Lecture 25: To Measure and to Recruit

Monday, November 27, 2023

Your Teaching Fellows:

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Lectures: MWF 12:00 PM – 1:00 PM (003); 1:00 PM – 2:00 PM (004); 2:00 PM – 3:00 PM (010)
Office hours: Tuesdays 2:00 PM – 4:00 PM

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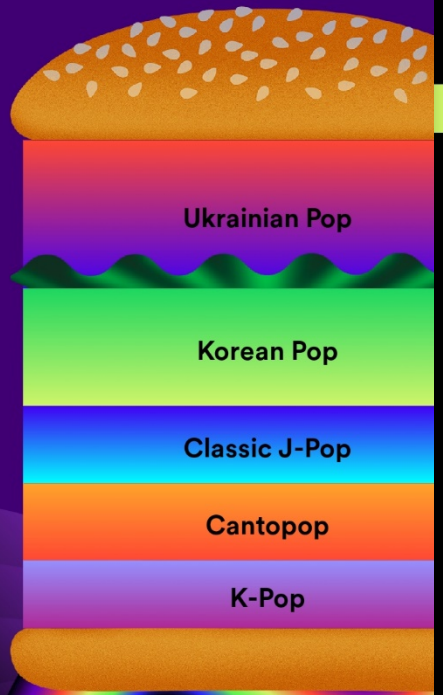
Spotify

Your top genres

Delicious.



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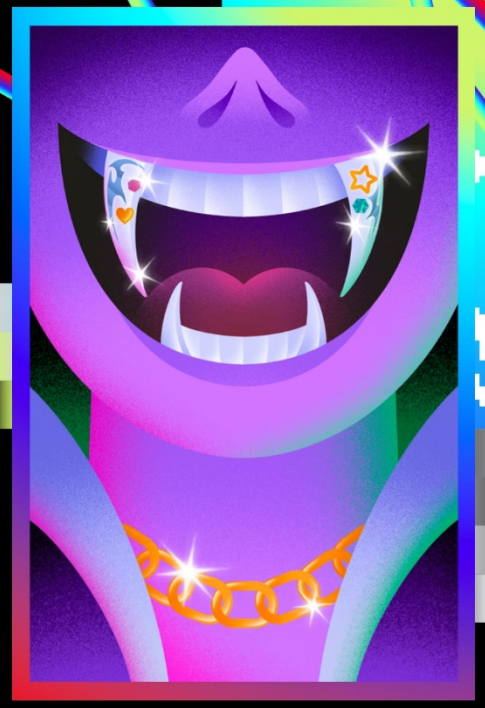
Spotify



Vampire

When it comes to your listening, you like to embrace a little... darkness. You listen to emotional, atmospheric music more than most.

