

Survey procedure and participant training

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Survey procedure

Participants were recruited via advertising on the Figure-Eight crowdsource platform. Choosing the task from the list directed all potential participants to the page of instructions. This page contained written instructions and is shown below.

The image is a screenshot of a web page titled "Make A Choice Between Sets Of Australian Maps". At the top left, there is a button labeled "Instructions". Below the title, the page is divided into three main sections: "Overview", "Steps", and "Rules Tips".

Overview

Welcome! Thank you for considering participating in our survey.

Participation will involve completing a few test questions followed by the survey. It will take no more than 10 minutes of your time to complete the task.

To recognize your contribution should you choose to participate the research team is offering you a maximum of \$5.00, paid into your Figure-Eight account at the completion of the survey.

Your rights when participating in this research survey:

Your participation in this research project is entirely voluntary. If you agree to participate you do not have to complete any question(s) you are uncomfortable answering. If you do agree to participate you can withdraw from the research project during your participation without comment or penalty.

If you decide to withdraw, you can close the survey window at any time. This will not submit your results, it will also not take a record of your contributor ID, and consequently you will not be paid for your participation.

All comments and responses are anonymous. Your contributor ID will be converted into an anonymous unique identifier marking your responses. This data may be used by other researchers in the future. Any data collected as part of this research project will be stored securely as per QUT's Management of research data policy. All answers you provide during the survey will be available online, this will not contain any personally identifiable information. Data will be stored for a minimum of 5 years. If you would like to know more about this research, please email stephanie.kobakian@qut.edu.au.

Your decision to participate or not participate will in no way impact upon your current or future relationship with Queensland University of Technology or any associated external organizations. This survey is conducted as part of a research project as part of a Queensland University of Technology degree.

Steps

Demographic information will be collected in the first stage of the survey, this includes gender, age range and education level. You must give your consent to participate to continue to the survey questions.

The survey will include 12 pages, each containing 12 map displays. You will be asked to choose one map on each page, that is most different from the rest.

You will need to report your choice, the reason you selected it and how difficult it was to make your choice.

Rules Tips

You must make a selection for each page. If it is difficult to choose, try to make a selection and indicate your certainty about this decision is very low.

Figure 1: Introductory information provided to participants.

Training

The participants were trained using simple lineups of three displays as shown in Figs. 2, 3.

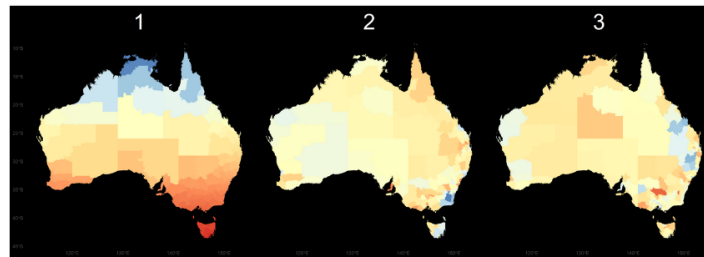
Simple Examples

The sets of images below show three maps of Australia, either a choropleth map or a hexagon tile map. You will see similar maps in the survey. In a choropleth map, geographic regions are colored according to a numerical value. In a hexagon tile map, each hexagon is colored according to a numerical value.

Please look at these images and read the explanations prior to taking the survey.

Set 1:

In this set of three maps of Australia: Which map is most different?

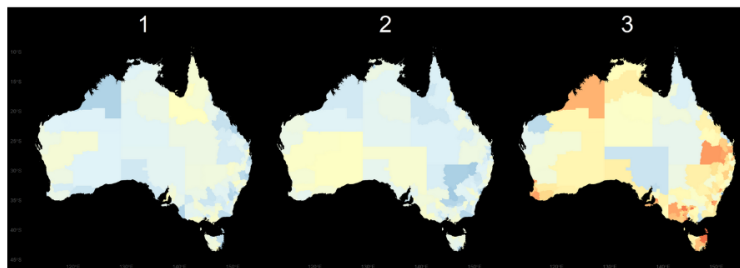


Answer: **MAP 1.**

This map has many blue areas at the top, and many red areas at the bottom. Tasmania, the island on the bottom right has much more red than the rest of Australia. This is very different to the other maps, which do not show the same color trend from North to South.

Set 2:

In this set of three maps of Australia: Which map is most different?



Answer: **MAP 3.**

This map has more red and orange areas around the coast.

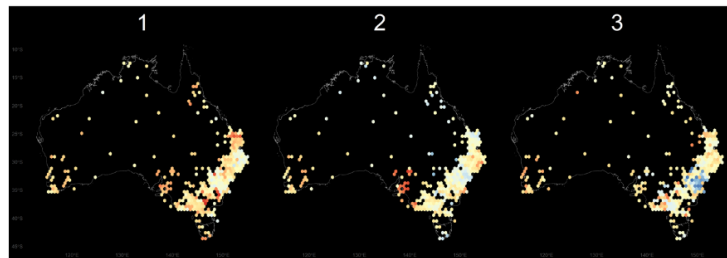
Figure 2: The training lineups of choropleth maps.

