

CYBER

# PSYCHOLOGY

WEEK 1: INTRODUCTION



## CONTACT INFO

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# COURSE OUTLINE

- “Intro to psych applied to the context of digital technology”
- We will cover various psychological topics, constructs and theories at a broad level
- There is an assigned textbook, but... it’s not great. To work around this, we will be pulling from various textbooks and journal articles (with a focus on the main arguments/theories, hypotheses, and findings)
- Some content will be covered in the slides that are not found in any of the assigned readings. These slides will be wordier than normal

# COURSE OUTLINE

- Any changes to the assigned chapters and readings will be announced on Telegram
- Lecture slides will be uploaded before and after class each week
- No need for written group report, only submission of slides for group presentation
- Midterm exam will be held in-class on 26 Feb, Thursday (Week 7) and will cover content up to Week 5
- Final exam will be held on 27 Apr, Monday (Week 16)

# HOUSEKEEPING

- Please be on time as TA will be taking attendance
- Food is fine, but be considerate (noise, smells, stains)
- Feel free to chime in at any time during the class if you've got questions, but be thoughtful with class participation
- I'm pretty bad with names and faces, so please don't be offended if I'm unable to recognize you. If you see me around, say hi!
- I get tons of emails, so I might be slow to respond at times. Just bump me if it's been a few days and you've yet to receive a response

# WHAT IS CYBERPSYCHOLOGY?

Cyberpsychology is field of study that sits at the intersection of **digital technology** and **human psychology**

- An array of psychological processes shape human behavior, both online and offline (e.g., cognition, individual differences, developmental life stages, sociocultural consideration, etc)
- E.g., When we observe cyberbullying taking place in a discussion forum, we can turn to a long history of psychological research on aggression to better understand what is happening and why

# IS THIS ABOUT THE INTERNET?

This course is not about the Internet strictly as a technology, but about any kind of digitally mediated life and online environment

- Online environments are broad and varied: e.g., the (regular) web, the dark web, emails, texts, forums, chat rooms, instant messages, blogs, social networks, virtual worlds, virtual reality, interactive video, mobile applications...
- Terms such as “the Internet”, “online”, “cyberspace” will be used broadly and inclusively throughout this course

# WHY DOES IT MATTER?

- Digital technologies and media play an increasingly central role in our everyday lives; many of our daily activities and interactions take place online, either in virtual worlds or mediated through digital technologies
- From online shopping and banking, maintaining relationships with family and friends, to creating new friendships and communities, and exploring who we are and how to present ourselves to others

How do we make sense of our digital lives and its implications?

# KEY RESEARCH ASPECTS

(1) How we interact with others using technology

- E.g., Do you present yourself differently in different online spaces? Would your impression of a person be different if you had first met them online?

(2) How our behavior and psychological states are affected by technology

- E.g., Why does time seem to pass so quickly when gaming? Are people more likely to be hostile and rude online vs. offline?

**ARE SMARTPHONES GOOD OR BAD?**

**WHAT FUNCTIONS/NEEDS DOES A  
SMARTPHONE FULFILL?**

# **CONTEXT MATTERS**

...Especially when evaluating the ways in which people interact with technology. In the absence of context, we are unable to derive insights that are sufficiently nuanced or meaningful regarding the use of digital technology.

# CONTEXT OF TECHNOLOGY USE

Meanings ascribed to digital devices do not take place in isolation; neither are they fixed or universal

- “They are implied by design but individually interpreted, shared and negotiated with others as part of an ongoing fluid involvement in particular social contexts.”
- Consider a middle-aged person whose car has broken down and is calling for tow assistance by the side of the road vs. a teenager who is messaging their school friends in the middle of the night

# CONTEXT OF TECHNOLOGY USE

Ultimately, technology use is shaped not only by the technical functions it is 'designed for' but also by its **'context of use'**

- A set of social expectations about possibilities for action and norms of behavior which are enacted and affirmed through use by other users
- Some limits are set by design and functionality, but the same functionality can be enlisted for different social purposes

# CONTEXT OF TECHNOLOGY USE

Context is dependent on a number of factors, such as...

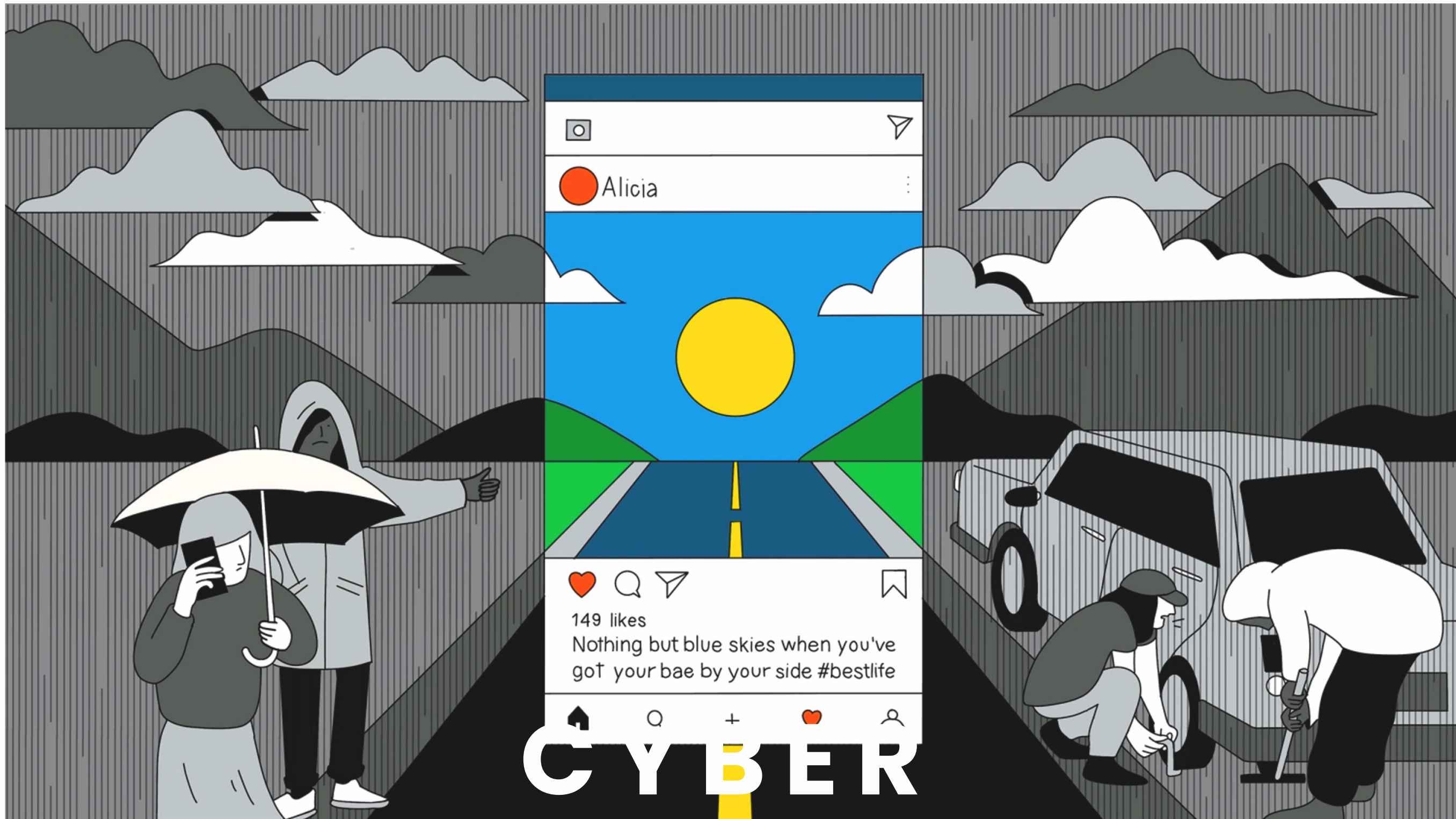
- Possibilities for action
- Norms of behavior
- Personal motivations (e.g., how our age and respective life goals frame our sense of purpose)
- People we share the online space with

Contexts are therefore dynamic and relational – it matters who is posting (or not), the life events that others choose to share online, and what is going on in each person's life at a given moment

# CONTEXT OF TECHNOLOGY USE

This has profound implications for how we make sense of cyberpsychology research

- Does “the Internet” mean the same thing to all users?
- If Internet addiction is a growing problem, what version of “the Internet” are we talking about?
- Rather than problematize the digital medium itself, we need to develop a better understanding of the social contexts and underlying motivations that drive such addictions



# PSYCHOLOGY

WEEK 2: RESEARCH METHODS & THE ONLINE SELF

# **RESEARCH METHODS**

# WHAT IS RESEARCH?

Research is the systematic process of collecting and analyzing information in an effort to contribute to knowledge on a particular phenomenon

- Considering what is currently known about a topic
- Articulating a specific question about it
- Designing a way to collect information
- Executing the information-finding strategy
- Analyzing the findings
- Communicating the results

# MEASUREMENT

Measurement involves using a specified procedure to convert an observation to a number

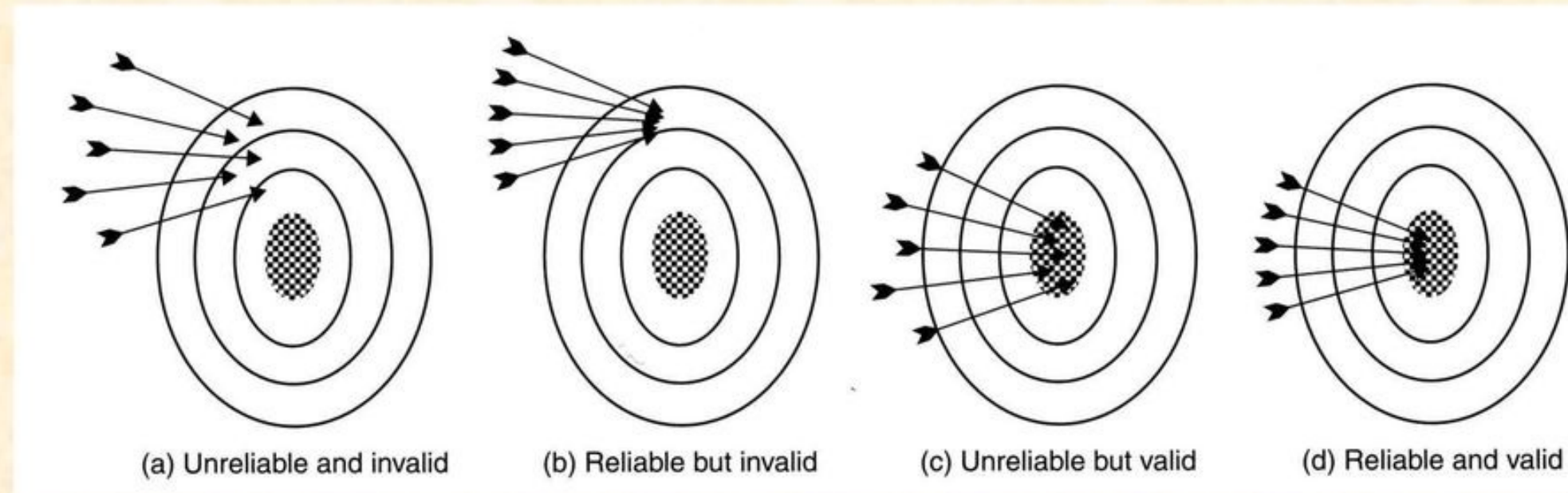
- E.g., To measure a fever, the thermometer is placed in your mouth, and after a period of time it shows you a number by which you determine if you have a fever
- Specified procedures that result in the collection of numbers are known as **research methods**; these numbers are then used in various analyses as evidence to reach certain conclusions in science

# MEASUREMENT

**Reliability** and **validity** are crucial in measurement

- Reliability refers to the **consistency** of the value obtained as the measurement is repeated (e.g., the thermometer displays similar values each time you take your temperature)
- Validity refers to the extent to which a measure **actually measures** what it says it does (e.g., the thermometer measures your temperature and not the temperature of your surroundings)

## A target analogy for reliability and validity



The 'Bull's eye' represents the true outcome to be measured and each arrow represents a single application of the outcome instrument (Pysent, 2004)

# MEASUREMENT

Common types of measures include:

- Scales/questionnaires (e.g., personality traits)
- Behavioral tasks (e.g., tasks to assess memory)
- Tracking computer interactions (e.g., eye movements, mouse movements, screen touches)

## Form 5 – BFQ-10

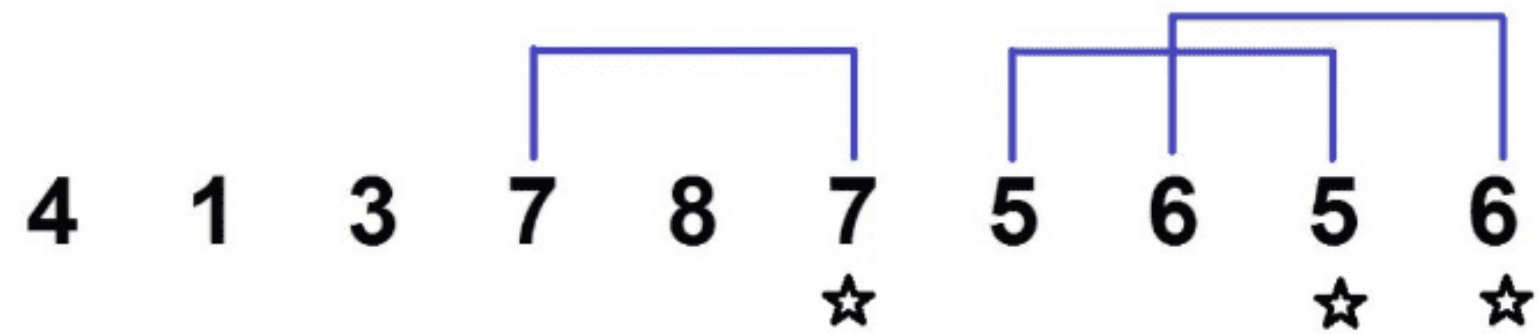
**Instructions:** Indicate how much you agree with the following statements about your personality. When answering, use the following scale:

Strongly Disagree	Little Disagree	Little Agree	Strongly Agree	Totally Agree
①	②	③	④	⑤

**I see myself as a person who ...**

1	... is reserved	①	②	③	④	⑤
2	... generally has confidence in others	①	②	③	④	⑤
3	... tends to be lazy	①	②	③	④	⑤
4	... is relaxed tolerates stress well	①	②	③	④	⑤
5	... has few artistic or cultural interests	①	②	③	④	⑤
6	... is confident, sociable	①	②	③	④	⑤
7	... tends to find flaws with others	①	②	③	④	⑤
8	... is diligent at work	①	②	③	④	⑤
9	... easily get upset	①	②	③	④	⑤
10	... has a vivid imagination	①	②	③	④	⑤

Numbers will be presented one at a time. Take note of them. If the number on the screen is the same as the number two numbers before, press the spacebar



☆ Press Space



WIKIPEDIA  
Die freie Enzyklopädie

Hauptseite  
Themenportale  
Von A bis Z  
Zufälliger Artikel

Mithraschen  
Artikel verbessern  
Neuen Artikel anlegen  
Autorenportal  
Hilfe  
Letzte Änderungen  
Kontakt  
Spenden

Werkzeuge  
Links auf diese Seite  
Änderungen an verlinkten Seiten  
Spezialseiten  
Permanenter Link  
Seiteninformationen  
Wikidata-Datenobjekt

Drucken/exportieren  
Buch erstellen  
Als PDF herunterladen  
Druckversion

In anderen Sprachen

- Alemannisch
- العربية
- Boarisch
- Català
- Čeština
- Dansk
- Deinorskt
- Ελληνικά
- English
- Español
- فارسی
- Saami
- Frantsès
- Arpetan
- Nordfriesk
- Frysk
- יידיש
- Հայերէշ
- Հայերեն
- Magyar
- Bahasa Indonesia
- Italiano
- 日本語
- 한국어
- Հայերեն
- Latina
- Lelebuwetesch

Nicht angemeldet Diskussionseite Beiträge Benutzerkonto erstellen Anmelden

Hauptseite Diskussion

Lesen Quelltext anzeigen Versionsgeschichte Wikipedia durchsuchen

### Willkommen bei Wikipedia

Wikipedia ist ein Projekt zum Aufbau einer Enzyklopädie aus freien Inhalten, zu denen du sehr gern beitragen kannst. Seit Mai 2001 sind 2.076.952 Artikel in deutscher Sprache entstanden.

Geographie Geschichte Gesellschaft Kunst und Kultur Religion Sport Technik Wissenschaft

Artikel nach Themen · Artikel nach Kategorien · Gesprochene Wikipedia · Archiv der Hauptseite

Kontakt · Presse · Statistik · Sprachversionen · Mithraschen · Mentorenprogramm

### Artikel des Tages



**Puma** war eine brasilianische Automarke. Die Fahrzeuge entstanden ursprünglich auf DKW-Vermäglichkeits-Basis, wechselten nach dem Nationalismus in Brasilien zu Volkswagen-Basis und wurden in ihrer Endphase aus Brasilien nach Deutschland exportiert. Die Modelle, die in ihrer Grundkonzeption auf VW-Basis basierten, im erfolgreichsten Modell, die Puma, wurden offiziell 21.733 Fahrzeuge gebaut. Eine Puma wurde in Brasilien unter dem Namen von 1997 bis 2002 als Puma intensiv, den Anschluss an die westlichen Industrieländer zu erreichen, wurden Kooperationen mit großen Automobilherstellern wie Volkswagen. Parallel dazu wurden zur Förderung heimischer Produktionsstätten hohe Importzölle auf ausländische Fahrzeuge erhoben. – Zum Artikel ...

Artikel-Wörter und Zitate und lesenswerte Artikel · RSS-Feed

### In den Nachrichten

Unabhängigkeitstag der USA · Unfall auf der BAB 9 · ...

- Die SPD-Politikerin **Maria Theresia Schwanig** ist zur Ministerpräsidentin von Mecklenburg-Vorpommern gewählt worden.
- Der deutschen Schriftsteller **Bernhard Schöler** ist der Lebenswerk der desahlierte Thomas Mann Preis zuerkannt.
- Durch einen 1:0-Sieg gegen **Costa Rica** ist die deutsche Fußballnationalmannschaft erstmals den FIFA Confederations Cup gewonnen.



Weitere aktuelle Ereignisse · Wikinews

### Kürzlich Verstorbene

- Jose Luis Cuevas (88), mexikanischer Künstler († 3. Juli)
- Jean Jacques Susini (87), französischer Politiker († 3. Juli)
- Paolo Villaggio (84), italienischer Schauspieler († 3. Juli)
- Chris Roberts (73), deutscher Schlagersänger († 2. Juli)
- Hans Raschang (80), deutscher Maler († 24. Juni)

Weitere kürzlich Verstorbene · Wikisource

### Was geschah am 4. Juli?

- 1187 – In der Schlacht bei den Hörnern von Hattin unterliegt das Heer der Kreuzfahrerstaaten gegen die Truppen von Saladin.
- 1872 – Im Deutschen Kaiserreich werden Niederlassungen der Jesuiten durch das Jesuitengesetz verboten.
- 1902 – Vivekananda, hinduistischer Mönch und Gelehrter, stirbt.
- 1927 – Die italienische Filmschauspielerin Gina Lollobrigida (eas. *Fanfani*, *der Husar*, *trapez*, *Der Glockner von Notre Dame*) wird geboren.
- 1997 – Die NASA-Sonde *Mars Global Surveyor* landet auf dem Mars.

Weitere Ereignisse · Wikinews



Meta-Wiki – Koordination Commons – Medien Wiktionary – Wörterbuch Wikibooks – Lehrbücher Wikiquote – Zitate Wikiversity – Lernplattform Wikisource – Quellen Wikinews – Nachrichten Wikidata – Wissensdatenbank Wikivoyage – Reiseführer

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# TYPES OF RESEARCH METHODS

## (1) Observational

- Designed to capture behavior in an ongoing fashion (e.g., users can provide verbal statements of what they are doing as they interact with an app)
- If people are aware that they are being observed, their behavior often changes (i.e., the **Hawthorne effect**). Yet covert observation may not always be ethically possible
- **Observer bias** may also occur when a researcher's expectations, opinions, or prejudices influence what they perceive and record in a study

# TYPES OF RESEARCH METHODS

## (2) Correlational

- The goal of a correlational design is **prediction** – a researcher measures two or more variables and tries to determine if changes in one variable are related to another
- E.g., Relationship between Facebook use and self-image perceptions
- Different questionnaires would be used to measure aspects of Facebook usage and self-image

# TYPES OF RESEARCH METHODS

## (2) Correlational

A major concern in correlational studies is **external validity**, or the ability to apply obtained results to people and situations outside of the study (i.e., **generalizability**)

Factors that influence external validity include:

- Having valid measures
- A representative sample of participants

# TYPES OF RESEARCH METHODS

## (2) Correlational

Scales should be constructed carefully as questions can be asked in many ways

- Reliability can be established using the test-retest method, where a scale is taken more than once
- Validity can be established by correlating a scale with other scales that measure the same variable, or different but related variables

# TYPES OF RESEARCH METHODS

## (2) Correlational

Researchers need to collect a subset of the group (i.e., a sample) that in some way represents the wider population

- This sample should ideally be random, such that every member of the population has an equal chance of participating in the study
- However, a truly **random sample** is difficult to obtain, so researchers often fall back on a **convenience sample** (i.e., a sample from a group of potential participants to which the researcher has access)

## **Random sampling**

You're studying new interventions for boosting employee engagement in a large company.

You use a simple random sample to collect data. Because you have access to the whole population (all employees), you can assign all 8000 employees a number and use a random number generator to select 300 employees. These 300 employees are your full sample.

By using a random sample, you can be reasonably confident that your results are applicable across the whole company.