Share this story

Spotify

Your top songs

1 
고해
Lim Jae Beum

2 
금지된 사랑
Kim Kyung Ho

3 
我的歌聲裡
Wanting

4 
비밀 (원곡가수 부활)
Park Wan Kyu

5 
천년의 사랑
Park Wan Kyu

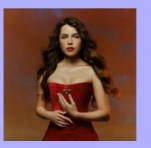
Share this story

Spotify

Your top artists

1 
MamaRika

2 
ZOZULYA

3 
Khrystyna Soloviy

4 
Kim Kyung Ho

5 
Олександр Пономарьов

Share this story

Send me yours! At bycheung.teaching@gmail.com

Learning objectives

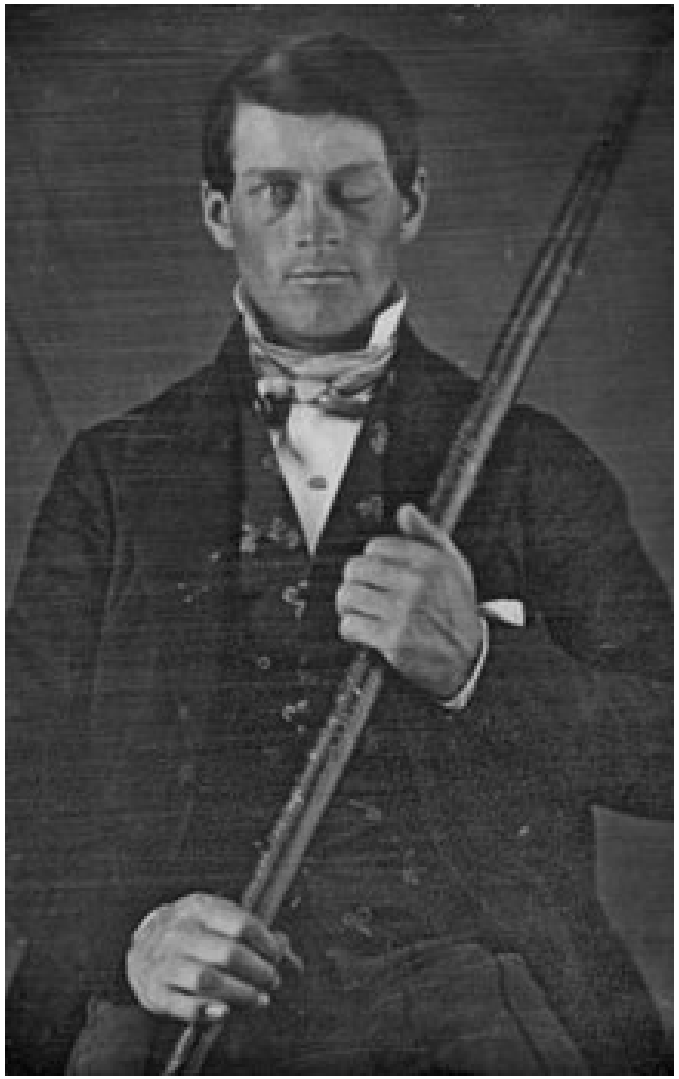
By the end of this class, you'll be able to

- Describe different ways in which questionnaires are administered
- Understand the role of the EAR
- Define probability and non-probability sampling
- Understand and apply probability and non-probability sampling techniques
- Recognise generalisability issues with regards to probability and non-probability sampling techniques
- Explain different ways of doing studies beyond relying on single studies

Alternative ways of doing research

- Special designs in which qualitative research is often found

Alternative ways of doing research

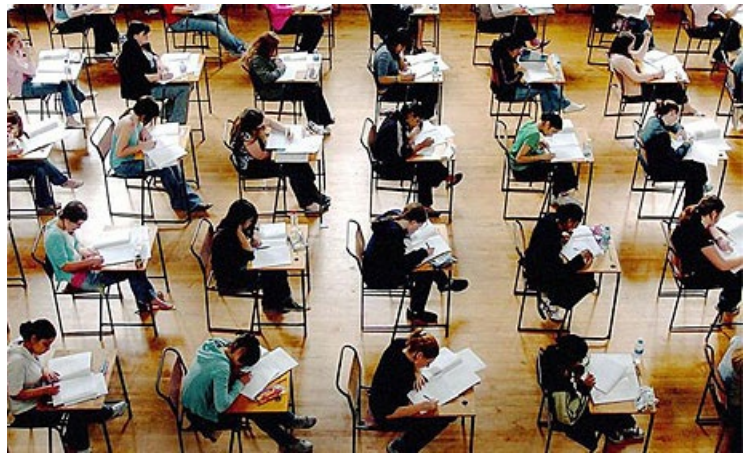


Alternative ways of measuring

- So far…

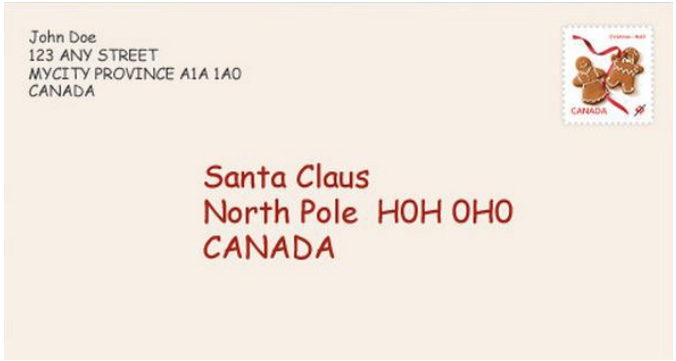
Questionnaires – How?

- Administered in person:
  - Characteristic of most research in psychology
  - Easy and inexpensive to administer
  - More easily control “test-taking” environment
  - Requires easy access to target sample



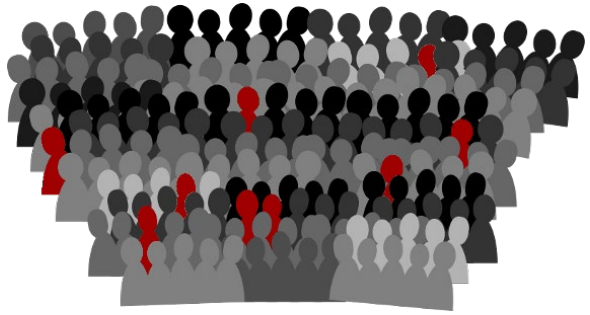
Questionnaires – How?