Survey application

The survey application was a `shinydashboard` we application, hosted on a website external to the Figure-Eight platform. The link to the survey was located at the bottom of the instructions and training page. Only participants who had read all of the instructions and seen the example image sets continued to the survey via the link. This page also contained a question that asked participants for a validation code. The participants unique validation code was generated upon them opening the web application. This code was released to participants when they had considered all twelve lineups and submitted their responses to the `googlesheets` data set. Their validation codes were contained in the data set and associated with each of their responses.

Set 3:

In this set of three maps of Australia: Which map is most different?

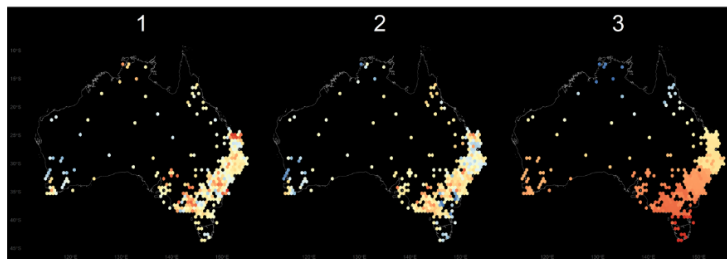


Answer: **MAP 2.**

This map has a group of red areas near each other. The other two maps are have scattered colors.

Set 4:

In this set of three maps of Australia: Which map is most different?



Answer: **MAP 3.**

This map has some blue areas at the top, and many red areas at the bottom.

Figure 3: The training lineups of hexagon tile maps.

The demographic and consent page of the **shinydashboard** web application are displayed in Fig. 4. Two example lineups are shown, one choropleth map lineup in Fig. 5 and one hexagon tile map lineup in Fig. 6.

The screenshot shows a web browser window with the URL 'survey.com'. The application has a dark blue header with the 'taipan' logo and a hamburger menu. The sidebar on the left is dark blue with 'About you' and 'Questions' links. The main content area is white and titled 'Demographics'. It contains the following sections:

- For payment, provide Figure Eight Contributor ID:** A text input field with the placeholder 'id'.
- Contact Information:** Two lines of text providing contact details for Stephanie Kobakian and the Research Ethics Advisory Team.
- Do you consent to your responses being collected? :** Two radio button options: 'Yes, I consent to my responses being used for research purposes and allow them to be published online in a de-identified form.' and 'No, I do not consent to my responses being used for research purposes and allow them to be published online in a de-identified form.'
- Select your preferred pronoun:** A dropdown menu with 'Choose one' selected.
- Select the highest level of education achieved:** A dropdown menu with 'Choose one' selected.
- Select your age range:** A dropdown menu with 'Choose one' selected.
- Have you lived in Australia?** A dropdown menu with 'Choose one' selected.
- Save Info:** A blue button at the bottom of the form.

Figure 4: The demographics questions tab of the shinydashboard survey application.

