



# Replicate Replicate - How You Can Take Part

*Intro session: Why replication? How is it done?  
Where to find replication material?*

Philosophy of Economics Working Group

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# Outline



- 1 Working Group Philosophy of Economics
- 2 Personal Motivations
- 3 Why replication?
- 4 How to replicate?
- 5 Where to find replication material?
- 6 Technical instructions for the webinar series
- 7 Literature

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# Working Group Philosophy of Economics

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- Working groups with regional or thematic focus



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- Young Scholars Initiative (YSI)
- Working groups with regional or thematic focus
- Philosophy of Economics group has (co-)organized for example groups for Discussion & Presentation, Writing, Peer Review, on Feminist Epistemology, workshops, and participated in events like the **Turin Festival of Economics**





# INET and YSI



Founded in the wake of the 2009 global financial crisis, the Institute for New Economic Thinking (INET) systematically conducts and publishes research that aims to **update the discipline of Economics** by privileging equality and distribution, diversity, history, independence from powerful interests and a multidisciplinary approach.

Young Scholars Initiative (YSI) is a network of young scholars that facilitates the exchange of information and knowledge, individual collaborations and institutional partnerships.





# INET and YSI



In 2013, it launched the “Curriculum Open-access Resources in Economics”, the **CORE curriculum project**, providing a new approach to the design, content and way of teaching the core economics curriculum for undergraduates, by incorporating **advances in economics research** over the past three decades, lessons from economic history, and the comparative experience of different countries.



Favouring a **pluralist education** (e.g. Reardon 2009) in Economics:

- Economics can only evolve if future economists are given the tools to think critically about the discipline
- There is a lack of training in **critical thinking** in Economics undergraduate degrees, i.e. absolute and undisputable facts
- The situation represents one of the main obstacles that prevent undergraduate and master students from using their skills to replicate (often throughout their careers)



The premise is that **just like other sciences**,

Economics “should confront its proposed explanations with systematic testing using evidence from history, experiments, and data” (Johnson 2013).



# The role of replication in Economics and other social sciences

*context and volume*



# The role of replication in Economics and other social sciences

Between 1665 and 2009, more than 50 million of scholarly articles were published

In the 1990s, there were around 1 million articles published per year

In 2007 it increased to 1.4 million

Between 1985 and 2009 the annual output for articles doubled showing the rapid increase of scientific output worldwide (Jinha 2010)

Q: Is all published content scientifically relevant?

Q: Does quantity stand for quality?

**Replication plays a pivotal role in any scientific area, including in Economics and other social sciences**



# What is the relation between Philosophy of Economics and replication?



## PHILOSOPHY

## ECONOMICS

## THEORY:

epistemology  
philosophy of science  
metaphysics

## POSITIVE:

descriptive  
explanatory analysis  
of what is: 'facts'

## PRACTICE:

aesthetics  
ethics  
political philosophy

## NORMATIVE:

evaluative  
analysis of  
what ought to be: 'values'



In Philosophy of Economics boundaries blur between both disciplines being about critically assessing and **reframing Economics' epistemological (HOW) and ontological foundations (WHAT and WHY)** with relevant topics including methodology, values, causation, evidence, rationality and interaction (Heilmann and Reiss 2022).

Recent systematic replication projects for experimental findings in Psychology, Medicine, and Economics, revealed a disappointingly **low replication rate** in all featured disciplines (Peden and Sprenger, 2022).

Research **methods** are sometimes **questionable** (using a selective reporting of results, adding covariates, or eliminating outliers) in order to obtain a significant (and therefore publishable) finding. Other times, when **significance tests** are conducted, they lead to a depreciation of nonsignificant findings (even if methodologically they are sound) (Peden and Sprenger, 2022).





Replication goes beyond methodology and it is useful to evaluate not only the correct use of a given **methodology** but also its' **scientific relevance and technical adequacy** to answer a specific research question.

It often requires taking simultaneously a **theoretical, practical, positive and normative approach**, being closely related to the realm of Philosophy of Economics (Heilmann and Reiss 2022).