- Mailed surveys
  - Allows researchers to reach samples to which they do not have easy access
  - More expensive than paper questionnaire
  - Logistically more difficult, esp. regarding compensation
  - No control over “test-taking” environment



Questionnaires – How?

- Internet-based
  - Access to massive sample size, frees researchers from many physical constraints
  - Extremely inexpensive
  - No control over “test-taking” environment
  - Difficult to verify authenticity and demographics



Questionnaires – How?

With mailed and internet surveys, lack of control in environment often translates into more noise in people scores (i.e. larger variances)

How does this affect power?

And how can we, as researchers, compensate for this?

Questionnaires – How?

- What may be some issues with asking participants questions about what they felt and thought about previously?
- Or asking them about why they feel a certain way?

- Memories may be biased!
  - Current mood may bias memories of previous week
- People don't often have access to subconscious mental processes

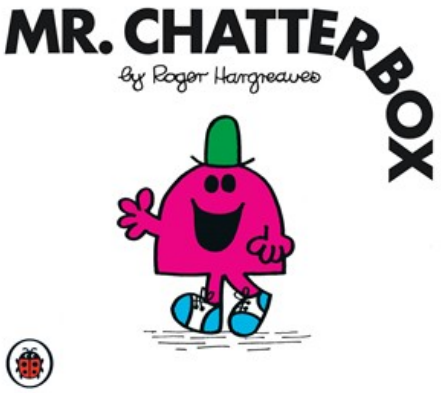
Questionnaires – How?

- On-line (not online) measures
  - Take measures/record data in real time, or as things happen
  - Done using special programs or instruments (e.g. smartphone apps, EAR)
  - EAR = Electronically Activated Recorder
    - Small clip-on microphone and digital sound recorder
    - At every pre-set interval, EAR records 30 seconds of ambient sound

Questionnaires – How?

- Over 6 years, Mehl et al. (2007) asked people to wear an EAR for about a week
- Purpose: Do women really talk more than men?

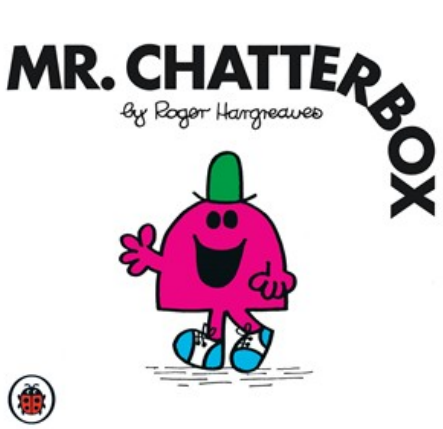
Gender	Average words spoken per day
Women (n = 210)	16,215
Men (n = 186)	15,669

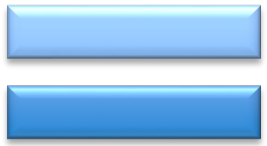


Questionnaires – How?

- *t*-test!
  - $t_{obt} = 0.68$
  - $t_{crit} = 1.97$

- Verdict?





