



SCREENER

Welcome

Welcome to our survey studying replication in the geography. This research is funded by the National Science Foundation (BCS-2049837). You have been invited to participate in this survey because you have published research in a geography journal in the past five years. Your participation will help us better understand (1) current research practices and (2) potential ways to better train future researchers. Throughout the survey, you will be presented with a series of questions about your own research practices and your perceptions of the replicability of research in geography. This survey should take **fewer than 15 minutes** to complete.

Risks and Benefits

There are no known risks to taking part in this study. Participation in this survey is entirely voluntary. You may stop the survey at any time, or skip questions you do not wish to answer. At the end of the survey you will have a chance to enter a prize draw to win one of three \$90 Gift Cards. By electing to participate in the prize draw you agree to the corresponding **Terms and Conditions (ADD LINKED PDF)** of the draw.

Ethics Clearance

This research project has been approved by ASU Institutional Review Board - STUDY00014232.

Privacy

All personally identifiable information will be kept private. Personally identifiable information will be disconnected from your response data using an anonymous key and stored on a password protected disk drive, disconnected from the internet in the PI's secured faculty office. Your anonymized individual responses will be used for statistical purposes only and may be published in an archived project database or in peer-reviewed papers, presented at academic conferences, or used in teaching workshops.

How old are you?

- ☐ Under 18
- ☐ 18-34 years old
- ☐ 35-54 years old
- ☐ 55+ years old

Have you conducted research in the field of geography in the last 5 years?

- ☐ Yes
- ☐ No
- ☐ Unsure

Select your **primary** sub-field of research from the following options:

- ☐ Human geography
- ☐ Physical geography, earth and environmental sciences
- ☐ Nature and society
- ☐ Geographic methods, GIS, spatial statistics
- ☐ Other (specify)

How would you describe the type of research you primarily conduct?

- ☐ Quantitative
- ☐ Qualitative
- ☐ Mixed Methods

Participant Definition of Replication

In the context of conducting research in your subfield, how familiar are you with the term "replicability"?

- ☐ To a great extent
- ☐ Somewhat
- ☐ Very little
- ☐ Not at all

What is your understanding of the term "replicability" within your subfield?

Clarification of Terms:

This survey focuses on whether and how the claims of geographic research studies can be replicated. For the purposes of this survey, we adopt the following definitions:

A **Replication** is any study that seeks to evaluate the claim of a prior study using similar procedures and new data. The claim made in a prior study has been replicated when the replication produces outcomes that are consistent with the prior claim and increase confidence in that claim.

The data or procedures used in the replication study may be quantitative, qualitative, or mixed.

Is it Valuable to Attempt Replications?

To what extent do you agree with the following statements about replications in your sub-field? Replication studies can be used to assess whether a prior study's ...

	Strongly agree	Agree	Disagree	Strongly disagree	I don't know
Claim is the product of chance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Result is the product of a flawed research design	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Observations and analyses reflect the concepts they are intended to represent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Claim will hold in other populations (e.g., different age groups)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Claim will hold in other locations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Factors that Affect the Replication of Claims

How do each of the following **characteristics of a study** published in your sub-field affect the chances of replicating that study?

	Very likely to increase	Somewhat likely to increase	Not likely to affect	Somewhat likely to decrease	Very likely to decrease	I don't know
Multiple hypotheses were tested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quantitative methods were used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Qualitative methods were used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mixed methods were used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor documentation of study methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restricted access data was used	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data was gathered from multiple study sites	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A large research team conducted the study	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relied on expertise unique to the researcher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relied on the unique position of the researcher	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please list any additional characteristics that may affect the chances of replicating a study in your sub-field.

How do each of the following **characteristics of the phenomenon** being examined affect the chances of replicating a study in your sub-field in a different location from the prior study?

	Very likely to increase	Somewhat likely to increase	Not likely to affect	Somewhat likely to decrease	Very likely to decrease	I don't know
is spatially dependent upon itself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
is strongly related with local conditions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
exhibits variation across locations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cannot be directly measured	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cannot be directly manipulated	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
has multiple competing theoretical explanations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please list any additional characteristics of the phenomenon being examined in your sub-field that may affect the chances of replicating a study.

Frequency of Replication

Please estimate the percentage of recent studies published in your sub-field that have been replicated.