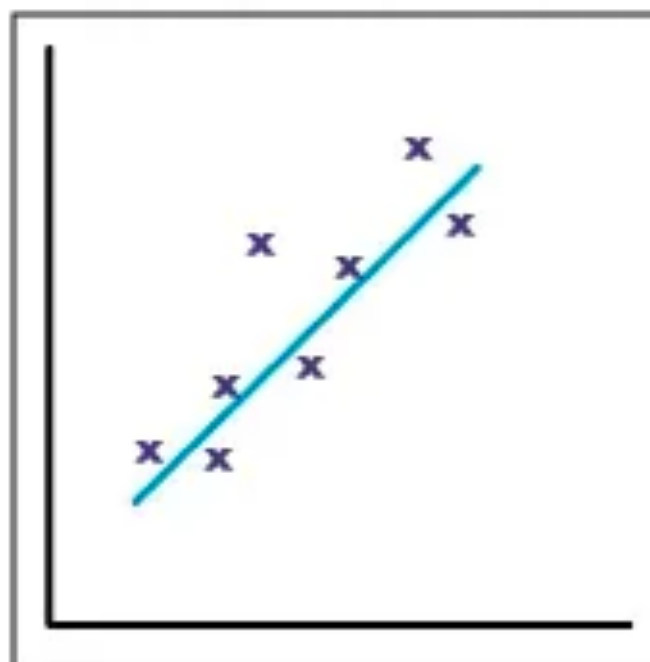
# TYPES OF RESEARCH METHODS

## (2) Correlational

### Limitations

- Causal conclusions should not be made from correlational data; correlation does not imply causation
- E.g., Messerli (2012) reported a strong positive correlation between national per capita chocolate consumption and the per capita number of Nobel prizes won by the country. Should we conclude that consuming more chocolate in Singapore would cause more Nobel prizes to be won?

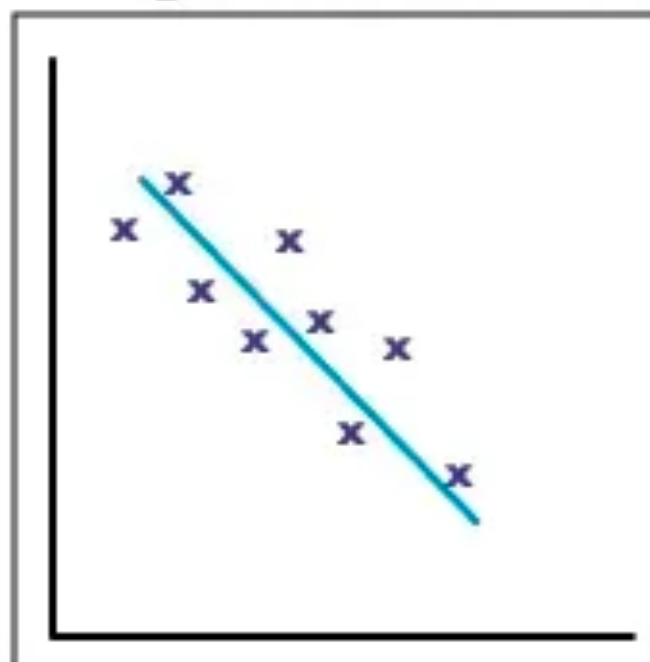
**Positive correlation**



The points lie close to a straight line, which has a positive gradient.

This shows that as one variable **increases** the other **increases**.

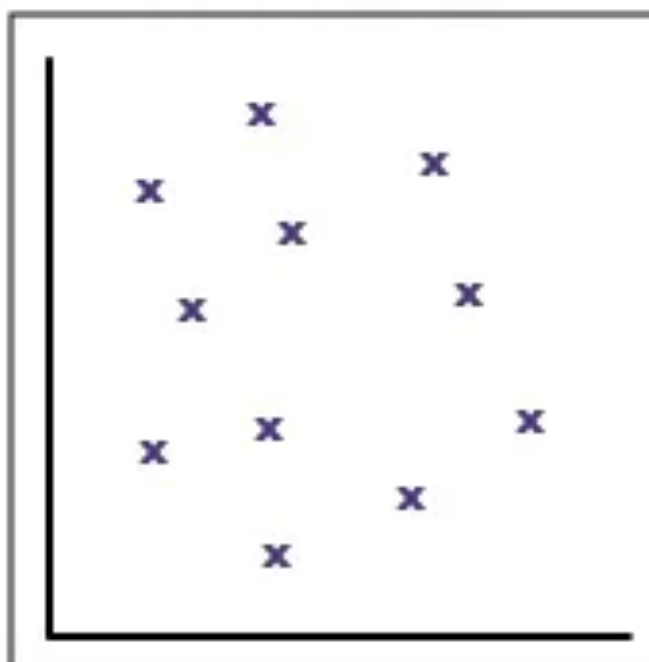
**Negative correlation**



The points lie close to a straight line, which has a negative gradient.

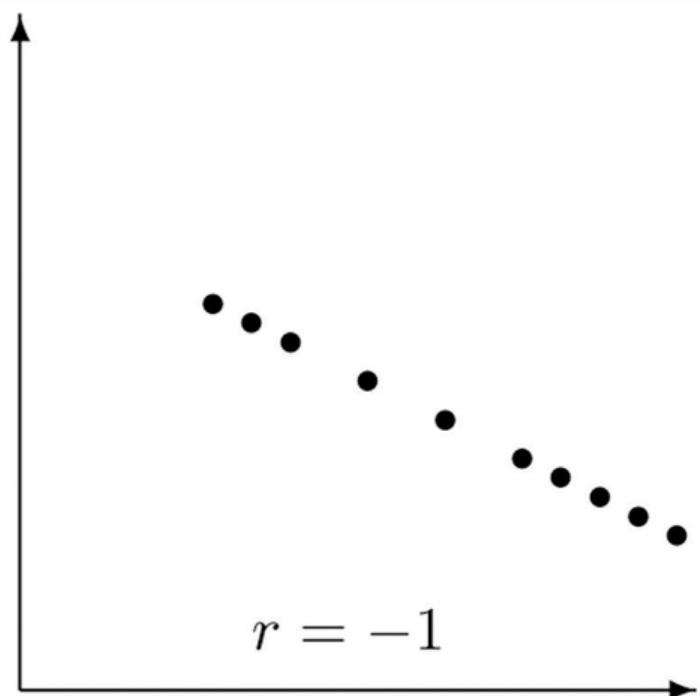
This shows that as one variable **increases**, the other **decreases**.

**No correlation**

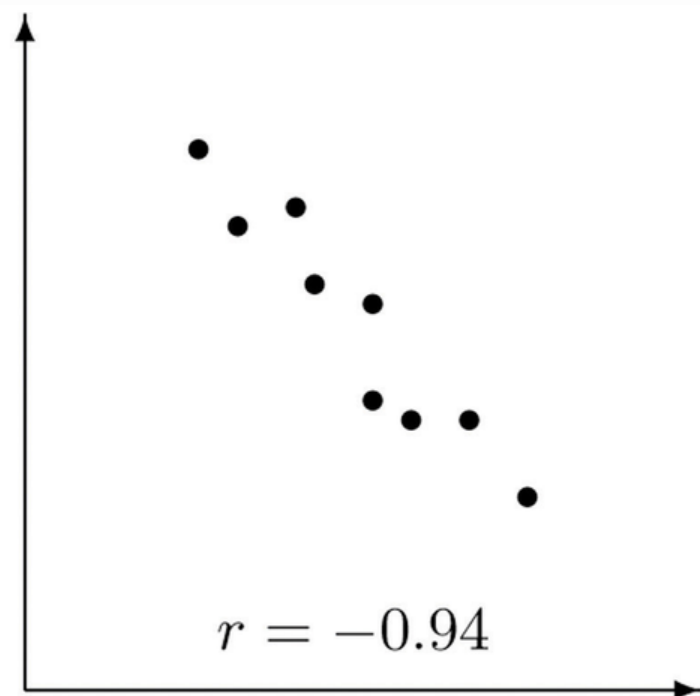


There is no pattern to the points.

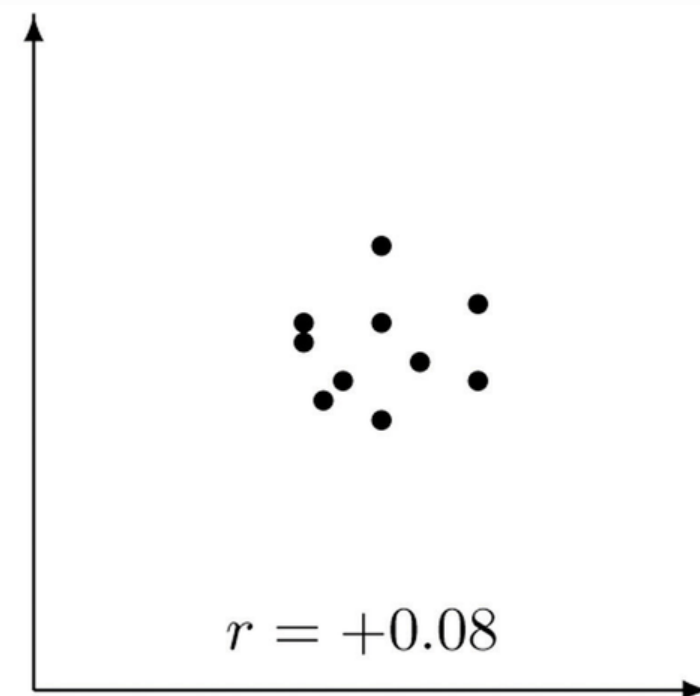
This shows that there is **no connection** between the two variables.



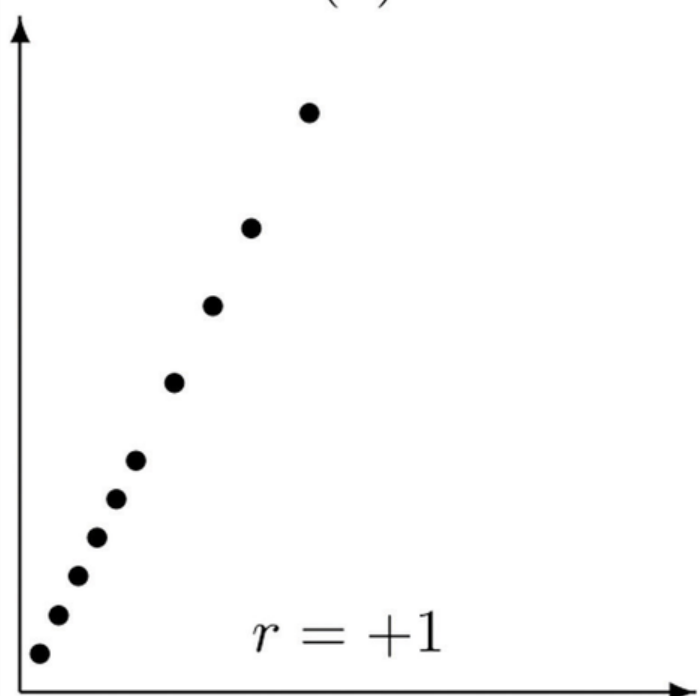
(a)



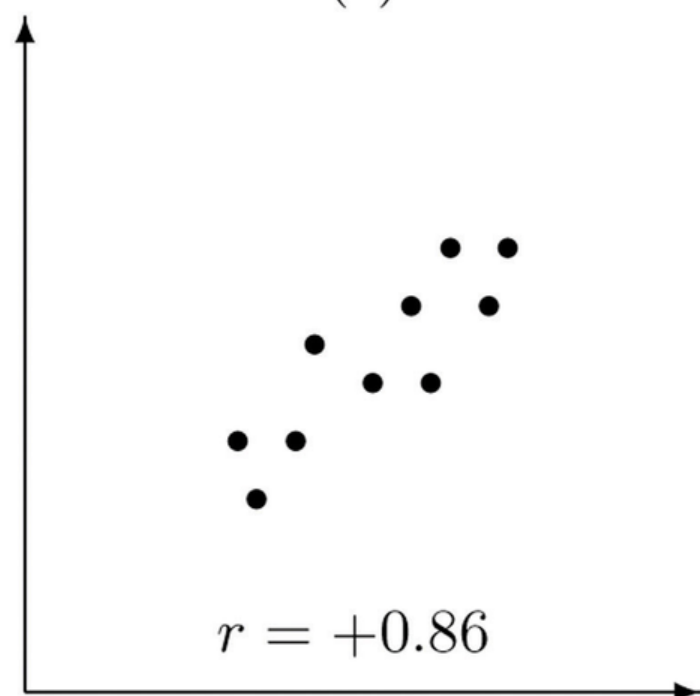
(b)



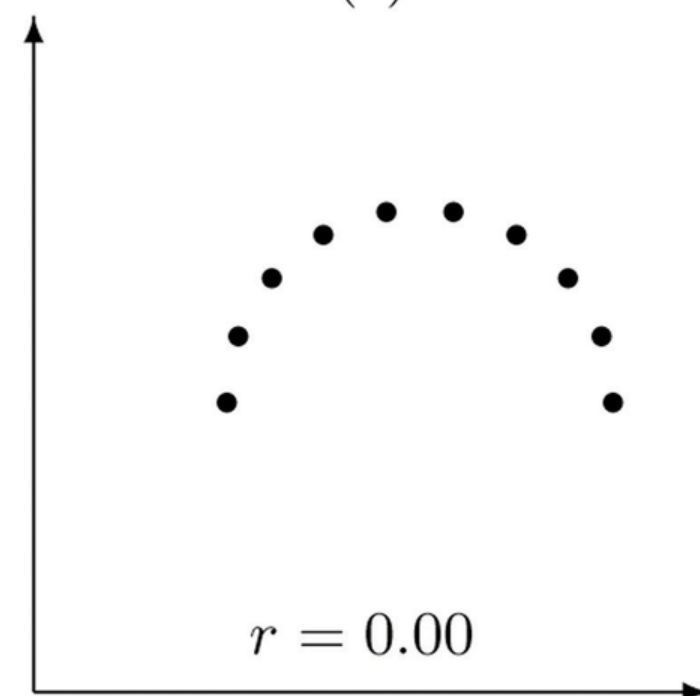
(c)



(d)



(e)

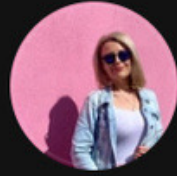


(f)

# TYPES OF RESEARCH METHODS

## (3) Experimental

- The core elements of an experimental design are manipulation, control and careful measurement of the outcome; when conducted correctly, experiments allow us to make **causal statements** (i.e., a change in X causes a change in Y)
- The independent variable (IV) is manipulated; the dependent variable (DV) is measured; everything else in the experiment must be controlled so that it remains the same



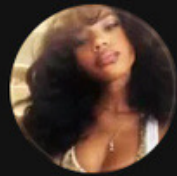
Nat Cat Eye

What have you created 🤔🤔🤔🤔🤔🤔🤔



2023-12-22 Reply

❤️ 32.1K



Joycita 🦊

Bruh you can literally teach children anything



2023-12-22 Reply

❤️ 731



babygirlNatt\$

The results are so adorable omg 🥹❤️

2023-12-22 Reply

❤️ 1976







<https://youtu.be/yihMw0e8pV4>

# TYPES OF RESEARCH METHODS

## (3) Experimental

E.g., Which type of button helps users to respond faster when using an app? 

- If we control all elements of the experiment other than the button type, and find that users respond faster when using touch buttons, we can conclude that touch buttons result in faster responses
- If the touch button is also 4x the size of the mouse click button, the results could now be due to either the button type or the button size (i.e., a **confound variable**)

# TYPES OF RESEARCH METHODS

## (3) Experimental

E.g., Which type of button helps users to respond faster when using an app?

- IV (manipulated by the researcher): type of button
- DV (the outcome that is measured): users' response times
- Control variables (to avoid confounds): size of the button, color of the button, location of the button... etc.

## **Different levels of an IV**

In a clinical trial, you investigate the effect of iron supplements (IV) on energy levels (DV).

You use three groups of participants that are each given a different level of the independent variable:

- A control group that's given a placebo (no dosage, to control for a placebo effect)
- An experimental group that's given a low dosage
- A second experimental group that's given a high dosage

# TYPES OF RESEARCH METHODS

## (3) Experimental

A major concern in experimental studies is **internal validity**, or the extent to which the design and conduct of the study are able to support a causal conclusion

Factors that influence internal validity include:

- Variability between people/within a person
- Presence of confounding variables

# TYPES OF RESEARCH METHODS

## (3) Experimental

When different participants are subject to different conditions of an experiment, a researcher must verify that the differences in outcome is due to the independent variable (rather than because each group had different people in it)

- **Random assignment** (i.e., each participant has an equal probability of being in any condition of the experiment) is important in ensuring that there are no systematic differences between participants in each group

## **Non-random assignment**

In your clinical study, you recruit participants using flyers at gyms, cafes, and local community centers. You use a haphazard method to assign participants to groups based on the recruitment location:

- Participants recruited from cafes are placed in the control group
- Participants recruited from local community centers are placed in the low dosage experimental group
- Participants recruited from gyms are placed in the high dosage group

## **Non-random assignment**

Gym-users may tend to engage in more healthy behaviors than people who frequent cafes or community centers, and this would introduce a healthy user bias in your study.

If your study outcomes show more energy in the high dosage group, you might not be able to attribute this result solely to the manipulation of your IV (the iron supplement). Instead, this result may come from the interaction between the participants' characteristics and the IV.

## **Random assignment**

Using the same method of recruiting participants using flyers at gyms, cafes and local community centers, this time you take the complete list of participants and assign each one a number. You then use a random number generator to place each participant in one of the three groups.

By using random assignment, you can be reasonably confident that any differences in energy across groups are an effect of the IV (and not any systematic differences across groups).

# **RANDOM SAMPLING VS ASSIGNMENT**

- Random sampling is an important consideration in the external validity (generalizability) of results from the sample to the population
- Random assignment is necessary to ensure that the differences between groups reflect differences in the experimental treatments (IV) and nothing more (internal validity)
- Random assignment is arguably more important than random sampling

	<b>Random sampling</b>	<b>No random sampling</b>
<b>Random assignment</b>	Can determine causal relationships in the population. This design is relatively rare in the real world.	Can determine causal relationships in the sample only. This design is where most experiments would fit.
<b>No random assignment</b>	Can detect relationships in the population, but cannot determine causality. This design is where many surveys and observational studies would fit.	Can detect relationships in the sample only, but cannot determine causality. This design is where many unscientific surveys and polls would fit.



<https://youtu.be/8B271L3NtAw>

# TYPES OF RESEARCH METHODS

## (4) Field experiments

- While most experiments are conducted within a laboratory, it is sometimes necessary to conduct experiments in a real-world situation

## (5) Online research methods

- The web also provides unique opportunities for cyberpsychology research (e.g., recruiting participants online; analyzing Facebook feeds)

	<b>Quantitative</b>	<b>Qualitative</b>
<b>Definition</b>	Data that can be numerically analyzed and quantified	Non-numerical data that describes qualities, opinions, feelings
<b>Research methods</b>	Online, in-person, and phone interviews with close-ended questions; controlled experiments	Open-ended survey questions; unstructured interviews; focus groups; observation
<b>Best for</b>	Drawing conclusions through larger-scale studies, conducting statistical analysis	Formulating hypotheses and gathering detailed information from smaller groups
<b>Analysis</b>	Statistical analysis through charts, tables, statistical programs	Manual analysis through grouping of common themes and other methods
<b>Question example</b>	Did you buy ice cream today? (1) Yes (2) No	Why did you buy ice cream today?
<b>Data example</b>	67% of respondents bought ice cream today	"I saw ice cream on sale by the checkout and it was an impulse buy. I wanted to treat myself."

## **IN SHORT...**

As you engage with the readings moving forward, there are two key questions to bear in mind: “How do we know?” and “Are we right?”

These questions can be answered by considering the following:

- Was the appropriate research method used to answer the research question?
- Are the conclusions justified by the method?
- Are the measures reliable and valid?
- Does the experiment have any confounds? Were there proper controls?

# **THE ONLINE SELF**



**WHAT DO YOU NEED  
TO USE THESE APPS?**



PHONE

EMAIL

IE +353 | Phone

You may receive SMS updates from Instagram and can opt out at any time.

Next

Already have an account? [Log in.](#)



PHONE

EMAIL

Email

Next

Already have an account? [Log in.](#)

## **WHAT IS “THE SELF”?**

*“It is you... all of the psychological and physiological features that come together to give you a personal identity. It is how you think and feel, and how you interpret, react to, and behave in diverse situations. It is the person you talk about when you use the pronouns ‘I’ and ‘we’... This list is not exhaustive.”*

# THE ONLINE SELF

The **online self** is the person you are when perusing the Internet, interacting with others or even simply observing others in their online activities

- In order to complete any task or partake in any activity online, we need an online self-identity
- E.g., We need to input our details on a website to use it; when we do so, we are sharing information about ourselves that enables others to create an image or profile of us – we are putting our “self” online

# THE ONLINE SELF

This does not mean that the **offline self** is irrelevant

- The offline self shapes and influences who we are in our online activities (vice versa), but there are likely changes and distinctions between the two
- E.g., Differences in how we create our online vs. offline selves based on the time we are afforded to explore how we want to portray ourselves – an advantage we rarely have offline
- We can create, edit, and re-edit who we are before we share information about ourselves with others, giving us full control of who we want to be online

# THE ONLINE SELF

- Note that in the early days, researchers often referred to an online world and a “real” (offline) world
- Such terminology negates the effects that online behavior can have offline and vice versa (e.g., the effects of cyberbullying on a teenager’s offline social life)
- The self is the self, regardless of whether this is online or offline

**COGITO, ERGO SUM  
(I THINK, THEREFORE I AM),  
BUT WHO AM I?**

# SELF-CONCEPT

The self is not a simple object, but a construct

- A person, with the help of others, builds up a body of beliefs about itself
- The accumulation of this set of beliefs is, in essence, the construction of the self
- At the most fundamental level, the **self-concept** refers to our concept of who we are and how we fit into the world; this is most clearly demonstrated through our answer(s) to the question “Who am I?”