## REPLICATING EMPIRICAL STUDIES IN ECONOMICS

Webinar Series

### REPLICATE REPLICATE - HOW YOU CAN TAKE PART

Next event: 08 SEPTEMBER 2022  
Online

Working group(s): *Philosophy of Economics*

- Lectures by replication experts with live QA sessions
- Replication in Economics and other social sciences
- Participants from all levels are encouraged to participate and work on a proposed replication plan
- The Webinar's materials will be freely available to instructors

Organized by:

- Gustavo A. Castillo Alvarez (Universidad de los Andes)
- Jan H. Höffler (ReplicationWiki)
- Diana Soeiro (ISCTE-University Institute of Lisbon)

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# Personal Motivation: Gustavo

- Best methods for empirical work?
- The need to use real data in undergrad courses, "truer" than simulations
- My first laboratory experiment and my first webinar on replication
- Statistical significance, "*stargazing*" \*\*\*
- A professor's (Andrés Moya, Univ. de los Andes) presentation on a failure to replicate a study on dishonesty (Dan Ariely's, et al. 2012 PNAS study)



Thinking about evidence, and vice versa



Menu

## [98] Evidence of Fraud in an Influential Field Experiment About Dishonesty

Posted on August 17, 2021 by Uri, Joe, & Leif



# Personal Motivation: Diana

- Background in Philosophy-Economics-Public Policy and work in the realm of Cities and Spatial Planning
- Replication in science assures that results are reliable and trustworthy
- Because it is impossible to be knowledgeable in every relevant scientific field, replication is crucial to validate scientific results that are used to inform public policy
- Key questions to be discussed in the webinar are:
  - How to choose an article or a study to replicate?
  - Which approaches can you take to replicate, which protocol to follow to assure you replicate well,
  - What obstacles can you expect to find and how to overcome them?
  - What is a successful replication and how to publish one?



# Personal Motivation: Jan

- first PhD supervisor pointed me to topic
- gave first seminars
- former professor of mine had been editor for pivotal article (Hamermesh 2007)
- first research I was working on did not seem replicable to me
- read about Institute for New Economic Thinking's grants
- suggested wiki collecting replications as grassroots activity



Kim Carpenter, Flickr (CC-BY 2.0)



Thomas and Jan in San Francisco

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- learning about new methods, data sources





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Carmen M. Reinhart  
World Economic Forum Flickr  
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The New York Times

## A Study That Set the Tone for Austerity Is Challenged

BY ANNIE LOWREY APRIL 16, 2013 2:36 PM

Source



Thomas Herndon  
Thomas Herndon CC-BY-SA 3.0




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CLICK
- incentivize discussion, introduce more diverse perspectives to economics (dominated by researchers based in the US working with US data)



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- incentivize discussion, introduce more diverse perspectives to economics (dominated by researchers based in the US working with US data)
-  When using different methodology or different data, no surprise that outcomes can be different, doesn't invalidate original research

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# How to replicate?

## Narrow sense

rerun original studies' data & code: check results and **learn** how they are produced

should always be the first step if possible

sounds easy, often isn't, even with available data & code

plus: data can be proprietary or sensitive, not all hard- and/or software available to all researchers



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## Wider sense

updating or using entirely new data or methods to check for robustness and/or generalizability

replication can help to overcome the incentive to preferably publish "significant" results

Do results still hold in different contexts like time periods or countries?





# How to replicate?

## Prepare a preanalysis plan:

What are your hypotheses and how do you want to test them?



# Replication examples

Johnson et al *Journal of Monetary Economics* 2013 showed different versions of the Penn World Table lead to significantly different results in a number of studies

Bold & Broer *Journal of the European Economic Association* 2021 used data to empirically test the conclusions of a theoretical paper

Chang & Li *Critical Finance Review* 2022 replicated several dozen studies on US growth from top journals and describe the challenges they encountered

## resistance from authors of original studies & editors

- editors of the *Journal of Political Economy* repeatedly blocked the publication of replications even when studies contained clear errors (Häring 2008, Klasen 2008), also *Econometrica* refused to publish a correction (Humphreys 2015)
- Acemoglu et al 2012 entitled working paper for response to replication of their work in *American Economic Review*: “Hither thou shalt come but no further”
- an editor of the *Economic Journal* even replied to a correction of a study that had been positively reviewed that they don't publish replications

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## data & code availability

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## Most important:

Search for a topic that you really care for! ♥

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# Instructions for the webinar series

- **Check** the schedule on the [webinar series page](#) and choose which presentations you'd like to participate in.
- **Create** accounts on the [ReplicationWiki](#) and on the [YSI platform](#) (both links direct to the pages to create your accounts).
- **Watch** the pre-recorded video lecture before the live sessions.
- 🖱️ **Present** your replication preparing a video for the live sessions
- 🖱️ **Start** a sub-page under the webinar site with your session's information (instructions [here](#)):

To prepare your session, link to your replication materials (if you wish to share publicly) *or* just summarize on the page what you have done.

- **Participate** in live Q & A sessions of your peers (if available) and **contribute** to discussion pages of your peers at the time of your convenience!



**In brief...**

# Actively engage during the webinar!



**Created by ProSymbols**

Participation by ProSymbols from [Noun Project](#)



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**Thank you for your attention!**



**REPLICATING EMPIRICAL  
STUDIES IN ECONOMICS**  
*an opportunity for students*