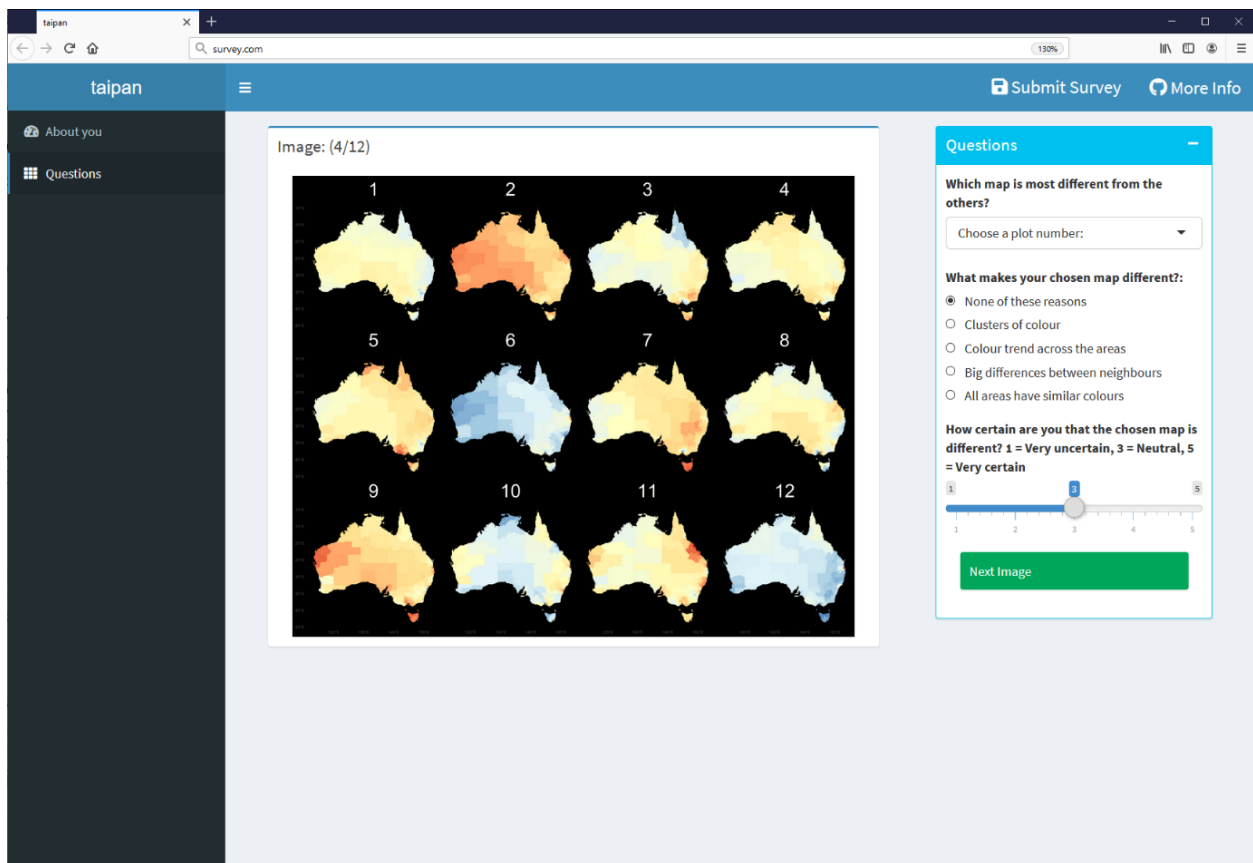


Figure 5: An example of the choropleth map lineup shown in the survey tab of the shinydashboard app.

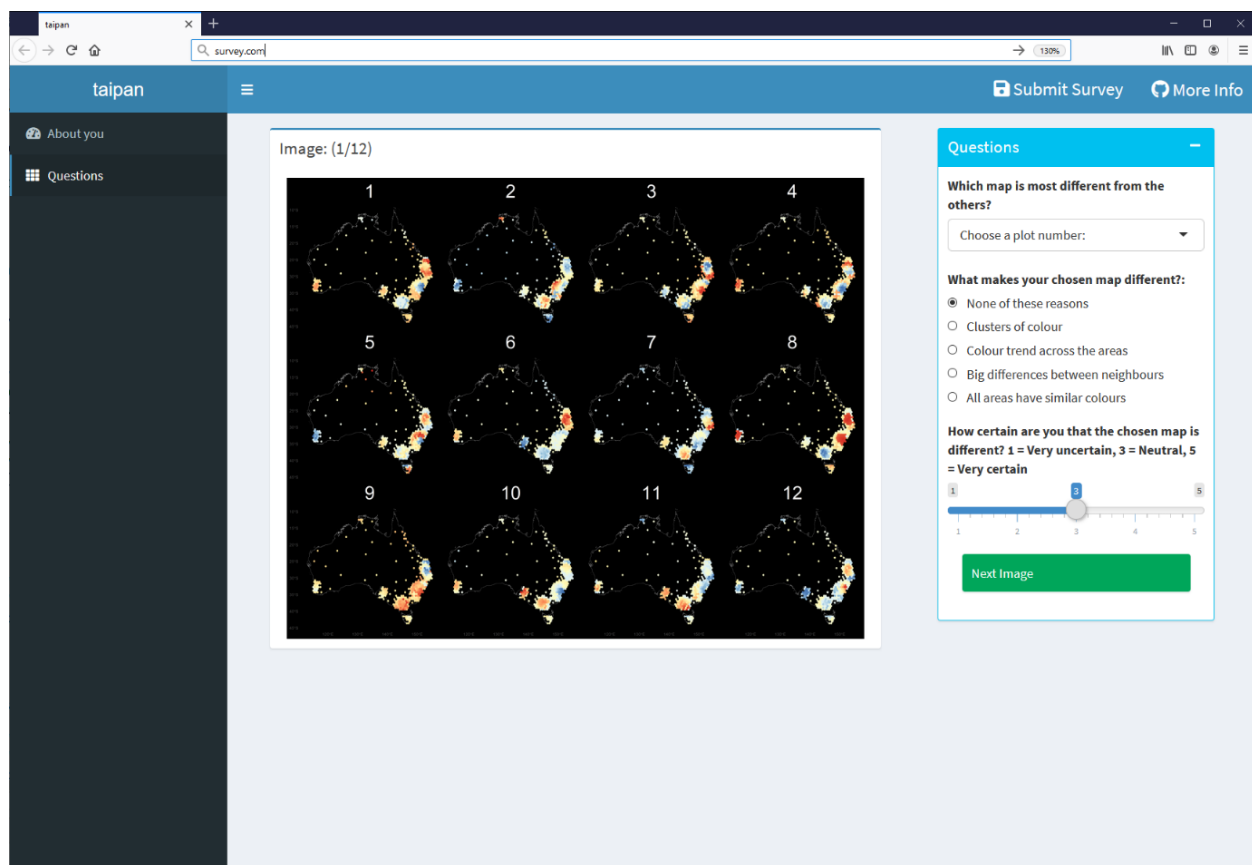


Figure 6: An example of the hexagon tile map lineup shown in the survey tab of the shinydashboard app.