# SELF-CONCEPT

Self-concept is defined as a **learned, organized, and dynamic** system of beliefs, attitudes and opinions that each person holds to be true about his or her personal existence (Purkey, 1988)

- Self-concept is different from self-esteem, which refer to feelings of personal worth and levels of satisfaction regarding oneself
- It is also different from self-report, or what a person is willing and able to disclose

# SELF-CONCEPT

Three key aspects:

(1) Self-concept is **learned**; it evolves throughout our lives as a result of interacting with the social world (e.g., parents, teachers, peers) which help us to form a perception of who we are

- Because it is a social product, our self-concept may differ from how others actually perceive us and may differ across life stages

Jane was required to take a foreign language course at her school. She chose to learn German because relatives on her mother's side lived in Germany, and her family was planning a visit in the summer.

Unfortunately, Jane's few months of German class were not fun. She had a teacher who was very strict in her lesson plans and grading of the students. Additionally, Jane fell behind in the class work due to an after school sports injury; she was out for two weeks.

When she returned to class, her teacher called her out in front of other students because she didn't know the correct vocabulary terms and proper responses.

When summer arrived, Jane's family went to Germany as planned to visit their relatives. During her stay, Jane tried to practice her German but stopped trying after her relatives told her, "Your pronunciation is so poor, are you sure you've been taking German classes?" As a result, Jane withdraws from learning the language and culture.

**How are these experiences likely to have impacted Jane's self-concept?**

Jane is likely to develop a self-concept that consists of any of the following:

- I will never learn the German language and culture
- I'm terrible at learning new languages
- I should just do what I'm good at
- I cannot make mistakes or people will criticize me

# SELF-CONCEPT

(2) Self-concept is **organized**; it seeks to “fit” our beliefs and experiences in a way that makes sense

- We possess a great deal of knowledge and beliefs about ourselves
- Each piece of information is categorized or compartmentalized in a way that makes sense and attains harmony, taking into consideration all other information
- As a result, we may discard certain experiences that challenge our beliefs about the self, including changes toward a more positive view of the self (Swann, 1987)

# SELF-CONCEPT

(3) Self-concept is **dynamic**; it is both **context-specific** and **malleable**

- Different situations direct our attention to different aspects of our self-concept, which become the prevailing “guide” for how we process self-relevant information as well as how we behave or take action (e.g., “me at work” vs. “me at home”)
- Self-concepts are malleable, as they are actively shaped by our experiences. As we face different situations and challenges in life, our insight of ourselves may change depending on the way we respond.

# SELF-CONCEPT

Self-concepts naturally vary between people

- Each person differs from others in his or her life, career, and social experiences, knowledge, interests, desires, exposures to external forces (e.g., political and commercial), and cultural influences (Elliott 2001)
- Other factors include age, gender, personality, ethnicity, historical context, (predominant) self-motives, group memberships, and roles (Baumeister 1998; Oyserman et al. 2012; Rosenberg 1979)

The wholeness of these experiences shape our unique life stories and our self-concepts

**WHO WOULD I/OTHERS  
LIKE ME TO BE?**

**WHO DO I/OTHERS THINK  
I SHOULD BE?**

# MULTIPLE SELVES

According to Higgins' **Self-Discrepancy Theory (SDT; 1987)**, the self can be conceptualized in three ways:

- The **actual self**, or your representation of the attributes that someone believes you actually possess
- The **ideal self**, or your representation of the attributes that someone would like you to possess (i.e., someone's hopes, aspirations and wishes for you)
- The **ought self**, or your representation of the attributes that someone believes you should possess (i.e., someone's sense of duty, obligations and responsibilities for you)

**Ought self:** A doctor... lawyer... accountant? any other job with greater job security

**Ideal self:** Take acting classes, eventually go on to be a full-time actress

**Actual self:** Majoring (failing) in accountancy so that I can become an accountant with great job security (or at least greater job security than an actress)

# MULTIPLE SELVES

- While the actual self constitutes what is typically thought of as an individual's self-concept, the ought and ideal selves constitute standards of comparison
- According to SDT, the greater the gap between an individual's actual and ideal/ought self (i.e., **self-discrepancy**), the greater the psychological tension and discomfort an individual is likely to experience
- An individual is therefore motivated to reduce self-discrepancy so as to relieve their feelings of discomfort — and **self-presentation** is one way in which this can be achieved

# WHO ARE WE ONLINE?

Different situations create different social norms; the self is malleable and flexible enough to adapt to these norms, whether online or offline

- We fulfill a number of social roles which are not mutually exclusive (e.g., student, son/daughter, boyfriend/girlfriend, etc.)
- In any given situation, we choose which aspect of the self to present
- Offline, we are likely to behave very differently on a night out with our friends compared to a family dinner with our parents; online, we may be more brash in dismissing potential dates than if we had met them face to face

# **SELF-PRESENTATION**

Let's say you have a friend who has never watched an episode of Game of Thrones because she doesn't consider herself to be a fan of the fantasy genre.

Whether she takes your advice that Game of Thrones will enrich her life depends on how persuasive your argument is, but also **what your friend thinks of you as an individual** – does she see you as someone of good or poor taste? Do you have a track record for making good recommendations?

# **SELF-PRESENTATION**

- We often attempt to influence the opinions and impressions of others as part of social interaction; this may apply to a variety of things (e.g., ideas, objects, other people)
- However, we cannot take the individual attempting to manage these impressions out of the picture, as any attempt communicates some form of information about the self (e.g., attitudes, preferences, feelings, etc.)
- Self-presentation is therefore a subcategory of impression management that specifically involves managing the impression of self

# **SELF-PRESENTATION**

Self-presentation can be defined as...

- Any form of behavior that is intended to create, modify or maintain an impression of ourselves in the minds of others (Brown, 2014)
- The process of controlling how one is perceived by other people (Leary, 1995)

# THE PERFORMED SELF

Most social interactions are role governed; each person has a role to play, and the interaction proceeds smoothly when these roles are enacted effectively

- E.g., Airline pilots are expected to be poised and dignified. As long as they convince their passengers that they possess these qualities, their passengers remain calm and behave in an orderly fashion. Imagine how unsettling it would be if your airline pilot acted like these SNL characters...



[https://youtu.be/7F\\_CI8wUUHQ](https://youtu.be/7F_CI8wUUHQ)

# THE PERFORMED SELF

Inspired by theatrical performance, Goffman (1959) proposed that people are **social actors** who display different masks in different social interactions

- People play a variety of parts or roles throughout their lives (“one man plays many parts”)
- The specific part that is played at any time depends on both the environment and the audience; as such, **there is no “actual” or “true” self**

# THE PERFORMED SELF

Social interaction can be viewed as a performance

- People make use of different tactics to control and stage how they appear, depending on the **context** (e.g., environment, social norms, audience) and their desired **goals**
- People also differ in the extent to which they take cues from the audience to adjust their performance (i.e., levels of **self-monitoring**)

# THE PERFORMED SELF

How does this unfold online?

- The online world offers multiple avenues for self-exploration and self-presentation, whether of an ideal, actual, ought, or even fictional self
- In some ways, the online world provides unique advantages over a face-to-face setting because people can take their time to get the right text, photo, or video
- People can edit and revise text, retouch photos, and make thoughtful decisions about what to disclose

# MOTIVATIONS & STRATEGIES

According to Goffman, our motives are key to the self-presentation strategies we choose to employ

- We may or may not be consciously aware of our goals as we present ourselves online, whether it is to be liked by others or to have others fear and respect us
- Nevertheless, these goals will shape our online behavior (i.e., we select and present aspects of the self that is tailored to meet these goals)

# ARKIN'S SELF-PRESENTATION STRATEGIES

Arkin proposed that people adopt two strategies to achieve the performance outlined by Goffman:

- **Acquisitive self-presentation**, which is used to **gain** others' approval and acceptance of the self (achieving desired outcomes/making a positive impression)
- **Protective self-presentation**, which is used to **avoid** others' disapproval and criticism of the self (avoiding undesired outcomes/not making a negative impression)

# ARKIN'S SELF-PRESENTATION STRATEGIES

Individuals differ to the extent that they are motivated to adopt either strategy

- Some individuals tend to “play it safe” in social situations and present themselves in relatively neutral terms (a protective self-presentation strategy) which rarely leads to highly favorable or highly negative interactions
- E.g., In politics, the candidate who wins an election is often the one with the lowest negative rating rather than the one with the highest positive rating. As such, politicians often refrain from taking stands as it is more important to avoid alienating a block of voters than it is to favorably impress one

# **JONES' SELF-PRESENTATION STRATEGIES**

According to Jones (1990), there are five broad self-presentation strategies:

(1) **Ingratiation** (to get others to **like** you)

- Can be achieved through imitation, flattery, or displaying positive personal characteristics (e.g., warmth and kindness) etc. as people tend to like those who agree with them, say nice things about them, do favors for them
- May backfire if it is too blatant; however, most people want to believe they are likable and liked by others



r/djervavenue

u/thesesourtymes • 257d

## customer service is a joke

like i get the whole " we're so relatable and gen z " vibe they're going for, but every e-mail is filled with these condescending emojis (" e.g. so sorry you feel that way 🙄💔 ") and xoxo's. like you aren't my friend, you are a established brand that is supposed to be professional... and multiple complaints i have made about quality and errors in my orders they don't even apologize for THEIR MISTAKE or offer me a better solution.



76










17








Share

**Comments**

 **djerfavenue**  1d  
[redacted] or we have the duvet cover in sizes 140 x 200 and 240 x 220    
Reply

 [redacted]  
@djerfavenue will a larger size be available in the future? I'm a bit blindsided because I assumed it would have the same sizes as your other duvets.. 240x220 won't fit my king    
Reply

 **djerfavenue**  1d  
[redacted] crossing our fingers that it will in the future angel     
Reply

 **elianna7** • 220d  
It's literally so annoying like you are a business not my friend lol  
...  Reply  47 

 **MiserableCrow1680** • 220d  
They're quite unprofessional and often condescending. You can be friendly as a business but still be professional and answer costumers questions properly.  
...   17 

 **iamgettingaway** • 220d  
crossing my fingers that no one ever talks to me like this    
...   9 

# **JONES' SELF-PRESENTATION STRATEGIES**

## **(2) Self-promotion** (to convince others that you are **competent**)

- Can be achieved through “blowing one’s own horn” (i.e., performance claims and accounts) so that others perceive you to be intelligent, capable or talented
- Note that this rarely leads to strong feelings of liking; as such, people are often forced to blend or balance between ingratiation and self-promotion (e.g., modesty may be an effective form of ingratiation but it rarely instills a perception of competence)



Kala



@engineer.everything

47

Following

549.7K

Followers

5.1M

Likes

Follow

Message



~There has to be a better way~  
My new YouTube channel for backup  
@engineerkala

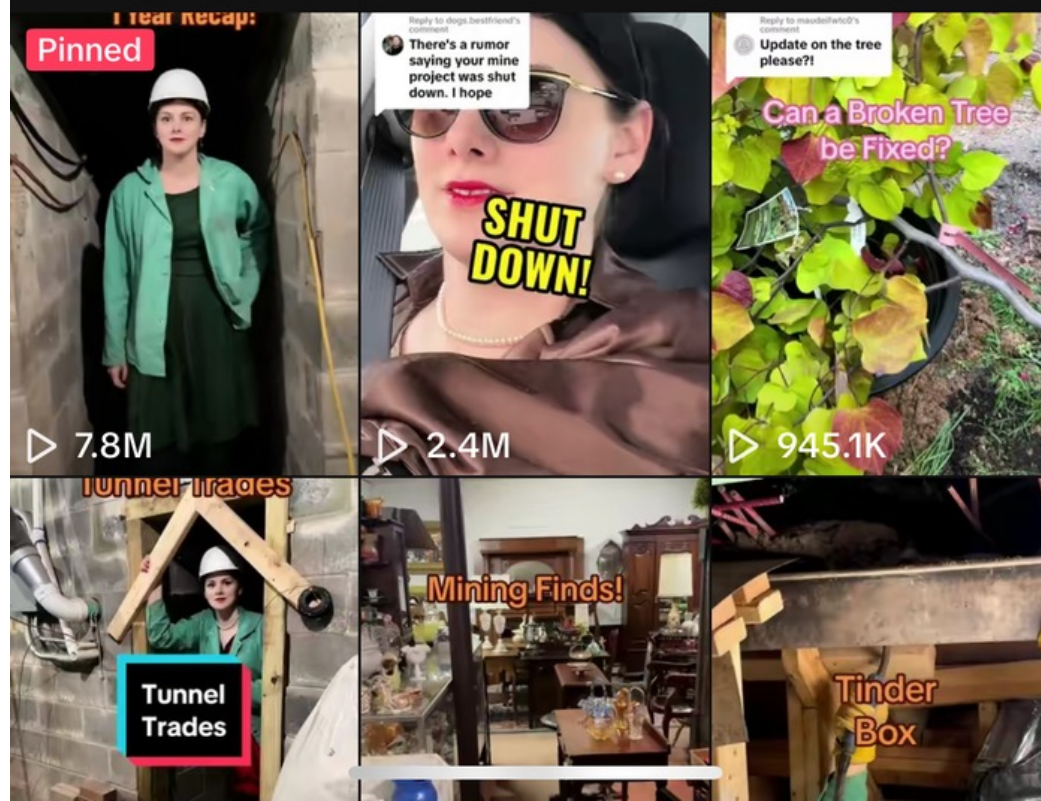
[amazon.com/shop/influencer-7b666187](https://amazon.com/shop/influencer-7b666187)

Showcase | Youtube | Add Yours



Geology!

Secret Tunnel



# **JONES' SELF-PRESENTATION STRATEGIES**

## **(3) Intimidation** (to get others to **fear** you)

- Can be achieved through threats or power (e.g., a manager may successfully get his staff to do his bidding because they fear the consequences of his response to failure)
- Note that threats do not necessarily have to be explicit in order to be effective

# JONES' SELF-PRESENTATION STRATEGIES

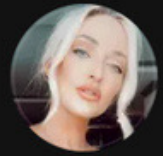
## (4) Exemplification (to project moral righteousness)

- Can be achieved through advocacy, taking a stand for worthy causes, displays of virtuous character (e.g., honest, disciplined, charitable, self-sacrificing)
- “The neighbor who bicycles to the train station may arouse our guilt as we climb into our gas-guzzling cars; supervisors who arrive early and leave late may exert exemplifying pressure on their subordinates even though they may take long lunches”
- Note that self-promotion and exemplification share the goal of being respected and admired, they differ in the specifics of what to be respected for

# **JONES' SELF-PRESENTATION STRATEGIES**

## **(5) Supplication (to appear **weak** and receive **help**)**

- Can be achieved through self-deprecation or advertising misfortune and helplessness, which makes salient a norm of obligation and social responsibility for those with greater resources
- May result in costs, such as being perceived as incompetent



dgraham618

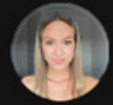
Make a trip to Kennesaw, ga I'm the manager at a med spa. Microneedling on us 💕

2023-12-23

Reply



♡ 9577



Em · Creator

This is so nice ❤️

2023-12-26

Reply

♡ 1306



mega meg

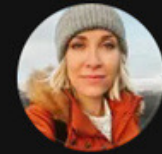
Baby girl, where was this at, I WILL GO TALK TO THEM FOR YOU ❤️

2023-12-28

Reply



♡ 766



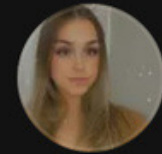
Jean Smith

Normal prices for micro needling. A lot of ads say "starting at." Yeah, that's on you, you always ask the total price before you get procedures done.

1-6

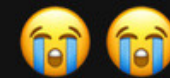
Reply

♡ 19



Kristina Kachanovich

in what world would microneedling be \$75 😭



2023-12-23

Reply

♡ 2776



Self-Presentational Strategy	Impression Sought	Prototypic Behaviors	Self-Presentational Risks
Ingratiation	Likable	Compliments, favors	Insincere, deceitful
Self-Promotion	Competent	Boasting, showing off	Conceited, fraudulent
Intimidation	Powerful, ruthless	Threats	Reviled, ineffectual
Exemplification	Virtuous, moral	Self-denial, martyrdom	Hypocritical, sanctimonious
Supplication	Helpless	Self-deprecation	Manipulative, demanding

# SNYDER'S SELF-MONITORING THEORY

Individuals also vary in terms of how motivated they are to engage in self-presentation entirely

- **High self-monitors** are “social chameleons”; they carefully regulate their self-presentations to make themselves more likable and socially desirable to their audience
- **Low self-monitors** are “true to themselves”; they value authenticity and care less about what the audience might think

Imagine that you and another person are discussing recent movies, and this person tells you that they liked a particular movie you did not like.

What would you do?

Would you (1) say you also liked the movie, even though you didn't; (2) voice your true opinion and admit you didn't like the movie; or (3) avoid taking a stand by changing the subject?

**All else being equal, high self-monitors are more likely to choose the first option compared to low self-monitors**

---

Component Processes	High Self-Monitor	Low Self-Monitor
Goals	Be the right person for the situation.	Be <i>me</i> in this situation.
Social Acuity	Highly adept at reading the character of the situation and the behavior of others, and able and willing to use this knowledge to construct a prototype of the model person for the situation.	Less adept at reading the character of the situation and the behavior of others. They based their behavior on personal attitudes, values, and dispositions.
Acting Ability	Superior acting ability allows them to modify their behavior to match the requirements of the situation.	Limited acting skills lead them to play similar roles in various situations.

# **MOTIVATIONS VS STRATEGIES**

Although self-presentation motivation may seem directly related to the various self-presentation strategies that an individual might employ, there are instances in which this is not the case

Just because someone is highly motivated to manage their impression does not necessarily mean that they are able to do so

# CONTEXT

Context influences which strategies people use online (Kuznekoff, 2012)

- Researchers examined three platforms: Facebook, a multiplayer first-person shooter game, and FatSecret (a social support community for weight loss)
- Facebook users primarily made use of ingratiation, in line with the goal of social networking
- Players of the first-person shooter game mostly chose intimidation
- Those who were part of the FatSecret community were more likely to use supplication to receive help and advice

# AUDIENCE

Most of the time, we are able to see our audience when managing their impression of us in an offline setting

- Knowing who is watching and listening allows us to tailor our self-presentation to that particular individual or group
- We also receive quick feedback from our audience (e.g., an arched brow, an approving nod)

Online, however, the audience is much more difficult to pin down

# AUDIENCE

- Facebook was initially created as a social network for college students to connect with fellow students at the same college
- However, the network now includes family members, distant acquaintances, friends of friends, work colleagues, high school classmates, and even strangers who happen to share the same interests
- A wallpost photo of a party you attended last night might not be what you'd like your grandmother or employer to see

This phenomenon is known as **context collapse**, or "the flattening of multiple audiences into a single context"

# AUDIENCE

How do people navigate context collapse?

- People may create one account on a socially oriented network to present the social self, but also create an account on LinkedIn to present a more professional self
- People may also opt for a “lowest common denominator” approach where self-presentation is watered down to avoid offending anyone in the overlapping audiences
- Some sites may allow for the segregation of audience, such that a user could designate different people as “close friends” vs “friends”

One might argue that if someone is truly presenting the real, authentic self, it should not matter who the audience is or whether the context is collapsing around us. Talking about the audience, some Twitter users discount the notion, preferring to emphasize a more consistent and honest self-presentation regardless of who is listening:<sup>29</sup>

*As an individual (not org or corp) it's worth it 2 me 2 lose followers  
2 maintain the wholeness/integrity of who/ what/how I tweet.*

*when I tweet, I tweet honestly, I tweet passionately. Pure expression of  
my heart*

But human beings don't have just one "self," and what constitutes that "self" changes depending on who we're interacting with and the context of the interaction. With some we are, and should be, more reserved about self-disclosure, and with others, we might interact in more personal ways. The strategies people use to manage these multiple online audiences on social networks are evolving; a few users, perhaps in exhaustion, just call it quits and delete their accounts.

# AUTHENTICITY

To what extent do people's public self-presentations reflect how they privately see and think about themselves?

- Individuals who present an insincere or inauthentic impression to others run the risk of being exposed as a fake or liar if their attempts are discovered (i.e., they may be held **accountable** for creating a false self-impression)
- This is especially so if future interactions are anticipated or if audiences have knowledge of their past



# CYBER PSYCHOLOGY

WEEK 3: THE ONLINE SELF 2

## **ON THE WHOLE...**

- Engaging in selective self-presentation online may help diminish the gap between one's actual and ideal/ought self, and reduce feelings of discomfort in the short-term
- This may not necessarily translate to any real change offline, and so may not be a most feasible long-term solution

## ON THE WHOLE...

- However, when an individual publicly announces an intention or “stakes a claim” to an identity, they may experience additional pressures to make good on their claims and turn it into a reality (i.e., **self-improvement**)
- E.g., Telling others that you’re a pilates girly may provide you with the motivation to work towards the outcome of regularly attending pilates classes

**ONLINE CUES &  
IMPRESSION FORMATION**

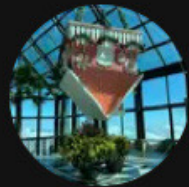


DerekHuff7

It's like he has never spoken to people before... How about, "how's your day", "what's your name"??? What on earth will he do with the info he collected. What weirdo.

8-24 Reply

♡ 2,826



user345556764

You cannot convince me that JD Vance isn't a Skyrim NPC

8-23 Reply

♡ 1,138



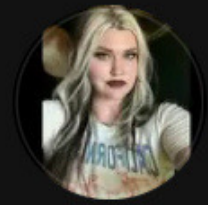


shannerie

"We really came just to go to Runza and we did a little rally on the side. 😊" he's so dad coded, I love it. 😂

8-19 Reply

♡ 21.9K 🗨️



WildSoulDesignArt

The way he waves when he walks in a place 🥺 Like a Papa waving to his grandbabies walking in the door for Christmas dinner

8-19 Reply

♡ 486 🗨️

# **S O C I A L C U E S**

What information do you use to form an initial impression of a person you've just met?