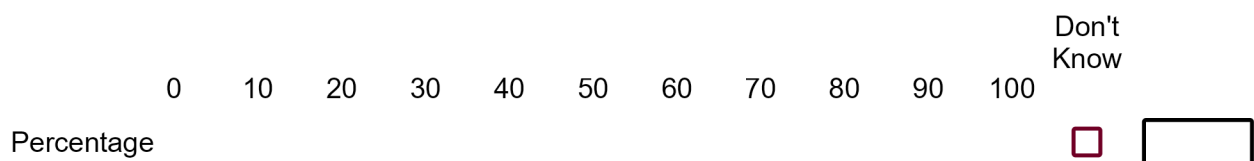
0102030405060708090100

Percentage

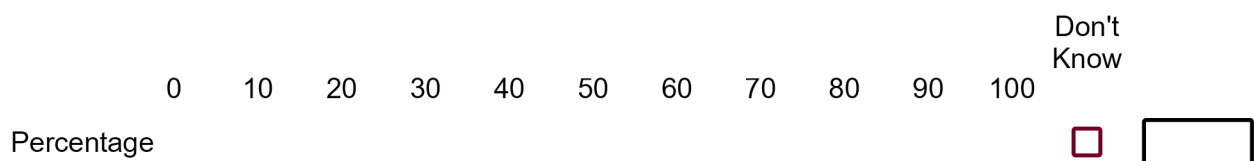
Don't Know

☐

Please estimate the percentage of recent studies in your sub-field that could be replicated.



Please estimate the percentage of recent studies published in your sub-field that should be replicated.



Factors that Limit Replication Attempts

How often do each of the following factors affect researchers' decisions to attempt a replication in your sub-field?

	Always	Frequently	Occasionally	Rarely	Never	I don't know
Pressure to publish original research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low value of replication studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Low chances of replicating a result	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of experience conducting replications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty publishing peer-reviewed replications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty accessing/creating relevant data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient information about original methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Difficulty recreating similar procedures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of funding for replication studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fabrication of data or results by original authors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ethical concerns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Known spatial variation in phenomena being studied	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please list any additional factors that may influence decisions to attempt replications in your sub-field.

Researcher Replication Attempts

In the last 2 years, have you...?

	Yes	No	Don't Know
Thought about the replicability of your research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spoken with colleagues about replicability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Questioned the replicability of published research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Considered replicability while peer reviewing a research proposal or publication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attempted to replicate prior research claims	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Was/were your replication study/studies conducted in the same location as the prior study/studies?

- ☐ Yes, it was conducted in the same location
- ☐ No, it was conducted in a different location
- ☐ It was conducted in both the same location and in a new location
- ☐ I don't know

Thinking about the replication(s) you attempted in the last 2 years, why did you decide to attempt the replication(s)?

Thinking about the replication(s) you attempted in the last 2 years, what proportion of the research results were you able to...?

	All	Some	None	Don't Know
Exactly replicate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Partially replicate (e.g., slightly different results but same conclusions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not replicate (e.g., different results and different conclusions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thinking about the replications(s) you attempted in the last 2 years, were you able to...?

	Yes, all	Yes, some	No	Did not attempt
Access the prior study's data?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access the prior study's code or analytic procedures?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Follow the procedures of the prior study without making assumptions about procedural details?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreate the computational environment (hardware, software, etc.)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Find details about the geographic location and extent of the prior study area?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publish your findings?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Why didn't you publish your replication study, or all of its findings?

Could you evaluate whether a study has been replicated in your sub-field?

☐ Yes, I would use the following criteria to evaluate the results of the replication study:

☐ No, the claim of a prior study cannot be evaluated with a replication

☐ I don't know

Demographics

How many people are part of your research group or lab? Include all relevant senior investigators, postdoctoral fellows, technicians, and graduate or undergraduate students.

- ☐ 1
- ☐ 2 - 5 people
- ☐ 6 - 10 people
- ☐ 11 - 15 people
- ☐ 16+ people

Which job title best applies to you?

- ☐ Full professor/lecturer
- ☐ Associate professor/lecturer
- ☐ Assistant professor/lecturer
- ☐ Laboratory director/head
- ☐ Research scientist
- ☐ Post-doctoral fellow
- ☐ Graduate student (PhD, masters)
- ☐ Technician/research assistant
- ☐ Other (specify)

In which country do you currently reside?

Prize Draw

If you wish to be entered into the prize draw for a \$90 gift card, please check the box below. By choosing to participate in the prize draw you acknowledge that you have read and understand the terms and conditions of the draw as outlined in the materials provided to you in the original contact email.

- ☐ I would like to be entered into the prize draw