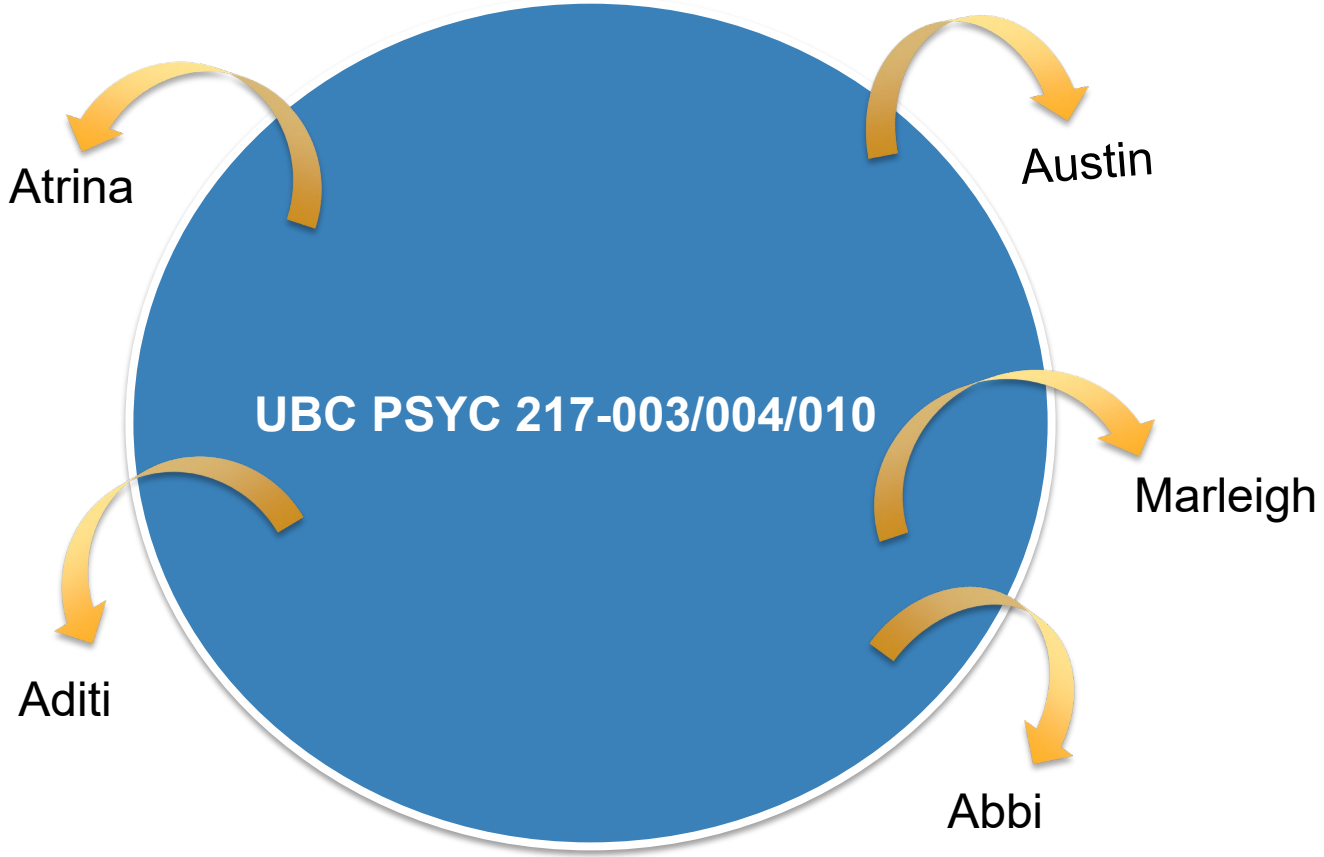
Recruitment – Sampling techniques

Recruitment – Sampling techniques

- Two broad categories of sampling techniques:
  - Probability sampling
    - Participants are randomly drawn
    - Likely representative of population
    - High generalisability
  - Non-probability sampling
    - Participants not drawn at random
    - Easy and convenient
    - Low generalisability