- **Social cues** are bits of information gleaned from a person or situation (e.g., dress sense, hairstyle, body language, vocal tone, etc.)
- Offline, these cues convey a wide range of information which enable us to interpret and respond to others, as well as form judgements about them

# SOCIAL CUES

People tend to leap to conclusions about others quickly, even with few cues to guide them (Asch, 1946)

- A man described as “intelligent, skillful, industrious, **warm**, determined, practical and cautious” was quickly assumed by participants to be honest, good-natured, wise, popular, sociable and imaginative
- However, when the word “warm” was substituted for the word “cold”, participants assumed that the man was unlikable, unpopular, and disagreeable

# **SOCIAL CUES**

“Warm” and “cold” are heavily weighted central traits that are used in the formation of a first impression

- The cues used to infer warmth tend to be nonverbal in nature (e.g., facial expressions, vocal patterns, body posture, gestures, eye contact)
- Words tend to take a back seat to other cues when drawing conclusions about warmth and coldness – unfortunately such cues have historically been less available online

# **S O C I A L C U E S**

In the early days of the Internet, the self had to be almost entirely expressed in written text

- Most theories argued that nonverbal and other traditional social cues were crucial for effective communication, self-presentation and impression management
- Much of the original research on impressions of warmth and coldness therefore showed that people tend to seem cooler, more task-oriented and irritable online than in person

## **S O C I A L   C U E S**

- Participants in a face-to-face meeting expressed more agreement while participants in a computer-mediated meeting expressed more disagreement and made less attempts to relieve a tense situation (Hiltz & Turoff, 1978)
- Participants who took the MBTI from the perspective of their colleague (with whom they had only communicated via email) were more likely to indicate that they were thinking rather than feeling types (Fuller, 1996)

# SOCIAL INFORMATION PROCESSING

According to social information processing (SIP) theory (Walther, 1992), the loss of nonverbal cues in computer-mediated communication (CMC) is not inherently detrimental to defining our impression of others

- Individuals are able to use whatever cues they have at their disposal in order to form impressions – that is, they are able to **compensate for absent social cues** through other means
- However, **more exchanges are required over time** in order to accumulate information about an online partner, since each exchange bears relatively less information than do offline exchanges

# EMOTICONS & IMPRESSIONS

Even in a text-only environment, people find new tools for self-expression and self-presentation

- Emoticons refer to the use of typographic symbols to depict an emotion or sentiment. Using just a keyboard, people are able to smile, frown, wink, and laugh online (e.g., ;) / :) / <3)
- Emoticons have since grown to become more accessible and nuanced with more sophisticated software (from a simple graphic smiley ☺ to Japanese emoticons (づ ◉\_◉ )づ to telegram stickers and gifs)

# EMOTICONS & IMPRESSIONS

Date: January 1

Subject: Question

Hi, can you send me the name and contact information of a tutor that can help me with the accounting class? Thanks. :)

- Students in a management course were tasked to judge this email and another one like it without the smiley face. The sender who added the smiley face was perceived as more likable (Byron & Baldrige, 2007)

# EMOTICONS & IMPRESSIONS

- Participants viewed a transcript of a conversation where a subject expert discussed a topic with a group. For half the participants, the transcript contained comments that included emoticons – in this condition, the expert was rated as more friendly and competent (Kalyanaraman & Ivory, 2006)
- Emoticons strengthened the intensity of a message when its contents were in the same direction (i.e., positive or negative; a criticism was seen as even more biting when a frown :- ( was included and vice versa). When the message was neutral, a smiley face led to a more positive interpretation while a frown led to a more negative interpretation (Derks et al., 2008)

# EMOTICONS & IMPRESSIONS

Context matters

- In a formal/business setting, emoticons may be viewed as offensive, immature and inappropriate
- Response rates from women decreased by 66% when men included a wink in their messages (Stamper, 2014)

# EMOTICONS & IMPRESSIONS

The recipient's personality also affects how emoticons are received

- Participants who scored lower on neuroticism were more affected by the the addition of a smiley face in the email, while those who scored higher on neuroticism were unaffected (Byron & Baldrige, 2007)
- Note that smiley-face emoticons help reduce uncertainty by signaling a positive affective tone, and those lower in neuroticism are more sensitive/receptive to positive cues

## **MORE CUES...**

- When little else is available, we are motivated to find something – anything – to base our judgments on
- Given that it is often time-consuming to collect information, and the mind is inclined to conserve energy and reduce cognitive load (i.e., a **cognitive miser**), we may overuse certain cues in impression formation
- Other typographic cues in computer-mediated communication (CMC) include the use of ellipses, repetitious punctuation marks, and capitalization of letters

Online text for many of us is now our primary form of communication. So necessarily, web culture started breaking all the traditional rules of grammar to make it better fit the medium, with trends like the extra space before punctuation ... or idiosyncratic capitalization to Make A Point.

# 13 Reasons We Type in Lowercase

## **Casualness (real)**

Messages typed all in lowercase can feel more offhand. The stakes feel lower, the vibe is calm. The first staff-wide email that David Haskell, the new editor-in-chief of *New York Magazine*, sent out was typed entirely in lowercase. I asked him about what it meant recently over Slack. “Low key?” he responded. And it was true; it had seemed that way. It was maybe even why I felt comfortable chatting him about his intentions behind an email in the first place, which I now feel weird about.

## **Casualness (false)**

Similarly, typing in lowercase (or inconsistent lowercase) can be a sign that someone is trying to convey casualness, even if they’re not actually feeling casual. For instance, if you want to conceal how long an email to a potential romantic partner took you to write, and how much you care about what the recipient thinks of it/you, it can be useful to go back in and change some of the “I’s” to “i’s” — inconsistently — to make it seem more dashed off. Is this pathetic? Yes. Is it a good idea? No. Does it show? Yes, probably. That’s never stopped me, though.



r/answers • 5 yr. ago  
ShadySima



## Why do some people type multiple commas in a row on social media?

Answered!

Example I saw on Twitter.:

"how do i have 8k followers i don't deserve any of you !!!!!!!!!!!!!!!!!!!!!!! thank you so much,,,,,"

Is this just some sort of typing idiosyncrasy or does this actually have context/meaning behind it? I usually see this on Tumblr or Twitter



hagearty • 5y ago

aesthetic and comedic value. they express a different voice over text.

"and i'm like,,,,,"

"and i'm like..."

i read the first one as being more dramatic, more annoyed. the second expressed an ellipsis' original function of trailing off. I use it mainly over text, but imo i use it because the people i text use it so, kinda up to the social aspect of language.

and yeah, sometimes it's just kinda goofy. Brandon Wardell's twitter is an example of that.

Just as when we speak, if we use certain words or phrases, it can indicate where we are from or where we grew up. Using periods or using proper capitalization can indicate that we are perhaps educated or that we are writers or that we are intellectuals or that we value a formal tone in some way. That says something about a person's style and personality. That's just another way of being able to express oneself in a kind of different way that might be slightly different from the people around you to be a little bit of an individual.

# EMAIL ADDRESSES

Back et al., 2008

- 600 participants provided their actual email addresses and identified various objective characteristics, such as the number of characters, number of digits, name of provider (Yahoo!, AOL, Hotmail, etc.) and top-level domain (.com, .net, .edu, etc.)
- 100 strangers were then asked to rate the email owners on the Big Five personality traits

<b>TRAIT</b>	<b>ADJECTIVES</b>	<b>SAMPLE ITEMS</b>
Extraversion	Active, assertive, energetic, outgoing, enthusiastic, talkative	I feel comfortable around people. I think a lot before I speak or act (reversed).
Openness to experience	Artistic, curious, imaginative, insightful, original, broad range of interests	I have a vivid imagination. I have difficulty understanding abstract ideas (reversed).
Agreeableness	Appreciative, forgiving, generous, kind, sympathetic	I sympathize with others' feelings. I feel little concern for others (reversed).
Conscientiousness	Dependable, responsible, productive, ethical, high aspirations, not self-indulgent	I am always prepared. I often forget to put things back in their proper place (reversed).
Neuroticism	Anxious, self-pitying, tense, touchy, unstable, worrying	I worry about things. I seldom feel blue (reversed).

<sup>a</sup> Items identified as "reversed" were reverse scored, so that stronger agreement indicates lower scores on the trait.

# EMAIL ADDRESSES

- Those with funny email addresses or fantasy characters in their address were rated as more extraverted
- Email addresses that seemed to belong to female owners were rated as more neurotic, open to experience, agreeable and conscientious
- Email addresses with more dots and characters were thought to belong to more conscientious owners
- Owners of salacious or self-enhancing email addresses (e.g., “tufdude” or “foxylady”) were perceived as narcissistic

# INTENDED VS UNINTENDED CUES

Self-presentation involves strategic elements

- One way in which individuals tactically manage their impressions online is by selectively disclosing information about themselves (e.g., hobbies, attitudes, interests) which best serve their current purposes
- **Identity claims** are deliberate self-disclosures by an individual
- However, individuals also leak unintentional cues which are referred to as **behavioral residue**

Without ever meeting the occupant of an office workspace or a bedroom, could you accurately judge his/her personality?

- A clean, orderly, uncluttered room could indicate that the inhabitant is conscientious
- A room with distinctive decorations (magazines, books, CDs) may indicate that the inhabitant is open to experience
- A colorful, cluttered and inviting space could indicate that the inhabitant is sociable and extraverted

# BEHAVIORAL RESIDUE

Such behavioral residue can similarly be found in online spaces (e.g., email addresses, emoticons, comments, number of followers...)

- When observers form an impression of your online persona, they are likely to take into account the extent to which the behavioral residue is within your control
- If the residue is not within your control, observers may ignore it — conversely, they may decide that the cue is more valuable/believable precisely because you were unable to manipulate it

# **PERSONAL WEBSITES**

Personal websites differ from social network profiles, because they are publicly accessible and serve as digital billboards

- The content serves as a collection of identity claims, carefully selected to create a specific impression
- Unless the website owner allows visitors to comment, all behavioral residue are within their control

# **SOCIAL NETWORK PROFILES**

On the other hand, the nature of social networking platforms result in a lot more behavioral residue

- Observers tend to perceive profile owners whose wall posts include attractive friends as more attractive
- Observers rated profiles with larger friendship networks as most likable and physically attractive at about 300 friends, but this dropped off as the number of friends increased (they were perceived as more extraverted but not necessarily likable or physically attractive)

# **LOOKING THROUGH A LENS**

To navigate the complexities of online impression formation, we can consider the following questions:

- (1) What cues are people using to form impressions?
- (2) Which available cues are actually valid predictors of someone's personality?
- (3) Are people using the right cues that lead to accurate impressions?

**TECHNOLOGICAL FEATURES  
& AFFORDANCES**

# **H Y P E R P E R S O N A L   C O M M U N I C A T I O N   M O D E L**

The hyperpersonal communication model (HPCM; Walther, 1996) builds on the central assumption of social information processing theory

- However, the model focuses on the features and affordances of technology which benefit self-presentation
- These features may subsequently lead to CMC becoming **hyperpersonal**, or more socially desirable than face-to-face communication

# **H Y P E R P E R S O N A L   C O M M U N I C A T I O N   M O D E L**

## (1) Greater degree of editability

- Users typically construct their message in its entirety before sending it, and the recipient does not have access to the message as it is being constructed
- Even when communication takes place in relative “real-time” (e.g., instant messaging services like WhatsApp), users are still afforded time to reflect on and edit their message before delivery
- This gives users the opportunity to deliberate more deeply on how they want to appear to others

# **H Y P E R P E R S O N A L   C O M M U N I C A T I O N   M O D E L**

(2) Asynchronous communication (i.e., exchange of information takes place outside of real-time)

- Users can respond to others at their own convenience or take part in group activities and processes independently in time
- Moreover, as the sender does not have access to the receiver's whereabouts and current activities, it cannot be presumed that the recipient is available or able to respond
- Again, this gives users the opportunity to deliberate more deeply on the content of their message

# **HYPERPERSONAL COMMUNICATION MODEL**

(3) Lack of physical proximity to recipient

- Unwanted spontaneous communication cues (e.g., blushing, shaking or mismanaged eye contact, which may reflect negatively on the communicator) can be better concealed online
- This allows users to accentuate the image they wish to convey and to mask the image they do not wish to convey

# **HYPERPERSONAL COMMUNICATION MODEL**

## **(4) Reallocation of cognitive resources**

- It is cognitively demanding to attend to the activities of others (e.g., monitoring feedback, use of nonverbal cues) and manage one's own use of nonverbal behavior at the same time
- When these factors are removed from the communication context, cognitive resources which would ordinarily be dedicated to these activities may be reallocated to eloquent and coherent expression

# **ANONYMITY & PSEUDOANONYMITY**

Users are able to interact with others with some level of perceived anonymity

- Although users are expected to make themselves known in some online spaces (e.g., Facebook, LinkedIn), other spaces provide users with more freedom to hide aspects of their identity (e.g., Reddit)
- Note that no one is ever truly anonymous online, as an individual could potentially be identified and located through their IP address even in the absence of any personally identifiable information

# ANONYMITY & PSEUDOANONYMITY

- Anonymity may help users feel more at ease disclosing information that they would otherwise feel uncomfortable revealing; there could be fewer consequences if others are unable to link information to the offline self
- According to the **equalization hypothesis**, anonymity creates a more level playing field by giving a voice to those who are typically viewed as less powerful (e.g., minority group members, people with disabilities)

# ANONYMITY & PSEUDOANONYMITY

Is anonymity a simple dichotomy?

Some researchers propose that anonymity is better conceived as points along a continuum

- **Objective aspects** shaped by the features and affordances of the technology (e.g., whether the option is given to include a photograph)
- **Subjective aspects** shaped by the extent to which an individual perceives themselves to be identifiable to others (e.g., an individual may feel “safe” online as other users are geographically dispersed and unlikely to identify them offline)

# ANONYMITY & PSEUDOANONYMITY

Pseudoanonymity refers to instances where individuals adopt false names and identities online

- Pseudonyms allow individuals to explore different identities, which would be less likely on sites that try to tie users to a single “real” identity (e.g., Facebook)
- This is especially beneficial when it involves types of self-presentation that would be viewed negatively by mainstream society (any behavior that goes against morals or social norms), or when the individual desires to keep their online identity practices separate from their offline self

# THE UNHEALTHY SELF

- Some online spaces are designed to draw people into a promotion of a negative, unhealthy self by reaffirming skewed self-judgments (e.g., #edtw, groups that promote suicidal or terrorist ideations)
- An extremely underweight individual who is drawn to a pro-anorexia website may see images of other underweight individuals receiving praise and adoration, which inculcates a sense of acceptance for that body style
- This may result in online interactions becoming hyperpersonal; an individual may neglect offline relationships that offer healthier interactions in favor of the opinions they receive online

# **JOURNAL ARTICLES**

- What is the main argument put forth by the authors?
- What were the proposed hypotheses/expected findings? Any specific theories or theoretical frameworks?
- How were they tested?
- Do the results support the proposed hypotheses? Do you agree with the results?

# **WHO AM I?**

Emanuel et al., 2014

# MAIN ARGUMENT

- The Internet is not a single homogenous space, so studies should not simply compare generic online behavior to generic offline behavior
- Specifically, self-disclosure across discrete online contexts is likely shaped by three factors: the function of the online space; the social norms governing interaction within that space; and the perceived audience that one may encounter

# MEASURES

## Twenty Statements Test (TST)

- Participants provided 20 different statements to the question “Who am I?”
- The instrument is context-free, allows for exploration of information patterns (quantity and type), and is sensitive enough to capture multiple selves and the effects of context on self-presentation

Individual difference measures including personality traits, self-awareness, self-monitoring and social desirability

# PROCEDURE

- In the **private disclosure** phase, participants completed the TST and provided 20 different statements
- In the **public disclosure** phase, participants were assigned to one of four conditions (offline context/generic online context/specific online contexts: dating or job-seeking) and were told that their answers would be made available to others. They were given the opportunity to review and withhold any statements
- In the **questionnaire** phase, participants completed the series of personality and individual differences questionnaires

# VARIABLES

- IV: Context of public self-disclosure (offline/generic online/specific online - dating/specific online - job-seeking)
- DV: Participants' withholding behavior (number of statements withheld divided by the number of statements initially provided)
- Other potential IVs: Individual differences variables (big five personality traits, self-awareness, self-monitoring, social desirability)

# **HYPOTHESES**

(H1) Those in the offline context should exhibit the highest withholding behavior relative to all other online contexts

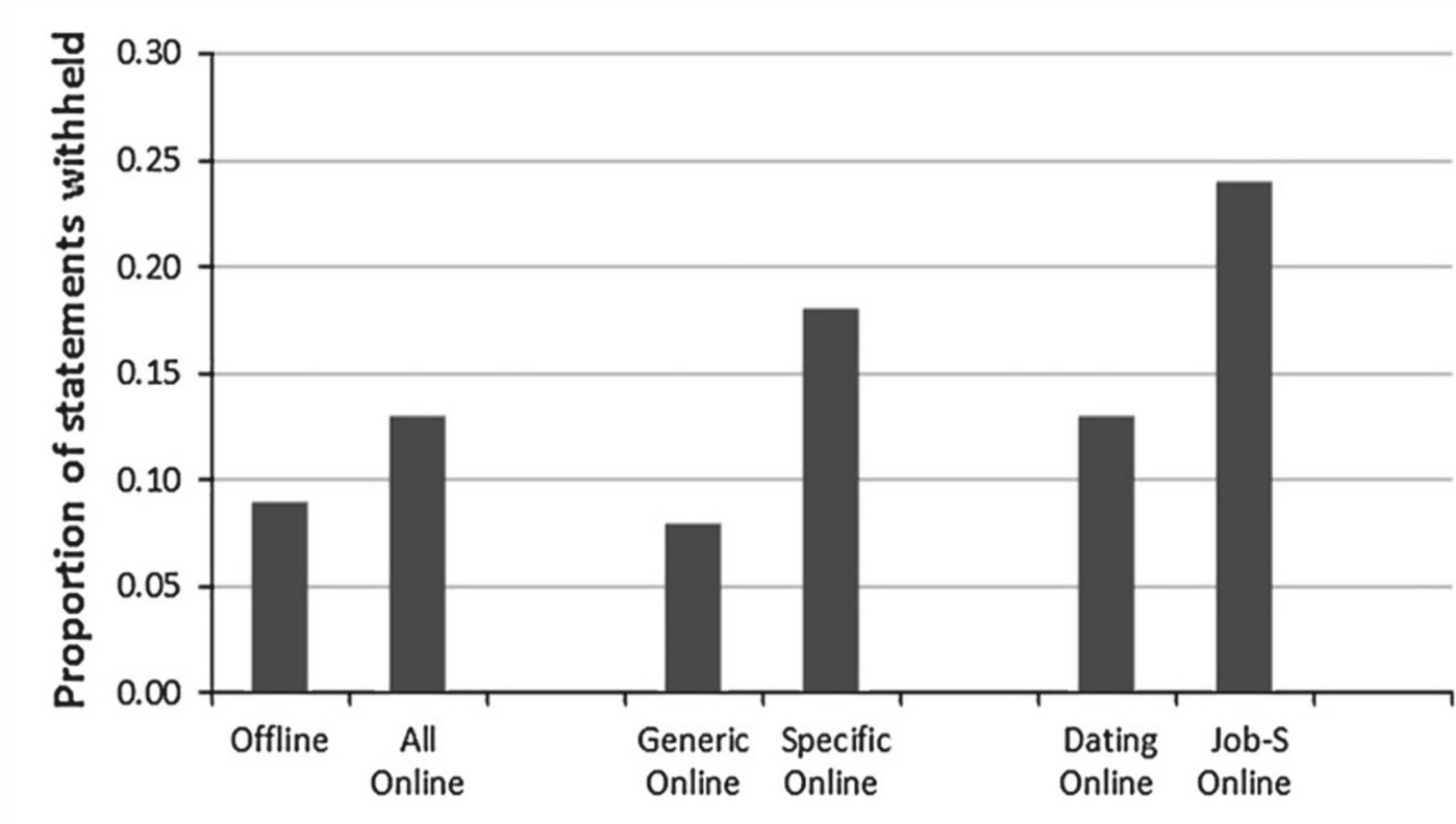
- This is in line with predictions that anonymity encourages greater self-disclosure online than offline (McKenna & Bargh, 2000; Newman et al., 2002)

(H2) There should be differences between generic and specific online spaces regarding the amount of statements withheld and the type of statements revealed

- This is in line with predictions that online spaces differ due to their function, norms and perceived audience (Van Dijck, 2013)

# RESULTS

- As context became more precise, proportion of information withheld increased

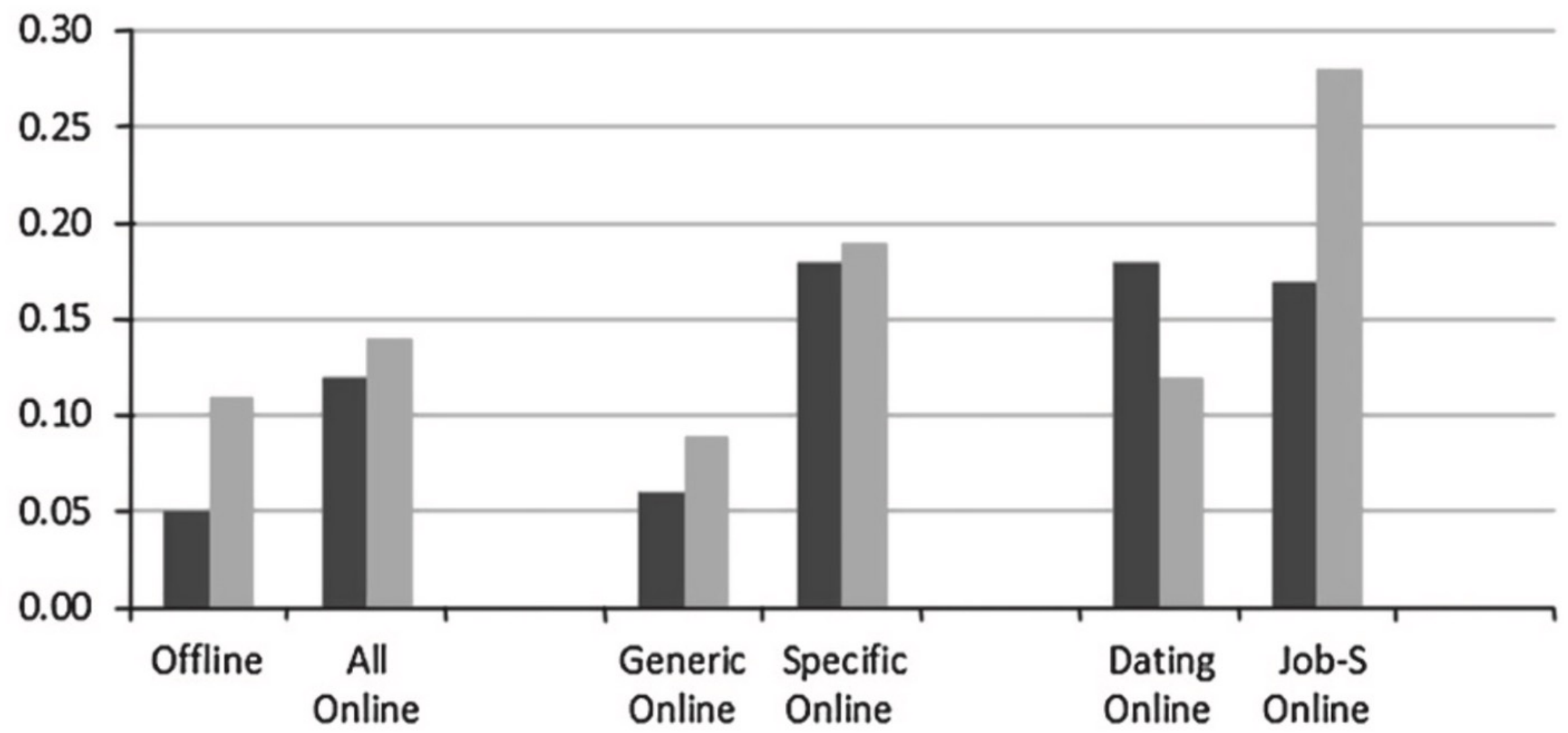


# RESULTS

- Objective statements contained information that was factual or easily verifiable by a third party; subjective statements contained information that was value-driven or required knowledge of the person to be verified
- No difference in subjective statements, but participants withheld fewer objective statements offline vs all other online conditions
- Participants withheld fewer subjective and objective statements in generic online vs specific online condition
- No difference in objective statements, but participants withheld fewer subjective statements in online dating vs online job-seeking condition

Proportion of statements withheld

■ Objective ■ Subjective



# RESULTS

- Participants were more willing to self-disclose offline vs. online, contrary to the expectation that perceived anonymity would lead to greater instances of personal disclosure (H1 ✘)
- Context of online spaces influenced both the amount and type of information disclosed (H2 ○)
- No influence of individual differences on self-disclosure across different contexts

**CLICK HERE TO LOOK CLEVER**

Johnson & Ranzini, 2018

# MULTIPLE SELVES

Higgins distinguished between two viewpoints through which the self is perceived:

- An individual's **own** viewpoint
- The viewpoint of some **other** person (e.g., generalized others or significant others such as one's family, friends, etc.)

