Defining Types Of Data

How to tell primary from secondary data when working with geographic information

In a 2018 report, Unicef's Office for Research Innovation outlines some of the ethical issues that should be considered when using geospatial technologies to collect data. The main focus of the report is on how geospatial tools such as crowd mapping, remote sensing, drones and GPS technologies can be used to answer important questions — such as the scale of damage after natural disasters — by creating new, primary data.

Yet the Unicef report also touches on some of the issues that must be considered when researchers look at and are involved in sharing geospatial data that has already been created by other researchers, companies or organisations for other purposes. This involves the use of secondary data.

It has been suggested that geographers make use of more secondary data than is usual in other fields of research. At the same time, all researchers — especially ones funded by the government — are encouraged to make their data accessible to other scholars in order to encourage future advances in knowledge. So it is important to understand this distinction and be familiar with and sensitive to the particular ethical issues that arise from the use of secondary data sources.

KEY RESOURCES

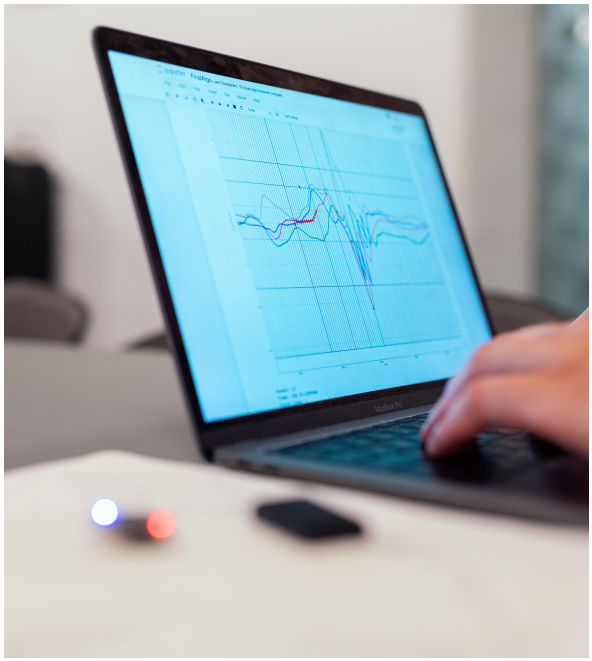
Berman, G., de La Roasa, S., and Accone, Y. (2018). Ethical Considerations When Using Geospatial Technologies for Evidence Generation, Unicef Office of Research (Online) From: bit.ly/3IjlxX5

EthicalGEO (2021). Locus Charter. (Online) From: bit.ly/3HAIsDI

UK Statistics Authority. (2021). Ethical considerations in the use of geospatial data for research and statistics (Online) From: bit.ly/3zmA0VQ

Montello, D. and Sutton, P. (2006). An Introduction to Scientific Research Methods in Geography. SAGE.

Primary vs Secondary Data



Primary data is data that is collected by researchers for the purpose of answering specific research questions. Primary data may take different forms — from survey data based on questionnaires to measurements and the observation of behavioural activity to interview data and social media activity such as tweets and posts.

What makes this primary data is that the researcher is involved in the creation of the data set. They set the parameters of the research design and make the key decisions about what data will be collected, how and for what purposes. They may also be involved in collecting the data themselves. Many of the key ethical principles that researchers must consider —relating to consent, privacy and preventing harm to participants — are concerned with how researchers might design projects and collect primary data in an ethical way.

Where researchers are using existing secondary data, they face related but distinctive issues. The issue of consent — the right of individuals to have the choice to opt in or out of being included in research — is a particular concern when data is re-used. Although we might agree to share our personal information with researchers for a specific purpose, for instance, we might not anticipate that it will used in other ways by other researchers. By combining large-scale secondary data sets, it may also become possible to identify individuals whose identity had previously been hidden or anonymised. This can result in peoples' privacy being violated and potentially cause them harm.

When using secondary data, researchers are also faced with the challenge of basing their research on data that they did not collect. Rather than knowing exactly how and why the data was generated, they must instead rely on research decisions made by others. This means that they are likely to be unaware of potential problems with the data, such as inaccuracies, inconsistencies or biases in the way that the information was collected. It also means that they are likely to have to shape their research questions around the data that is available to them, making the research more data-driven than in primary research.

ACTIVITIES

1. Open both sets of ethics frameworks (links on other side) and find the UKSA Ethics Checklist and 10 Locus Charter Principles.
    i. Which of the principles do you think apply to more to secondary data?
    ii. Give an explanation for your choices.

2. Using secondary data sources can be invaluable in undertaking project work, and websites such as ons.gov.uk or statista.com can provide useful insights. However, care needs to be taken.
    i. List 5 things that might make using secondary data problematic.
    ii. List 3 advantages of using secondary data in your projects.

3. Geographers reportedly use more secondary data than other fields. Why do you think this is? Categorise your ideas using the following titles:
    i. Technologies
    ii. Locations
    iii. Financial costs
    iv. Data processing

This resource was produced by Dr. Natasha Whiteman