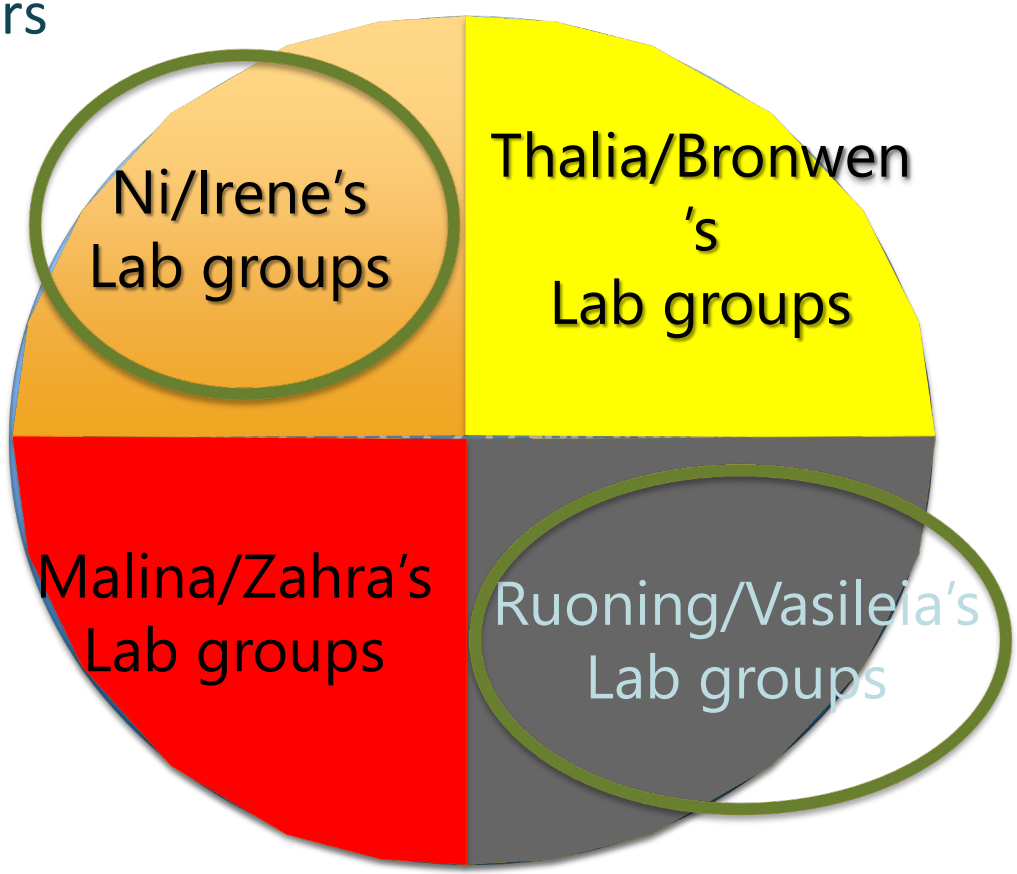
Probability sampling

- Simple random sampling
  - Everyone in a population has equal chance of being chosen



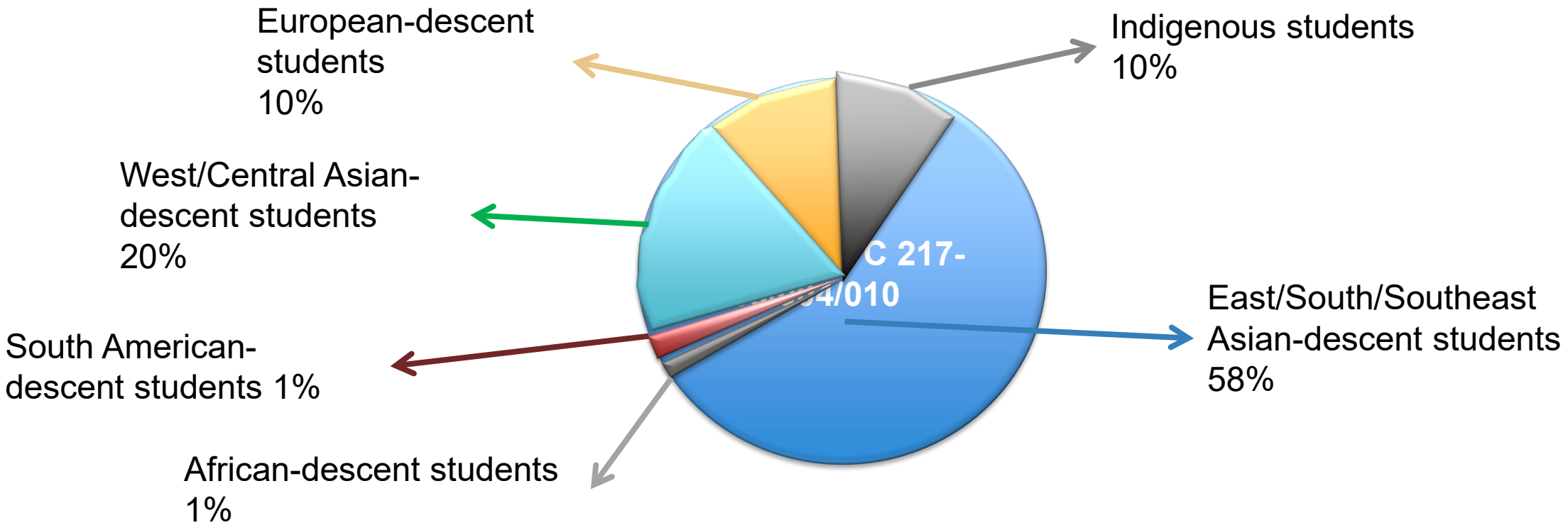
Probability sampling

- Cluster sampling
  - If “clusters” exist within a population, randomly sample clusters rather than individual members



Probability sampling

- Stratified random sampling
  - Identify subgroups within population
  - Identify proportion of people in population belonging to subgroups
  - Randomly draw samples from subgroups to reflect proportion in population



Random assignment vs. Random sampling

- Random assignment:
  - Every participant has equal chance of being in any experimental condition in a study
    - Allows for high internal validity

- Random sampling (Random selection):
  - Every person in the population has equal chance of being chosen to participate in the study
    - Allows for high external validity (generalisability)

Random assignment vs. Random sampling

		Random Assignment to Condition?	
		Yes	No
Random Selection from Population?	Yes	Internal validity ↑ External validity ↑	Internal validity ↓ External validity ↑
	No	Internal validity ↑ External validity ↓	Internal validity ↓ External validity ↓

True randomness?