# MULTIPLE SELVES

Users of social networking sites have an incentive to balance between presenting their actual, own-ideal, and other-ideal selves

- The **own-ideal** refers to an ideal self which responds to an individual's own idea of how they wish to be seen
- The **other-ideal** refers to an ideal self which responds to expectations from an audience that an individual wishes to attract

# MULTIPLE SELVES

According to SDT, individuals are motivated to reduce self-discrepancies in order to reduce discomfort and a sense of inauthenticity

- An **actual/own-ideal discrepancy** may lead to feelings of disappointment or dejection stemming from the perception that an individual's ideals may not be realistically met
- An **actual/other-ideal discrepancy** may lead to feelings of shame, anxiety or embarrassment stemming from the gap between an individual's actual identity and what they feel others would like them to be

# SELECTIVE MEDIA SHARING

- CMC and social media provide affordances for self-presentation through new ways of interacting with content (e.g., embedding, sharing, discussing and commenting on books, films, shows, games etc.)
- According to Belk's (1988, 2013) **extended self-concept**, individuals encompass possessions as part of their self-concept; "the online sharing of digital content and sense of joint possession enhances the sense of imagined community and aggregate extended self in a digital age"

# MAIN ARGUMENT

- Online users often need to summarize their identity into “reduced cues”, which infuses each of their messages with a self-disclosing power (i.e., any type of content shared online can be employed to steer others towards a specific impression of the self)
- Motivations to reduce self-discrepancies between an individual’s actual and possible selves (own-ideal/other-ideal) are likely to shape patterns of media content shared online

# PROCEDURE

- Participants were asked to imagine a situation in which they (a) wished to express themselves authentically (actual self); (b) wished to make a highly positive impression on others (own-ideal self); (c) wished to express their identification with a valued social group of their own choosing (other-ideal self)
- They were then asked to list three songs/artists and three films they would most likely post or discuss on their Facebook page in the given scenario
- Participants finally reported their perceptions of their selections in terms of uniqueness, prestige and guilty pleasure

# VARIABLES

- IV: Self-presentation motivations (presenting the actual self/own-ideal self/other-ideal self)
- DV: Perceptions of uniqueness, prestige and guilt
- Moderators: Individual differences variables (self-esteem, self-monitoring, need for uniqueness, involvement, sharing propensity, intensity of Facebook use)

# HYPOTHESES

(H1) A motivation to present the other-ideal self will produce sharing of less unique (i.e., more popular) music and film than will other motivations

- This is in line with Brewer's (1991) optimal distinctiveness theory; when group norms are important, the individual should be motivated to adhere to what is popular with others

(H2) A motivation to present the own-ideal self will produce sharing of more prestigious music and film than will other motivations

(H3) A motivation to present the actual self will produce sharing of more guilty pleasure music and film than other motivations

# RESULTS

An other-ideal motivation consistently produced less unique (i.e., more popular) choices for media sharing (H1 )

- The effect on music was moderated by intensity of Facebook use (i.e., more intensive Facebook users did not exhibit this tendency when given an other-ideal motive)

An own-ideal motivation led to more prestigious media being shared (H2 )

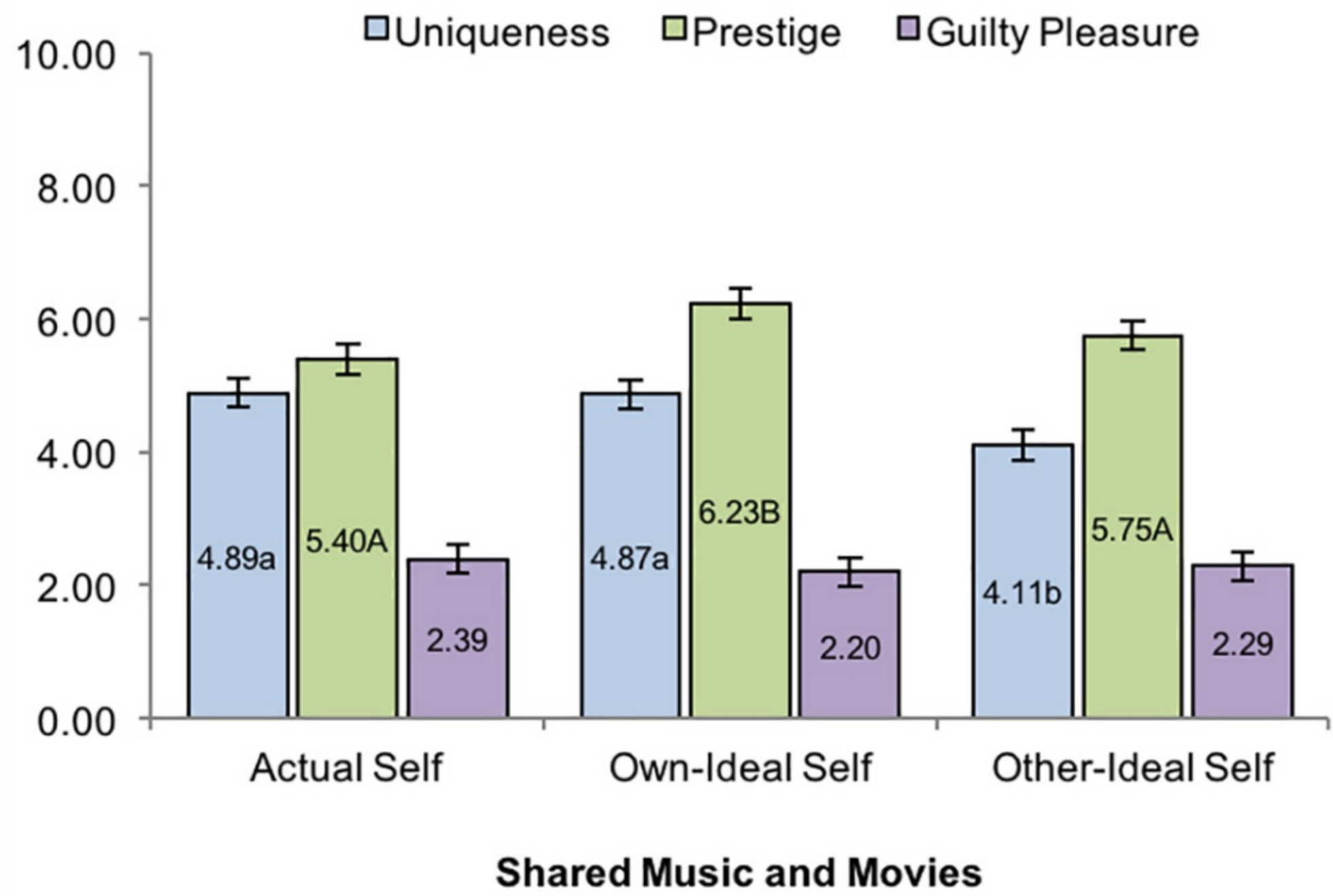
- This was moderated by need for uniqueness (i.e., those with a low need for uniqueness were more likely to share prestigious media when given an own-ideal motive)

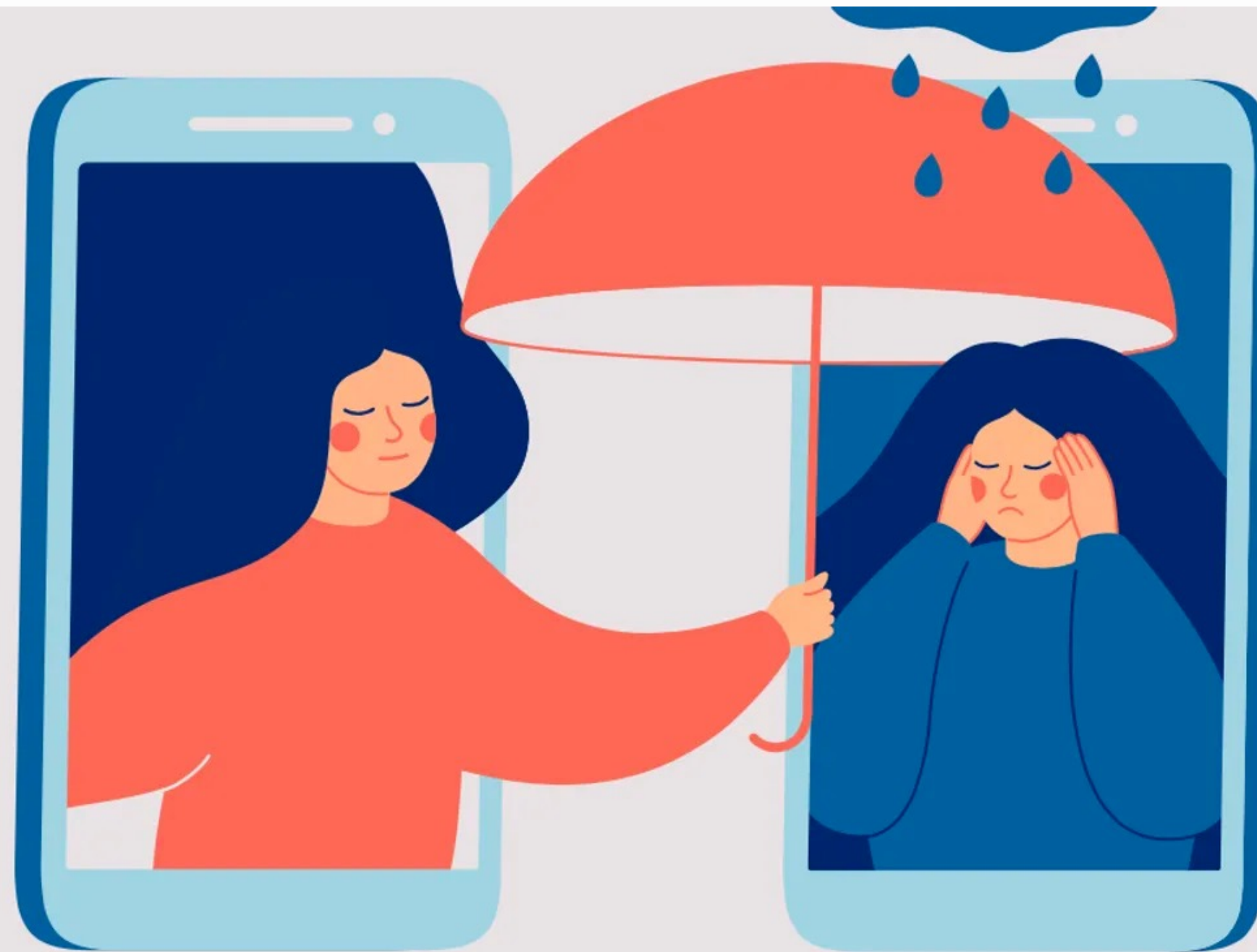
# RESULTS

An actual self motivation did not lead to more guilty pleasure media being shared (H3 **X**)

- This was moderated by need for uniqueness (i.e., those with a high need for uniqueness were more likely to share guilty pleasures when given an actual-self motive)

Self-esteem, self-monitoring, involvement and sharing propensity were not found to moderate the relationship between motives and media sharing





**CYBER**

**PSYCHOLOGY**

WEEK 4: INTERPERSONAL RELATIONSHIPS

# **S O C I A L N E E D S**

# THE SOCIAL INTERNET

The Internet has become more social over the last two decades

- Developments in technology (such as the ability to access the Internet on mobile devices) mean that social interaction can take place almost any time, anywhere today
- Unsurprisingly, the fulfillment of social needs has become one of the key motivations driving Internet use

# SOCIAL MEDIA

Social media platforms, in particular, may offer the fulfillment of social and interpersonal needs in ways that face-to-face communication and other forms of media cannot

- E.g., Constant and immediate social interaction; the need to belong; social compensation
- Social media is referred to as any online platform that (1) allows and encourages social interactions with others, and (2) allows users to create content with the intention of sharing it with others

# NEED TO BELONG

People are driven by a fundamental need to make and keep social connections (Baumeister & Leary, 1995)

- We find comfort and meaning and social connections, and have adapted physical and cognitive strategies to maintain our presence in groups
- E.g., Being ostracized (excluded and ignored) activates areas of the brain associated with physical pain, effectively “punishing” isolation and motivating behaviors to build and restore social bonds

# NEED TO BELONG

Sheldon et al. 2011

- More frequent Facebook use was associated with greater feelings of connection AND disconnection
- Process 1 (**need as a motive**): Feelings of disconnection motivates greater Facebook use as a coping response (“When I am feeling lonely or out of touch with others, I typically go on to Facebook”)
- Process 2 (**need as an outcome**): Greater Facebook use results in feelings of connection, thus rewarding and maintaining its use

# NEED TO BELONG

Grieve et al., 2013

- Participants completed two identical social connectedness scales, one with reference to face-to-face interactions and the other with reference to Facebook interactions
- Results showed that **the scales did not measure the same construct**; social connection experienced through social media use is not the same as social connection derived from face-to-face settings
- Facebook may act as an alternative social outlet to offline environments, in which people may develop and maintain relationships

# SELF-DISCLOSURE

According to Walther's (1996) hyperpersonal communication model, online interaction has a **disinhibiting effect**

- Technological features and affordances allow users to be selective about how they would like to present themselves, increasing feelings of disinhibition (e.g., they loosen up, express themselves more openly, etc.)
- This results in more intimate relationships, as users are more likely to engage in self-disclosure

# SELF-DISCLOSURE

Self-disclosure (i.e., the sharing of intimate, personal information) is a critical component of relationship formation and maintenance

- Self-disclosure is the most commonly offered definition for intimacy (Parks & Floyd, 1996)
- Self-disclosure is also strongly linked to liking; individuals self-disclose more to those they already like, and they like those to whom they have self-disclosed (Collins & Miller, 1994)

# SELF-DISCLOSURE

Park et al., 2011

- Amount of self-disclosure and degree of positive self-disclosure (i.e., disclosing positive information about the self) were positively related to feelings of intimacy towards Facebook friends
- Honest and intentional self-disclosure was not related to feelings of intimacy, suggesting that certain aspects of self-disclosure which translate into intimacy in face-to-face interactions may not necessarily hold the same value in online interactions

# **S O C I A L   S U P P O R T**

The exchange of social support is an integral component of social interaction

- Social support refers to the perception or experience that one is cared for by others, esteemed and valued, and part of a social network of mutual assistance and obligations (Wills, 1991)
- Social support is a crucial resource when facing challenges, and promotes both physical and psychosocial wellbeing

# SOCIAL SUPPORT

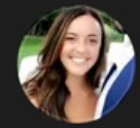
According to the Social Support Behavior Code (Cutrona & Suhr, 1992), there are five general categories of social support:

- **Emotional support** – expressions of physical affection, empathy, understanding and encouragement
- **Informational support** – provision of facts, guidance, or advice
- **Esteem support** – compliments and expressions of agreement with a support seeker
- **Network support** – expressions of companionship and connection; making a support seeker feel like part of a wider community
- **Tangible support** – provision of physical or financial assistance



**POV: you have an  
emotional support water  
bottle**

🎵 @urbanoutfitterseu



Alexandra Kay

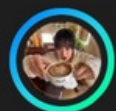
Okay, I need someone with your expertise. My husband and I are going in NOV as first-timers. I am literally CRASHING OUT about where to stay while in Tokyo. I know Shibuya & Shinjuku would be too chaotic for us. ChatGPT is convincing me that Daikanyama/Nakameguro aligns with my style of travel but I feel like it may be far from things?! I see a lot of recs for Akasaka , Ginza, Uneo. But I'm in a mental block right now. Where would you suggest? We're pretty seasoned travelers in general so we're up for whatever but i think location is key for Tokyo and I'm so lost 😭 it doesn't help we booked last minute and are going early November! Everything is sold out 😭

2025-9-22

Reply



❤️ 4



Shelby's Cafe Diary · Creator

Daikanyama and Nakameguro are NOT far from everything. They're very close and easy access to Shibuya, Shinjuku,



kojiwoji\_

Do you have any recommendations on certain places nearby Shinjuku or Shibuya? And best way to get around after getting a suica card

2025-10-14

Reply



❤️ 2



— View 1 reply ▾



I hope this finds you well

What do u think of Akasaka?

2025-7-7

Reply



❤️ 2



Shelby's Cafe Diary · Creator

I actually used to work in that area haha. There are a lot of hotels so it's nice but personally I don't like it as much as other areas! BUT if convenience/budget is your priority then it's a good choice!

