason and without there being any negative consequences.

## **Will my taking part in this project be kept confidential?**

All the information that we collect about you during the course of the research will be kept strictly confidential. You will not be able to be identified in any reports or publications. All

data relating to this study will be kept for 5 years at a BU password protected secure network in accordance with the Data Protection Act 1998.

### **Contact for further information**

If you have any other questions or would like to get a copy of this introduction please feel free to ask: Ramona Grzeschik – [rgrzeschik@bournemouth.ac.uk](mailto:rgrzeschik@bournemouth.ac.uk) or Jan Wiener – [jwiener@bournemouth.ac.uk](mailto:jwiener@bournemouth.ac.uk)

If you have any complaints about the project in the first instance you can contact any member of the research team. If you feel your complaint has not been handled to your satisfaction you can contact Tiantian Zhang, Deputy Dean for Research & Professional Practice via email: [researchgovernance@bournemouth.ac.uk](mailto:researchgovernance@bournemouth.ac.uk).

Thank you very much for your participation! 😊