2025-7-7

Reply

❤️ 2



# SOCIAL SUPPORT

Note that requests for social support typically involve an acknowledgment that the requester needs help (e.g., an admission of difficulty or emotional distress)

- This suggests that many social support requests function similarly to **emotional self-disclosure** (i.e., sharing information regarding one's emotional state), the type of self-disclosure best suited for building intimacy in interpersonal relationships
- Therefore, some of the benefits of social support may not necessarily be derived from the support itself, but from the opportunity to strengthen a relationship via intimacy

# **SOCIAL SUPPORT**

Social support may be derived from social media in various ways

- Likes (Instagram, Facebook)
- Favorites (Twitter)
- Upvotes (Reddit)
- Shares
- Comments
- Direct messages

Such cues and behaviors are evaluated with respect to one's situation, resulting in higher or lower levels of perceived support

# SOCIAL SUPPORT

Users make use of different social platforms to access different types of social support (Hayes et al., 2016)

- Facebook, Tumblr and Twitter were mentioned as platforms where seeking **emotional support** is OK, but participants noted it depended on what you used Twitter for and who your network was (e.g., some use Twitter for professional networking)
- Snapchat, Instagram and LinkedIn were mentioned as platforms participants would not use for emotional support (“No one likes a sad Snap or a gloomy Instagram”)

# SOCIAL SUPPORT

- Participants overwhelmingly mentioned Facebook as the platform they would use to seek **informational support**; other platforms were perceived as unhelpful to informational inquiries (“Trying to get help from your friends on Snapchat is just asking for fake shit”)
- Snapchat was favored by participants as the platform for **esteem support** due to its close and smaller network (“There are no rando[m] followers on Snapchat, you really know almost everyone...so if I had to ask about something more personal that’s where I’d go”)
- Participants indicated that social media would not be the place they sought **tangible support**, unless a private direct message was involved

# SOCIAL SUPPORT

- The concept of “chronic bitches” was also brought up across all focus groups, suggesting that if an individual seeks social support too often on social media, they may experience **diminishing returns**
- Most platforms were composed of **both strong and weak ties**; the only platforms that seemed to be composed of mostly weak ties were LinkedIn and Pinterest, which was unsurprising given their professional nature

# **S O C I A L   C A P I T A L**

Social capital is an elastic term with a variety of definitions in multiple fields

- Broadly, social capital refers to the potential benefits (or resources) we can receive through our relationships with others (Lin, 1999)
- The ability to form and maintain relationships is a necessary precondition for the accumulation of social capital

# SOCIAL CAPITAL

While social capital may be conceptualized at various levels (e.g., community, organization), our focus is on the individual. According to Putnam (2000), individual-level social capital can be separated into two broad types:

- **Bridging capital** stemming from “weak ties”, or loose connections between individuals who may provide useful information or new perspectives for one another
- **Bonding capital** found between individuals in tightly-knit relationships which provide emotional support (e.g., family, close friends)

# SOCIAL CAPITAL

- Social network sites may facilitate new forms of social capital and relationship building as photo directories and search capabilities support greater online linkages (Resnick, 2001)
- Specifically, bridging capital may be augmented by social network sites which enable users to create and maintain larger, diffuse networks of relationships cheaply and easily (Donath & Boyd, 2004)
- **Mutual surveillance**, or the use of social media to learn more about one's existing offline friends and vice versa, has been viewed as a way of increasing social capital (Kibby & Fulton, 2014)

# **S O C I A L   C A P I T A L**

- High-intensity use of Facebook is associated with high levels of bonding social capital (Ellinson et al., 2007)
- Information seeking on Facebook is associated with bonding and bridging capital, as it enables users to learn about potential commonalities (e.g., shared interests, mutual friends) which may then act as a catalyst to encourage online and offline communication (Ellinson et al., 2011)

# SOCIAL CAPITAL

- Technology provides the technical ability to communicate, but this alone is often insufficient for relationship development (e.g., calling total strangers on the telephone is unlikely to result in new relationships)
- Facebook, however, provides a rich collection of social context cues (e.g., mutual friends, shared interest, etc.) which can guide conversations and help participants to find common ground
- The information typically provided on Facebook profiles serves as a **social lubricant**, providing users with information that is critical in deriving benefits through the technical ability to connect

# **TECHNO FERENCE**

# TECHNOLOGY INTERFERENCE

- There are innumerable benefits of technology use, including social connectedness and the meeting of social needs
- However, technology use sometimes bleeds into our daily interactions, leading to interference or disruption
- Researchers have used the terms **technoference** (technology interference) or **phubbing** (phone snubbing) to describe the interruptions in relational interactions that can occur from technology use

# ROMANTIC RELATIONSHIPS

According to **displacement theory** (McCombs, 1972), technology use and relationships exist on opposite ends of a spectrum, such that time spent on one displaces time spent on the other

- Time spent on social media and smartphones may displace meaningful interactions with one's partner (e.g., not being fully present during conversations or shared time together)
- E.g., Conflict over video game playing in relationships may not stem from the game playing itself, but because it displaces time available for other activities with one's partner (Coyne et al., 2012)

# ROMANTIC RELATIONSHIPS

Przybylski & Weinstein, 2012

- Participants were paired and asked to spend 10 mins discussing an interesting event that took place in the past month
- Participants reported lower relationship quality and less closeness with their partners when a phone was present (placed on top of a book on a nearby desk outside of participants' visual field) than when it was absent
- Results suggest that the mere presence of a phone undermines perceived closeness, connection and conversation quality

# ROMANTIC RELATIONSHIPS

Amichai-Hamburger & Etgar, 2016

- Participants filled out two sets of questionnaires, one measuring romantic intimacy and another measuring smartphone interference in daily life (“Even when I have other things to do, I find myself saying ‘just a few more minutes’ and continue to use my mobile phone”)
- This was done twice; once in relation to themselves, and once in relation to their partner

# ROMANTIC RELATIONSHIPS

- Results showed that only the partners' smartphone multitasking was negatively related to ratings of romantic intimacy (i.e., participants' own smartphone multitasking scores were not significantly related)
- Even individuals who believed they multitasked more often than their partners believed that their own behavior was less related to their intimacy ratings
- Participants attributed their multitasking behavior to situations, but attributed their partners' behaviors to intentionality (e.g., an individual believes that they multitask only when an issue requires urgent attention, but that their partner multitasks because they do not care about intimacy)

# PARENTING & FAMILY RELATIONSHIPS

- Bids for attention were less successful when a child's caregiver was distracted by their phone, compared to some other distraction (e.g., conversation with another adult, reading the newspaper, etc.; Hiniker et al., 2015)
- Daily associations have been demonstrated between parents' problematic phone use and children's negative behavior, such that on days when parents struggled more with their device use, child behavior appeared to worsen (McDaniel & Radesky, 2017)

# PARENTING & FAMILY RELATIONSHIPS

McDaniel & Radesky, 2018

- Greater technoferece in parent-child relationship led to greater child behavior problems at later time points
- However, greater child behavior problems also led to increases in parents' stress levels and greater frequency of technoferece
- That is, children reacted to their parents' distraction with poor behavior, and parents reacted to their children's poor behavior by withdrawing to technology, creating a dysfunctional circular process in the family

# **JOURNAL ARTICLES**

- Define loneliness and the need to belong, and identify the link between the two concepts
- Identify the three theoretical frameworks reviewed in this article. Do they concur or differ in their implications regarding the relationship between social media use, belonging and loneliness?

# **BELONGING AND LONELINESS IN CYBERSPACE**

Smith et al., 2021

# LONELINESS

A subjective experience of distress that occurs when one's social relationships are perceived to be less than desired (Hawkley & Cacioppo, 2010)

- May be related to quantity and quality of relationships with others
- Research has shown that lonely people often feel misunderstood and that their relationships lack meaning (Lim et al., 2016)

# LONELINESS

Weiss (1973) identified three dimensions of loneliness

- **Emotional/intimate loneliness** — the perceived lack of a significant other or others to depend on for emotional support
- **Relational loneliness** — the perceived absence of family or friend connections on whom to count for instrumental support (e.g., advice, assistance with projects, loans)
- **Collective loneliness** — the perceived lack of a sense of inclusion in a network of others with common interests or values (e.g., clubs, hobbies)

# NEED TO BELONG

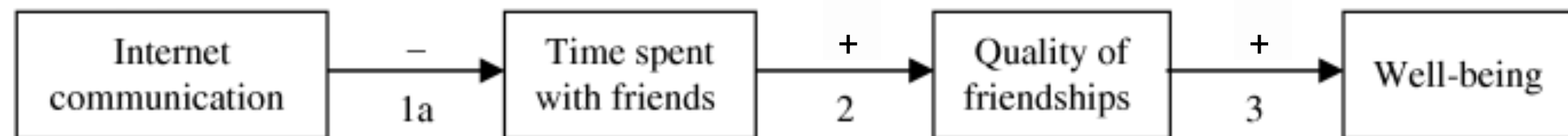
- A fundamental need to feel accepted by others and be part of a group (Maslow, 1968); a desire to bond with others in stable, meaningful and emotionally supportive ways
- When the need to belong is unmet, feelings of isolation, rejection and alienation are likely to arise (i.e., the unmet need to belong is likely associated with feelings of loneliness, and vice versa)

# SOCIAL DISPLACEMENT

(1) The use of social media and the Internet displaces time spent in face-to-face social interactions

(2) The type of social connections established and maintained online are qualitatively different, perhaps inferior, to those that take place in person (i.e., time spent on shallow online relationships displaces more meaningful offline relationships)

## Displacement Hypothesis



# SOCIAL DISPLACEMENT

- Results from a longitudinal study showed that increased Internet use was associated with decreased social support and increased feelings of loneliness (Kraut et al., 1998)
- This effect was referred to as the **Internet paradox**, whereby a medium intended to provide greater access to social communication resulted in lower social wellbeing
- However, the study had two key limitations: (1) use of snowball sampling affecting baseline loneliness and (2) operationalization of Internet in terms of informational or communication (email and specific types of web chat) use

# SOCIAL DISPLACEMENT

- Overall, studies provide limited support for online communication media displacing close friends and family relationships, leading to poor wellbeing outcomes
- Possible that the relationship between Internet/social media use and loneliness is **curvilinear**, rather than linear – according to the **Goldilocks Hypothesis** (Przybylski & Weinstein, 2017), moderate levels of social media screen use may be beneficial for wellbeing

# **RICH-GET-RICHER**

- Individuals with high social capital and personal assets (i.e., those who already have strong social networks and social skills) benefit the most from the Internet and social media
- People who have better social skills and many friends offline will exploit their highly developed social skills and make more friends online, whereas people who are less socially adept and have a poorer social life offline are likely to gain less from their online interactions

# **RICH-GET-RICHER**

- Results from another longitudinal study by Kraut et al. (2002) showed that for extroverts, Internet use was related to increases in well-being (decreased loneliness and other negative emotions)
- However, the opposite was true for introverts such that Internet use was related to decreases in well-being (increased loneliness and depression, lowered self-esteem)
- A recent meta-analysis of over 150 studies showed that extraverted individuals with significant online social capital (i.e., the skill to manoeuvre and leverage the benefits of social media) were able to maximize social media's resources and accumulate more capital over time (Cheng et al., 2019)

# **S O C I A L   C O M P E N S A T I O N**

- The Internet is more beneficial for individuals who are socially anxious, introverted or less likely to self-disclose, as it may compensate for the lack of a social network offline
- Characteristics of an online environment (e.g., anonymity, text-based communication, lack of visual and auditory cues) promote a sense of belonging by facilitating opportunities for self-disclosure

# **S O C I A L   C O M P E N S A T I O N**

- Introverts indicated the online modes of communication offer greater freedom of expression, and were more likely than extroverts to choose online communication for the purpose of interacting with friends (Goby, 2006)
- Shy people experienced lower levels of shyness and rejection sensitivity, and higher levels of interpersonal competence in initiating relationships online than offline (Stritzke et al., 2004)

# **S O C I A L   C O M P E N S A T I O N**

Contrary to the predictions of the social compensation model, a study conducted in Japan appeared to support a rich-get-richer effect (Takahira et al., 2008)

- Students who initially experienced low levels of loneliness used the Internet more frequently to communicate with friends and family and to establish stronger personal relationships
- Students who initially expressed depressed moods experienced greater levels of depression after using the Internet; they were also more likely to engage in non-social Internet use rather than communicating with others

# IN CONCLUSION...

- The three models are not mutually exclusive; it is possible that each of them explain specific facets of youths' experiences with social media
- Whether social media relieves or exacerbates loneliness and social isolation depends on the traits, dispositions and characteristics of the user (e.g., introversion/extraversion, social anxiety, self-esteem, and need to belong)
- Changes and developments in social media technologies over time also influences the depth and quality of online relationships
- Social media should be recognized as tools with the potential to build community and/or to isolate users

- How have parasocial relationships (PSRs) traditionally been defined? What are some examples of traditional PSRs?
- Identify the six characteristics of PSRs in the context of live streaming. How do they engender unique “one-and-a-half” PSRs?
- What are some effects of PSRs on wellbeing?

# **THE ONE-AND-A-HALF SIDED PARASOCIAL RELATIONSHIP**

Kowert & Daniel, 2021

# TRADITIONAL PSRS

Traditionally conceptualized as one-sided, intimate connections with a media performer based on repeated encounters (Dibble et al., 2016)

- A person extends emotional energy, interest and time in the relationship while the other person (the media figure) is unaware of their existence
- There is no reciprocal (i.e., two-way) interaction between the viewer and the performer due to their broad reach and restricted access
- E.g., Celebrities, fictional television/movie characters, video characters

# ONE-AND-A-HALF PSRS

## (1) Reciprocal interaction

- Live streaming provides greater opportunities for reciprocal interaction (e.g., streamers may respond to comments, take suggestions)
- “The visceral cues provided by the up close and personal nature of the videos help blur the line for viewers, allowing them to feel that there is a genuine bond with the host .... you start to develop a one-sided relationship with that person where you feel like you really know that person (Choi, 2017).”

# ONE-AND-A-HALF PSRS

## (2) Community affiliation

- A strong community affiliation may be fostered between a streamer and their community (e.g., interacting via live chat, shared experiences through games)
- The sense of community that forms among viewers of a particular streaming personality also contributes to the longevity of a PSR; discussions within a community about one's favorite streamer reinforces commitment and attachment

# ONE-AND-A-HALF PSRS

## (3) Fandom culture

- Being a fan (i.e., investing time and energy into thinking about, or interacting with, a media text, object or person) brings viewers in, then holds the potential for community to be built with other viewers
- Viewers who watched a particular stream to relax, commiserate with a social community, and escape for a while → reported higher PSR with and greater amounts of “fandom” for the streamer → led to a greater sense of community on the streaming platform (Blight, 2016)

# ONE-AND-A-HALF PSRS

## (4) Wishful identification

- Refers to the idea that streamers are aspirational figures (i.e., role models) to viewers in their community, who desire to imitate them
- Wishful identification is a predictor of whether viewers develop a PSR with the streamer as well as the strength of the PSR itself (Hamilton et al., 2014; Hu et al., 2017; Lim et al., 2020)

# ONE-AND-A-HALF PSRS

## (5) Emotional engagement

- Refers to viewers' intrinsically motivated involvement and enthusiasm for participation
- Emotional engagement stimulates PSRs with streamers and provides social comfort to viewers, especially those going through difficult times (Hamilton et al., 2014; Lim et al., 2020; de Wit et al., 2020)

# ONE-AND-A-HALF PSRS

## (6) Presence

- Live streaming platforms create a space that is high in presence (i.e., a psychological state in which the virtuality of the experience is unnoticed, as the lines between what is “real” and what is “virtual” is blurred)
- Presence of live streamers is also amplified by the near constant accessibility of the streamer and their content

# ONE-AND-A-HALF PSRS

Live streaming holds the potential for high levels of four types of presence

- **Physical presence**, in which individuals perceive virtual objects as actual physical objects
- **Social presence**, the idea that virtual beings are actual social people
- **Self-presence**, a reality where individuals perceive virtual selves as actual selves
- **Spatial presence**, in which an individual experiences the sensation of being physically located in a mediated environment

# IMPLICATIONS FOR WELLBEING

“One-and-a-half” PSRs are likely to have a broader impact on viewers’ wellbeing compared to traditional PSRs

- Live stream communities are rich sources of social and emotional support, particularly during difficult life periods (de Wit et al., 2020)
- E.g., Watching streams helps viewers keep their mind off difficulties; viewers may receive valuable help from the live streamer or their community; viewers may also trust and open up to the streamer about personal matters



# CYBER PSYCHOLOGY

WEEK 5: BEHAVING BADLY

# HOUSEKEEPING MATTERS

# MIDTERM EXAM

Content (up to week 5)

- Assigned readings
- Slides

Structure

- True/false questions
- Fill-in-the-blanks
- Short-answer questions (1-3 sentences **max**)
- Multiple-choice questions

\*Please come with lockdown browser installed and updated. The exam is 2 hours long, but you can leave once you're done.

### **Abstract**

The definition of parasocial relationships traditionally refers to humans, but perhaps should be expanded to incorporate non-human celebrities as well. Instagram is among the most popular social media platforms available, and it is saturated with animal content. Though humans can form parasocial relationships with other humans on social media platforms like Instagram, it is unclear how humans can form parasocial relationships with animals on Instagram. A survey was conducted to address this research gap. Three thousand, six hundred subjects' answers were analyzed regarding their parasocial relationships with various animals on Instagram. Results show that increased social media use and exposure to animal content increases a user's likelihood of forming parasocial relationships with the animal accounts they follow. Those who spend more time on social media and browsing animal content were also more likely to feel a connection to the accounts they follow. Finally, Instagram users more highly value physical qualities of the animals they follow such as cuteness, uniqueness, and breed/species.

Given the fact that there has not been enough research done on human-to-animal parasocial relationships, the following research questions were studied:

1. How do humans form parasocial relationships with animals through Instagram ?
  - a. Does the amount of time a social media user is exposed to a particular animal on social media increase the strength of their relationship with that animal?
  - b. What species, breeds, characteristics, or categories of animals are most often the subjects of parasocial interactions and parasocial relationships?
  - c. What social or personal factors, such as age, location, relationship status/loneliness, gender, or personality type, might influence a person's likelihood of forming parasocial relationships?

# Parasocial Relationships in Social Contexts: Why do Players View a Game Character as Their Child?

by Nansong Zhou

## Abstract

Many Chinese players view the game character in *Travel Frog* as their child. Using *Travel Frog* as an example, this paper explores the meaning constructed by players through their parasocial relationship with the 'frog' and the social context of this construction. The author conducted in-depth interviews with 20 players from first-tier cities in China, and the findings are based primarily on a thematic analysis of the data. This study finds that the reasons young Chinese players view the frog in the game as their child are deeply rooted in their conceptions of their ideal lifestyle and ideal parent-child relationship. Some players project their desire to live freely through their parasocial relationship with the frog, and express their expectations for an ideal parent-child relationship. This study aims to go beyond

## Travel Frog: The cute Japanese game that has China hooked

It lets players own a cute little green frog which lives in a hut, where it eats, writes, reads and sharpens his pencil - sometimes it dozes over books.



But the most curious feature of the app is that beyond that, players have very little control of the frog. It will frequently leave its home and travel around Japan on a whim.

Players never know when the frog sets off, when it will get back nor what it will bring on its return. Sometimes the frog goes home within a few hours; sometimes it could be gone for as long as four days.

It might send postcards, clovers, souvenirs - or might do absolutely nothing for its owner.

There is no way for the owner to control or interact with the frog.



"My mother longs for my return home when I am away, but she wants me to go out when I am home. That's my exact feeling towards my frog," Xian said.

"But I feel desperate when I keep receiving photos of itself: it is so antisocial and doesn't make friends!

"Today, it posed together with a rat, I almost cried with joy, it finally has friends!" Xian said.




These young people experience an ideal parent-child relationship in their parasocial interaction with the frog. This parasocial interaction in *Travel Frog* is different from that in other games. While most games give immediate feedback based on the player's actions, the interaction with the traveling frog does not. In *Travel Frog*, the player has no idea whether, when or how his or her efforts will be responded to. This delayed feedback gives the player a feeling that they cannot control the frog and that the frog has its own free will. It acts on its own terms, which is exactly what the player desires in a parent-child relationship.


*"I named the frog with my English name...The frog is like my son, and it is also like myself...it has its things to chase after ..."* (F1).


# BEHAVING BADLY


Online social spaces may appear as an obvious benefit , but they are not entirely benign or bereft of negative consequences




- The anonymity and physical distance that come with Internet communication provide a great deal of freedom and convenience
- However, they also allow for greater aggression and the occurrence of events which deviate from established ethical and moral norms, or even from standard etiquette observed in face-to-face settings

 bunny 🐰  
 "my pinky is up. that means i'm really scared!"



1-16 Reply  3,712 

 lyc  
 stop with the mean comments yall she might put her pinky up again 🥺🥺

1-14 Reply   21K 

 ari  
 girl write a book!!! you're a survivor 💜

1-16 Reply  50.5K 

 nicholas 🍉  
 IM CRYING AT THIS

1-16 Reply  1,903 

 지민<sup>143</sup>  
 lkr. Like it gave me legit chills when she raised her pinky 🥺

1-16 Reply  795 

# **ONLINE AGGRESSION**

# FRUSTRATION & AGGRESSION

The link between frustration and aggression can be observed in mundane, everyday occurrences

- A driver is engrossed in a phone call and doesn't notice when the light turns green; a second later, other cars start honking
- A couple attempts to construct a newly purchased IKEA bookshelf; after two hours and minimal progress, one of them loudly insults the instruction manual and throws it onto the ground

# FRUSTRATION & AGGRESSION

According to **frustration-aggression theory**, frustration causes negative affect, which in turn elicits aggressive inclinations

- This assumes that aggression is a motivated response, while frustration is a motivational state/event which drives that response
- E.g., Two groups of children were shown a room filled with interesting toys, which remained out of reach behind a wire screen; the group which was told to wait smashed the toys and broke them when the screen was finally opened (Barker & Lewin, 1941)

# FRUSTRATION & AGGRESSION

Frustration is even more likely to bring out an aggressive response when one is close to a goal and something/someone interferes with its attainment

- Those who were closer to the front of a line reacted more aggressively to a confederate cutting in than those who were further back (second vs twelfth place; Harris, 1974)
- However, this may not always take the form of observable aggressive behavior (e.g., a frustrated individual may not display their aggression openly if they have been taught that it is improper to do so)

# FRUSTRATION & AGGRESSION

Any frustrating, unpleasant event may lower our thresholds for an aggressive response

- Once we are in a state of frustration, our ability to look at a situation calmly and dispassionately (i.e., in an unemotional, rational and impartial manner) is negatively impacted
- We become more likely to lean toward a negative interpretation, when under more typical circumstances we would have adopted a neutral lens

# FRUSTRATION & AGGRESSION

Upon becoming sufficiently primed, almost anything could trigger an aggressive response as our perceptions are distorted

- E.g., An email from a colleague containing a sentence that reads, “WE NEED YOUR INPUT BY TOMORROW! PLEASE!” could be viewed as either desperate for help or rude and entitled, depending on our current state of mind
- Note also that when the source of the frustration cannot be challenged, our aggression may be displaced onto an innocent target (e.g., what happens when this email is from our boss?)

In 1990, a Stanford University graduate student in psychology named Elizabeth Newton illustrated the curse of knowledge by studying a simple game in which she assigned people to one of two roles: “tapper” or “listener.” Each tapper was asked to pick a well-known song, such as “Happy Birthday,” and tap out the rhythm on a table. The listener’s job was to guess the song.

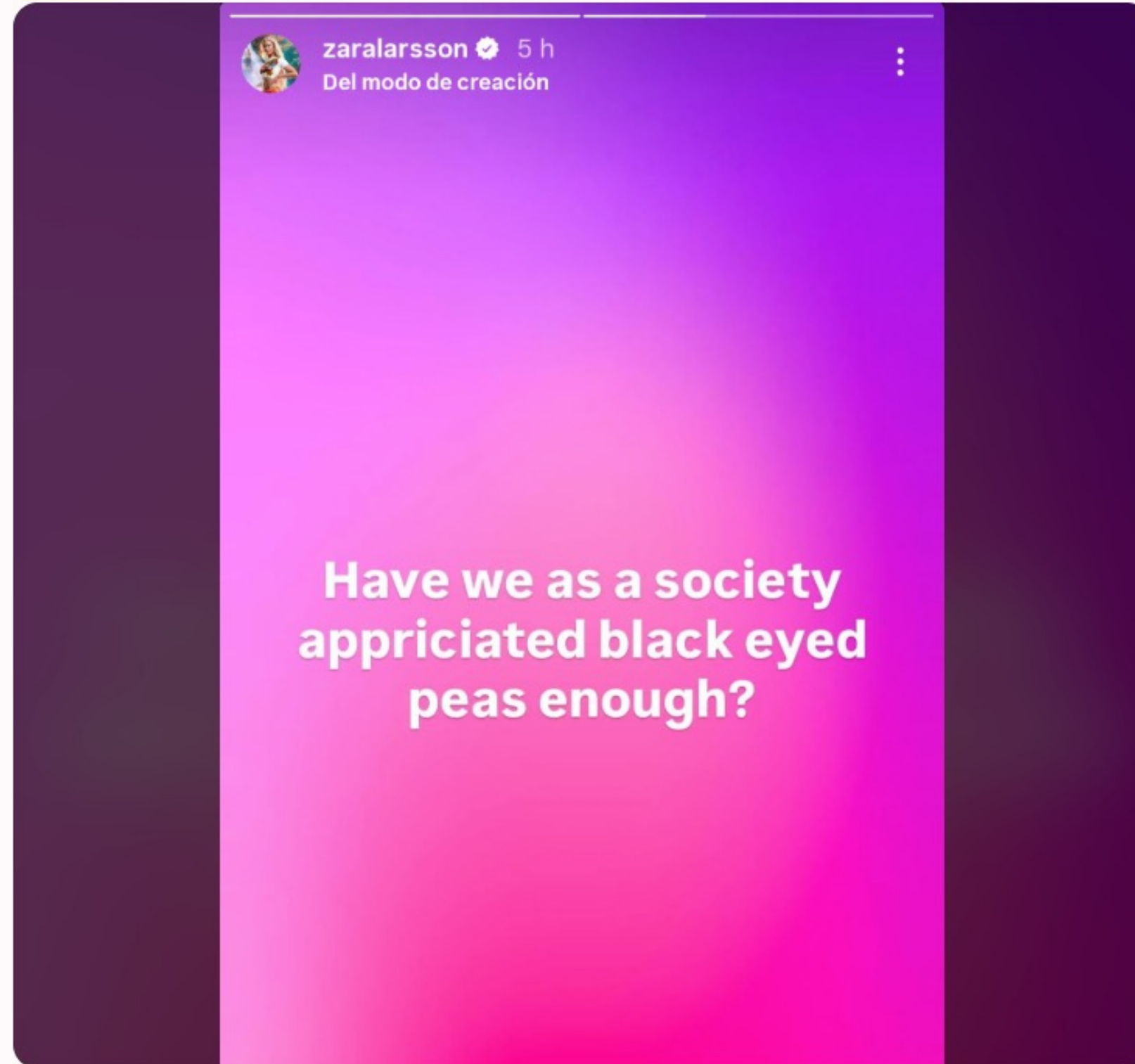
Over the course of Newton’s experiment, 120 songs were tapped out. Listeners guessed only three of the songs correctly: a success ratio of 2.5%. But before they guessed, Newton asked the tappers to predict the probability that listeners would guess correctly. They predicted 50%. The tappers got their message across one time in 40, but they thought they would get it across one time in two. Why?

When a tapper taps, it is impossible for her to avoid hearing the tune playing along to her taps. Meanwhile, all the listener can hear is a kind of bizarre Morse code. Yet the tappers were flabbergasted by how hard the listeners had to work to pick up the tune.

We are typically overconfident about the clarity of our communications, when they are often rather ambiguous and easily misinterpreted. To some extent, **this overconfidence arises because we are looking at things (or hearing things) in an egocentric way** – from our own perspective rather than the perspective of the listener. The tappers could hear the music in their own minds, possibly even all the words and a full orchestration. The listeners just heard the tapping.

Zara Larsson makes a very good point. Have we as a society appreciated black eyed peas enough?

FM RADIO



honestly, i don't think we have.



**RealBettyWhite69** · 4d ago

Bro, she means the legume. She say "black eyed peas" and you are thinking of "The Black Eyed Peas". Easy mistake.



165



Reply



Award



Share



**sunny\_d55** · 4d ago

"Bro, she means the legume," is somehow the funniest thing I've seen in a long time.



267



Reply



Award



Share



**sgsmopurp** · 4d ago

Agreed lmaooooo I was really passionate too. for the record I think my answer still stands that black eyed peas and THE black eyed peas don't get enough love LOL



41



Reply



Award



Share



# AMBIGUITY

(1) Text-based communication is often plagued with ambiguity due to the **absence of nonverbal cues**

- Gesture, voice, expression, etc. are important cues that help to disambiguate and clarify a message
- In fact, such cues and information not only supplement linguistic information, but at times may even alter it completely (e.g., hello :-) vs. hello ;-))

# AMBIGUITY

(2) People also tend to be **overconfident** in their ability to accurately communicate and interpret messages (Kruger et al. 2015)

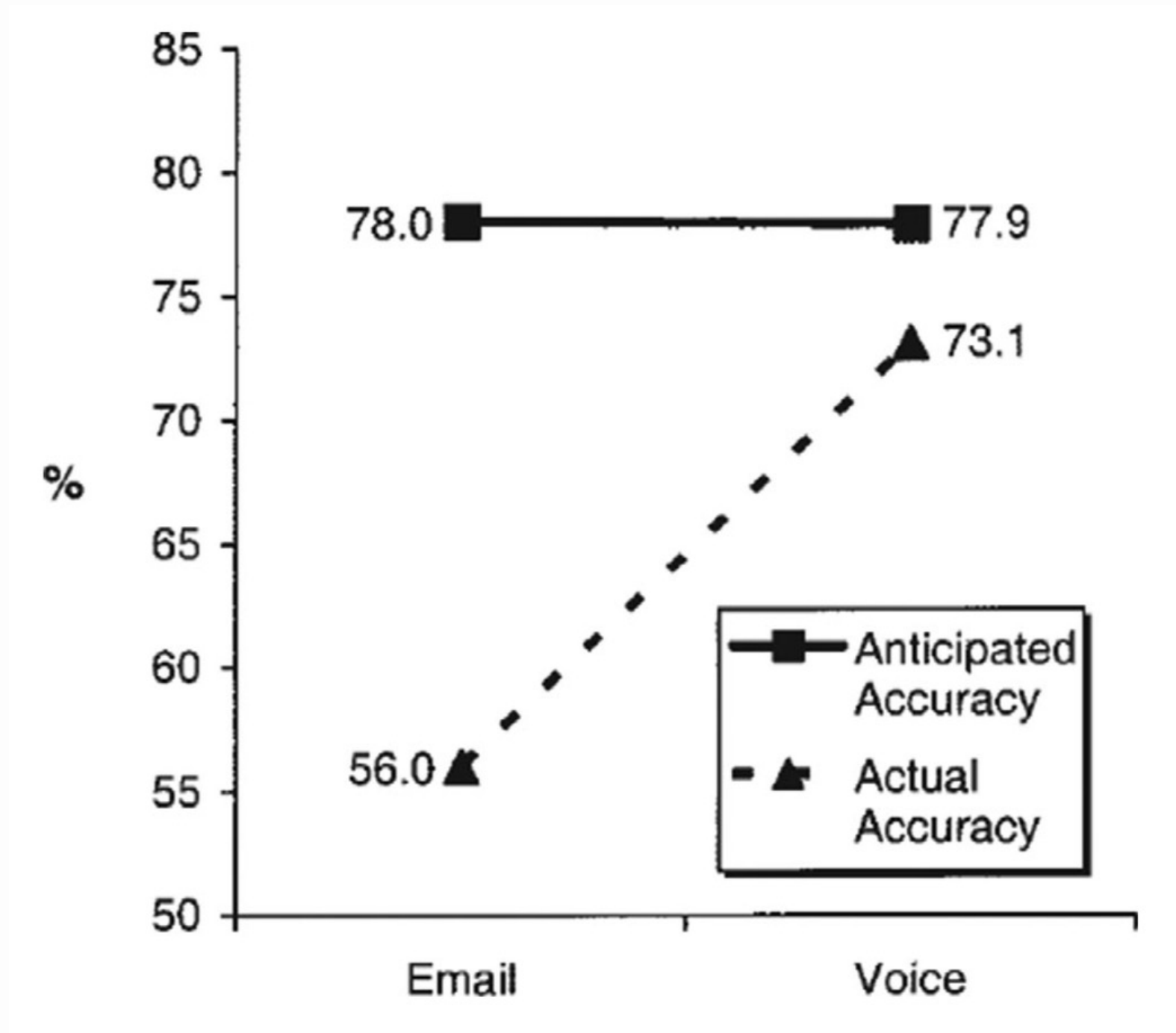
- All participants were given a list of 20 statements about a number of topics; half were intended to be sarcastic and the other half serious
- They were then told to select 10 statements that they believed would be the easiest for their partner to identify as sarcastic or serious (e.g., “I really enjoy dating because I like feeling as self-conscious and inadequate as possible”)
- A member of each pair was randomly assigned to communicate their chosen statements via a voice recorder, while the other did so via email

# AMBIGUITY

- Results showed that participants who listened to the statements were able to accurately decode nearly 75% of them, while participants who read the statements through email had an accuracy rate barely above chance (56%)
- Yet, both email and voice message senders were equally confident that their partners would accurately detect the tone of the message
- Although the senders' actual ability to communicate sarcasm depended on the medium of the message, their confidence in their ability did not
- Receivers in both conditions were also similarly confident in their ability to detect sarcasm

# AMBIGUITY

- **Senders:** Because we “hear” a statement differently based on our intentions, it can be difficult to recognize that our electronic audience may have a different perspective than our own
- **Receivers:** Once we interpret a statement as sarcastic, it may be difficult to “hear” the statement any other way, causing us to believe we understood the message better than we actually did



# AMBIGUITY

Social judgment is inherently egocentric

- When people try to imagine the perspective, thoughts or feelings of another individual, they tend to use themselves as the anchor or reference point
- This means that our assessment of another's perspective is influenced, at least in part, by our own perspective (remember the study on smartphone multitasking and relationship satisfaction?)
- Using our own perspective as an indicator of another's is generally a valid, useful heuristic – without this, effective communication would be challenging

# AMBIGUITY

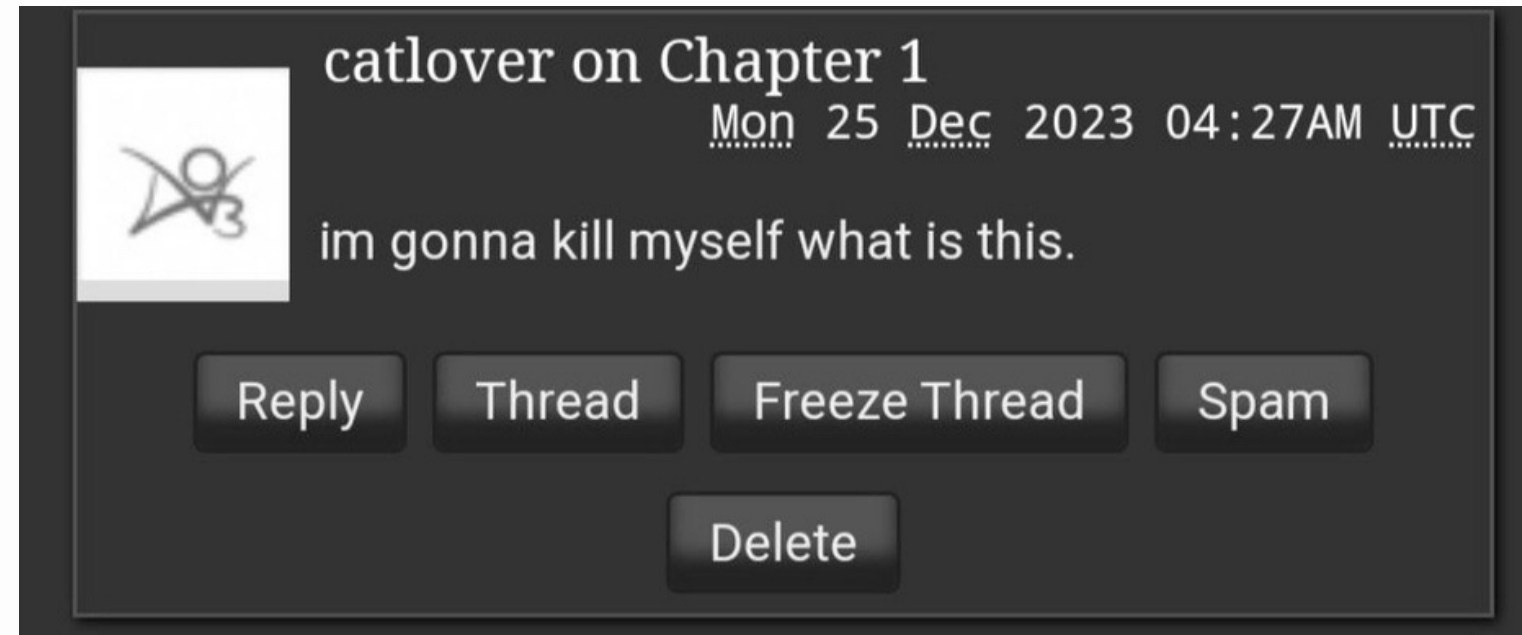
However, successful communication also depends in part on the ability to anticipate miscommunication

- When senders underestimate the ambiguity of their own messages and overestimate the obviousness of their intentions, this may become a systematic source of miscommunication
- This is also the case for receivers, who tend to be just as confident in their ability to understand a message when they actually did not, as when they actually did

## Opened my email excitedly after seeing I got a comment

Discussion (Non-question)

How does one respond to this and why is it low key hilarious. I would prefer a nice comment but!!! Gave me a solid laugh.





dihenydd1 · 42d

Tbh I'd say there's about a 50/50 chance this was complimentary. I can't tell these days lol

... Reply ↑ 4 ↓



Mystiquesword · 41d

Id reply back with "good, no one likes a worthless freak like you anyway 😈" & then block so they cant respond. 😂

... Reply ↑ -2 ↓



randomskycolor · 265d

Coming from a Gen Zer here, I think they meant it as a compliment. I constantly say stuff like that bc something is too good like "this fic was so good I'm gonna jump off a cliff" bc I cannot DEAL with the emotions it's making me feel

... 🏆 ↑ 37



thisisdaughter · 264d

You have already left kudos here. :)

The full stop makes it seem negative in my opinion. From my experience I've seen gen z use a period at the end of a question to indicate a negative tone. That and the "what is this" makes me think it wasn't meant as a compliment. I'm not caught up on Internet slang though so I could be wrong, lol.

... 🏆 ↑ 6

/j	joking
/hj	half-joking
/s	sarcastic
/gen or /g	genuine
/srs	serious
/nsrs	non-serious

**Tone indicators are shorthand for words used to convey tone**, which the Cambridge Dictionary defines as *"a quality in the voice that expresses the speaker's feelings or thoughts"*.

The tone of someone's voice can be joking, or serious; it can be teasing, or threatening. It can be negative, positive, or neutral. It can be sexually suggestive, or entirely friendly. **Tone can do so much to change the meaning and implications of a sentence.**

**How do you use tone indicators?**

Typically by putting them at the end of the relevant sentence.

***Example:***

"Wow, you're such a great friend! /gen"

*or*

"Wow, you're *such* a great friend. /s"

**What's the point of tone indicators?**

To indicate tone.

93% of someone's liking of what you say comes from *what you do non-verbally*, and we often don't have access to these non-verbal cues online.

It can be difficult for neurodivergent people to understand you even in face-to-face, where they *do* have access to non-verbal cues, so imagine how much harder it is online.

Also, even if you're neurotypical, how many times have you not gotten a joke on the Internet, or taken something the wrong way?

### **When should I use tone indicators?**

Whenever you're saying something that's tonally ambiguous. That is, it could be interpreted many different ways.

#### ***Example:***

"I hate you. **/j**"

If you're **joking** around with a friend, and don't actually dislike them.

"I hate you. **/ly**"

If you're quoting a song that happens to have the **lyric** "I hate you" in it, and you don't want concerned strangers asking if you're talking about them under your Tweet.

"I hate you. **/srs**"

If you're being **serious**, and legitimately hate someone. Don't use the **/srs** tag as a joke, ever.

# RETALIATION

How do we determine the appropriate level of retaliation in a given situation?

- The typical response to a real or imagined insult is to retaliate in kind
- People also tend to pick a method and a level that, in their minds, matches what the offender did and then up the ante (which is often how flame wars begin and then continue)
- E.g., Participants were given electric shocks by an opponent while they were engaged in a calculation task. More aggression of greater intensity was displayed against an opponent who appeared to have an aggressive intent, regardless of the actual level of shock intensity (Ohbuchi & Kambara, 1985)

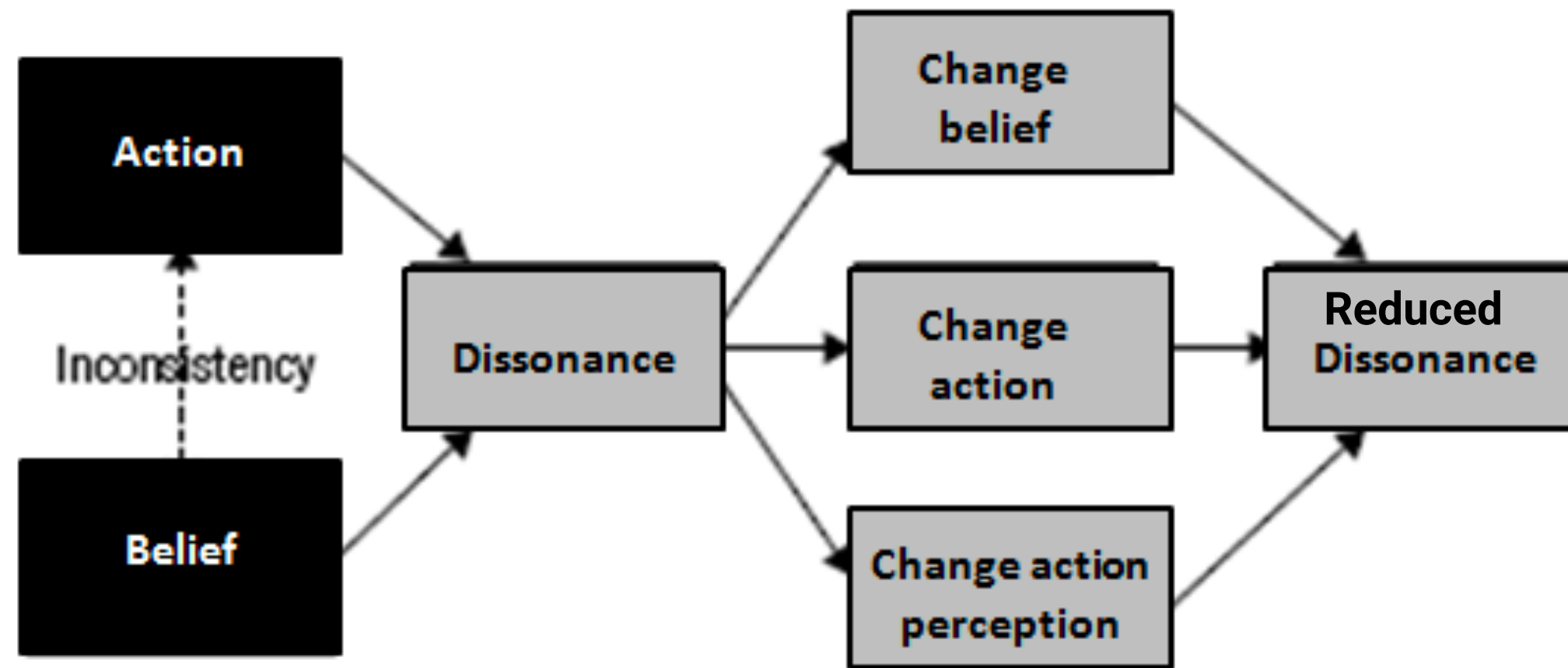
# OVERRETALIATION

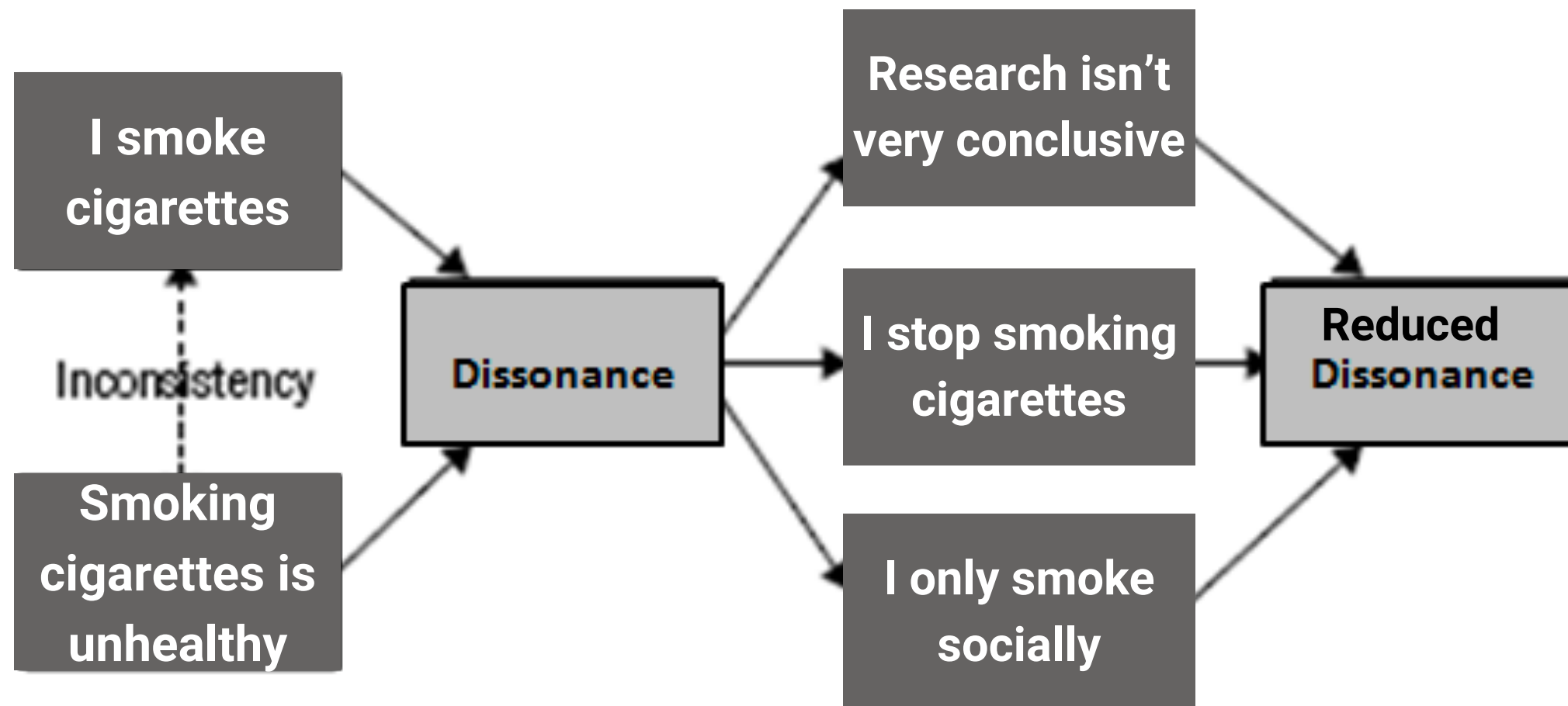
What happens when we realize that we may have overreacted or that the perceived slight was unintentional?

- The rational response would be to apologize – however, people are not always so rational due to their desire to preserve a positive self-concept (“I’m a kind and fair person, I would never react in that way”)
- **Cognitive dissonance theory** posits that (1) an underlying psychological tension (dissonance, or discomfort) is created when an individual’s behavior is inconsistent with their thoughts and beliefs; and that (2) this tension results in a motivation to resolve the contradiction so as to reduce discomfort

# OVERRETALIATION

In practice, people may reduce the magnitude of their dissonance in several ways





# OVERRETALIATION

- While it may be difficult to confront and change our beliefs, or to commit to changing our actions, it is not all that difficult to modify our perceptions
- When we behave aggressively towards someone who didn't really deserve such harsh treatment, we may revise our views of the offender or the offending incident, and think of them as worse than they actually were in order to justify our actions
- E.g., Participants who were instructed to provide negative feedback to another participant (that they were shallow, untrustworthy, dull and boring) subsequently revised their opinions of the participant downwards so that their actions would appear justified (Davis & Jones, 1960)

# CATHARSIS

While features of the online environment tend to draw out more aggression, could that be a good thing?

- According to **catharsis theory**, acting aggressively or venting one's anger is viewed as an effective way to purge angry and aggressive feelings
- “Frustrations lead to anger and that anger, in turn, builds up inside an individual, similar to hydraulic pressure inside a closed environment, until it is released in some way. If people do not let their anger out but try to keep it bottled up inside, it will eventually cause them to explode in an aggressive rage.”

# CATHARSIS

Research has shown that this is not the case — rather than decreasing anger and aggression, catharsis tends to intensify it

- Participants who were allowed to vent their anger (by pounding nails for 10 minutes) after being insulted by a confederate were subsequently more hostile towards the confederate than those who did not (Hornberger, 1959)
- Participants who read a procatharsis message (claiming that aggressive action is a good way to relax and reduce anger) subsequently expressed a greater desire to hit a punching bag than participants who read an anticatharsis message; results remained the same when participants actually hit a punching bag (Bushman et al., 2002)

# CATHARSIS

Bushman, 2002

- Venting, which often involves letting off steam on “safe” inanimate objects (e.g., rage rooms, screaming into pillows), is in essence practicing aggressive behavior
- Such aggressive activity then primes aggressive thoughts, feelings and behavioral tendencies, especially if one thinks about the source of their anger while venting
- By keeping anger feelings active in memory, venting then increases the likelihood of subsequent aggressive responses

# **ONLINE DEVIANCE & DISINHIBITION**

# ONLINE DEVIANCE

Online deviance refers to any behavior that is recognized as violating the rules, values or morals set out by a particular community (Williams, 2000)

- Note that deviance can take on multiple forms, and may range from behaviors that simply create an unfavorable impression (e.g., posting overly emotional messages, mentioning taboo topics) to behaviors that push the limits of moral and social boundaries (e.g., online rape threats, cyberbullying)
- Any behavior that goes against a community's social standards and norms can be labeled deviant

# CATFISHING

A form of online deception and fraud, where an individual (the catfish) steals the identity of another person or creates a fake identity and uses it as their own when interacting with others

- The catfish may have one or more goals in mind, ranging from financial gain to intentionally inflicting psychological or emotional pain for the sake of obtaining revenge on another person
- Given the basic human need to belong, people may ignore danger signals present in an online situation in order to feel accepted and wanted by another person

# FLAMING

Hostile communication which involves the use of aggressive, insulting and derogatory language

- Messages displaying attributes such as hostility, aggression, intimidation, insults, uninhibited language, and sarcasm may be considered flames
- Other attributes, such as the use of profanity, all capital letters, or excessive question marks or exclamation points, may also be characteristic of flaming
- People engage in flaming behavior for various reasons, including conforming to perceived norms, reduced awareness of others' feelings, to offend for mere entertainment, and to express disagreement or an opinion

# CYBERSTALKING

The repeated use of the Internet or other digital electronic communications to annoy, harass or threaten an individual

- Typically not a single act, but a series of events that when added together go beyond harassment and cause the victim considerable distress
- E.g., Sending unwanted and unsolicited messages; creating fake social media accounts to impersonate the victim; spamming and sending viruses; obtaining personal information such as the victim's home address or phone number
- Perpetrators often combine cyberstalking and physical stalking to ramp up their harassment

# DOXXING

The act of revealing private or personally identifying information on the Internet as a means of harassment, threat, revenge, or as a prank

- E.g., An individual's name, residential address, academic/business record, personal photographs and videos, etc.
- Doxxing motivations include revenge, competition (wanting to show superiority over a victim or to humiliate them), justice (doxxing a person who was perceived as having committed wrongdoing), and political/racial reasons

# ONLINE DISINHIBITION

When people believe their actions cannot be directly attributed to them, they tend to become less inhibited by social conventions and restraints. This may work in two opposing directions:

- **Benign disinhibition**, where people share personal information about themselves (e.g., secret emotions, fears, wishes) and show unusual acts of kindness and generosity
- **Toxic disinhibition**, where people engage in rude language, harsh criticisms, threats, or visit the underworld of the Internet (i.e., places of pornography, crime and violence) that they would never explore offline

# ONLINE DISINHIBITION

Six factors interact with each other to create the **online disinhibition effect**

## (1) Dissociative anonymity

- Online spaces afford people the ability to conceal or alter their identity
- This allows them to avert responsibility for their online behaviors, since whatever they say or do cannot be directly linked to the rest of their lives
- When people are able to separate/dissociate their online actions from their offline lifestyle and identity, they feel less vulnerable about self-disclosing or acting out

# ONLINE DISINHIBITION

## (2) Invisibility

- People are unable to see or hear one another in many online environments, especially those which are text-driven
- Lack of eye contact and face-to-face visibility disinhibits people as they don't have to worry about how others might look or sound in response to what they say
- This may give people the courage to go places and do things that they otherwise wouldn't

# ONLINE DISINHIBITION

## (3) Asynchronicity

- In offline interactions, feedback from others continuously shapes self-disclosure and behavior, which typically guides people to conform to social norms
- However, online communication is asynchronous, meaning people don't receive feedback in real time
- This delay in feedback may encourage disinhibited behavior which deviates from social norms (e.g., some people may feel safe putting something "out there" where it can be left behind, much like an emotional hit-and-run)

# ONLINE DISINHIBITION

## (4) Solipsistic introjection

- In the absence of visual and auditory cues, people may project their own thoughts, expectations or interpretations onto the person they are interacting with
  - E.g., We may assign a visual image to what we think the other person looks like, or “hear” their voice through our own when reading their texts, causing self-boundaries to be blurred
- As a result, the conversation may feel like a form of internal monologue where we are simply talking to ourselves, which encourages disinhibition

# ONLINE DISINHIBITION

## (5) Dissociative imagination

- People may perceive online spaces as an imaginary world with little to no connection to reality
- This is often heightened in environments like video games, chat rooms, or social media platforms, where users can craft alter egos or avatars
- The dissociation leads to a sense that everyday rules and norms no longer apply, and that their actions have little to no real-world consequences

Note that anonymity amplifies the effect of dissociative imagination

# ONLINE DISINHIBITION

## (6) Minimization of authority

- Traditional markers of authority (e.g., age, status, title, physical appearance) are often hidden in online text environments
- The Internet itself is also designed with no centralized control, and appears to support an egalitarian philosophy that everyone is an equal
- This creates the perception of a safe, low-risk environment where people can speak and act freely, with fewer consequences for violating social norms or engaging in disinhibited behavior

# ONLINE DISINHIBITION

- For some people, even just one or two of these factors is sufficient to produce the disinhibition effect
- Individual differences (personality, motives, feelings) interact with these factors to influence one's susceptibility to disinhibition
- According to Suler (2004), the concept of disinhibition may cause us to perceive that what is disinhibited is a more "true" aspect of identity; however, "the self does not exist separate from the environment in which it is expressed" (i.e., the disinhibited and inhibited selves are simply two dimensions of the same person revealed within a different situational context)

# I [32F] just discovered my husband [34] of six years is a Reddit troll, and I'm pregnant.

CONCLUDED

I am not The OOP, OOP is [u/whatanasssss](#)

I [32F] just discovered my husband [34] of six years is a Reddit troll, and I'm pregnant.

Thanks to [u/belowaverageforprez](#) for suggesting this BoRU

TRIGGER WARNING: 

[Original Post - rareddit](#) July 29, 2014

He left the browser open on our laptop after he went to work this morning. I go to work after, so I usually hop on and do my own things on my real account.

Today, however, I was disgusted at what I found. My husband is a troll. A really fucking nasty troll. He leaves horribly mean comments to all kinds of people. They're filled with racist slurs, awful insults, he tears into fat people, ugly people, etc. He loves to troll around places like [/r/progresspics](#) to discourage people, etc. He's sent PMs to people to call them names, calls women who post on [/r/gonewild](#) sluts and whores and cunts, etc.

I was horrified. Completely horrified. My husband is a nice, gentle man who is supportive and kind. In our 9-year relationship, we've fought three times total. I never thought this is a behavior he would take part in.

But this is something else. It made me wonder what else he did on the internet, so I looked at the browser history to find him also harassing teenagers on tumblr. Telling them to kill themselves, calling cute girls ugly and fat and stupid, etc. It horrified me to think this was the man who could be raising our daughter with me in a few months.

I understand trolling can be fun, we've all laughed at Ken M once or twice. But this goes far beyond what I ever imagined. I don't know how to look at him. I've lost respect for the man I looked up to and admired.

[Update 1](#) **Aug 6, 2014 (8 days later)**

I confronted him about the issue very tamely, over breakfast. I asked him, flat out, if he was harassing and bullying people online. He said yes, and immediately withdrew. After telling him that I needed to know why -- really why, not just "I don't know", he said he needed time to think about it.

When he finally gave me his answer, I was disappointed. He said he trolled/bullied people because it was an outlet for him to relieve stress. He said he didn't view the people as real, or what he was doing as anything other than a joke, and if it hurt feelings, "those people have bigger problems and it's not my fault."

I told him that it wasn't an acceptable behavior of an adult, and that he needed to stop it and find another way to express his frustrations that didn't involve hurting strangers. He said he would think about it.

Unfortunately, he's still doing it. I saw it happening a few mornings back, and after he left, looked again to see more comments and posts. I was disappointed. This was not the man I married. Or so I thought. But I guess it is.

# **JOURNAL ARTICLES**

- Define trolling and cyberbullying, and identify the key difference between the two concepts.
- What were the authors' proposed hypotheses/expected findings?
- The paper provides empirical evidence from two studies. What was each study designed to assess? Summarize the procedure and key findings of each study, and indicate if they align with the authors' expectations.

# **TROLLS JUST WANT TO HAVE FUN**

Buckels et al., 2014

# TROLLING

- Trolling refers to the practice of behaving in a deceptive, destructive or disruptive manner with no apparent instrumental purpose
  - “Much like the joker, trolls operate as agents of chaos on the Internet... if an unfortunate person falls into their trap, trolling intensifies for further amusement.”
- Associated with boredom, attention-seeking, revenge, pleasure, a desire to cause damage to the community
- Its deceptive and “pointless” disruptive aspects distinguish trolling from other forms of antisocial behavior such as cyberbullying, where the intent is more straightforward

# THE DARK TETRAD

The Dark Tetrad consists of four subclinical traits: machiavellianism, narcissism, psychopathy, and sadism

- All four traits share a common core
  - Individuals with high dark tetrad scores tend to be manipulative, show a significant lack of empathy, and exhibit behavioral tendencies such as deception, aggressiveness and self-promotion
- However, each trait also has its own specific characteristics

# THE DARK TETRAD

- **Machiavellianism** is associated with flattery, manipulation and cynicism; individuals usually engage in amoral behavior to impress others and are focused on their self-interest
- **Narcissism** is associated with excessive grandiosity, superiority, admiration-seeking, and dominance
- **Psychopathy** is associated with callousness, non-empathetic and impulsive behavior, superficial charm, and criminal tendencies
- **Sadism** is associated with enjoying the suffering of others, which could be **direct** (pleasure derived from personally inflicting physical/psychological harm) or **vicarious** (pleasure derived from the passive observation of others being hurt)

# HYPOTHESES

In examining the **personality profiles** of Internet trolls...

(H1a) The Dark Tetrad would be positively associated with a tendency to rate trolling as the most favored activity

(H1b) Of the Dark Tetrad, sadism would be most relevant to trolling (i.e., the association between sadism and trolling would remain significant even when controlling for overlap with psychopathy, narcissism and machiavellianism)

- “Trolling culture embraces a concept virtually synonymous with sadistic pleasure: in troll-speak, lulz.”



(H2) Of the Big Five dimensions, extraversion would be positively associated with trolling while agreeableness would be negatively associated with trolling

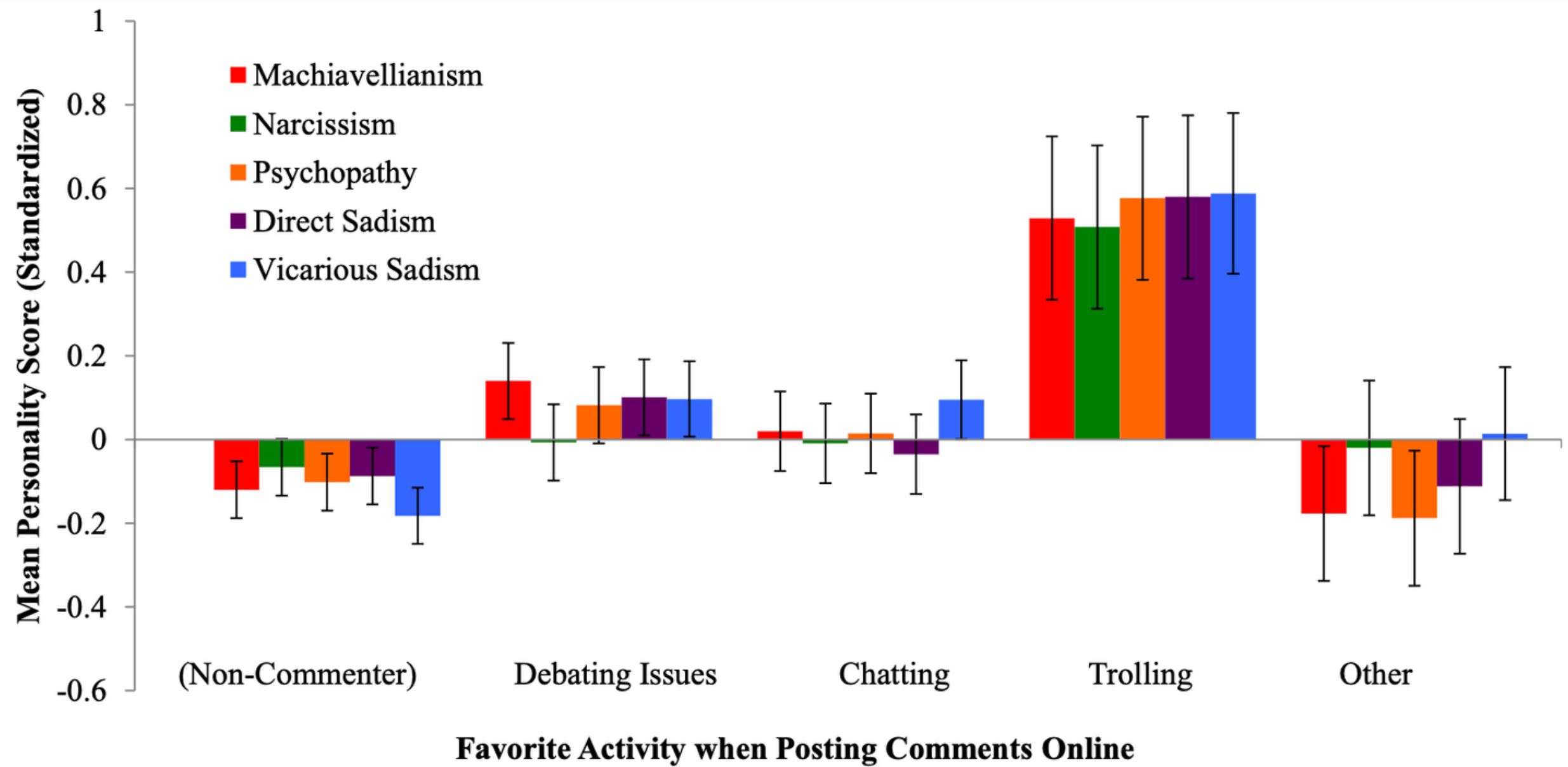
# STUDY 1

Focused on the enjoyment of trolling vs. other online social activities like debating and chatting

- Participants were recruited online and completed a battery of questionnaires assessing the Big Five personality traits, Dark Tetrad (including direct and vicarious sadism)
- Internet behavior was assessed by asking participants to estimate overall commenting frequency (“How many hours per day do you spend posting comments on websites?”) and preferred activity when commenting online (“What do you enjoy doing most on these comment sites?”)

# STUDY 1

- Of the five response options, “making friends” had lowest endorsement rates and so was combined with the “other” category
- Dark Tetrad scores were highest among participants who selected trolling as the most enjoyable activity, and the effect was significant for all Dark Tetrad traits (H1a )
- Participants who selected trolling were also higher on extraversion and lower on agreeableness compared to other participants; they did not differ on conscientiousness, neuroticism, or openness (H2 )



**Fig. 1.** Dark Tetrad scores as a function of favorite online activity in Study 1. Error bars represent standard errors.

# STUDY 2

- To address the limitation of having participants select trolling categorically from a list of activities, enjoyment of each activity was assessed on separate continuous scales
- To rule out the possibility that overall Internet use explains the observed relationships from study 1, a question on total time spent online was included for use as a control variable
- To derive a more nuanced measure of trolling, the Global Assessment of Internet Trolling (GAIT) was used to capture trolling behavior, enjoyment and identification with trolling/Internet subcultures
- To test the hypotheses regarding the unique contributions of the Dark Tetrad (H1b), overall sample size was increased

## STUDY 2

- Participants were recruited online and completed a battery of questionnaires assessing the Big Five personality traits, Dark Tetrad (including direct physical, direct verbal, and vicarious sadism), and trolling behavior (GAIT was interspersed in other measures)
- Internet behavior was assessed by asking participants about their total time spent online, whether they post comments on websites, and to estimate overall commenting frequency if so (“How many hours per day do you spend posting comments on websites?”)
- Those who indicated that they do post comments then rated their enjoyment of each activity on a scale of 1 (not at all enjoyable) to 7 (very enjoyable)

## STUDY 2

- Sadism, psychopathy and machiavellianism were positively associated with self-reported enjoyment of trolling even when controlling for overall Internet use
- Narcissism was not correlated with self-reported enjoyment of trolling, but with debating issues
- All Dark Tetrad traits were positively associated with GAIT scores (H1a ○)
  - This was especially so for sadism (H1b ○)
  - Those with higher GAIT scores tended to be men rather than women, and younger in age
  - Agreeableness was negatively associated with GAIT scores but extraversion was unrelated (H2 ○X)

## STUDY 2

Additional mediation analysis was run to examine the hypothesis that sadism leads to trolling because these behaviors are pleasurable (H3)

- Results showed that sadism → enjoyment of trolling → trolling behavior (GAIT scores)
- In fact, when controlling for enjoyment, sadism's impact on trolling behavior was cut nearly in half
- “The associations between sadism and trolling were so strong it might be said that online trolls are prototypical sadists. Sadists just want to have fun... and the Internet is their playground!”

- What is the main argument put forth by the authors?
  - Identify three key perspectives/approaches in the study of online disinhibition (OD).
  - How do the authors of each paper approach the study of OD? Do their perspectives concur or differ?
- How were they tested? Identify the two key components of the study.
- Do the results support the authors' main argument?

# **SELF-CONTROL IN ONLINE DISCUSSIONS**

Voggeser et al., 2018

# MAIN ARGUMENT

Instead of focusing on personality traits that make users particularly susceptible to toxic online disinhibition (OD), the authors propose that OD is a form of **self-control failure** that can stem from failing to recognize relevant social cues

- Self-control involves exerting control to override a dominant/impulsive response in line with a person's goals
- This is governed by a person's goals, norms or standards. To meet the goal, one has to monitor and look out for relevant cues and examine if there is a mismatch between the current situation (what "is") and the intended goal (what "should/ought" to be) in order to modify their behavior

# MAIN ARGUMENT

To communicate appropriately online, people must (1) intend to do so, (2) realize which messages are in/appropriate in a particular context, and (3) modify their behavior accordingly

Self-control failure occurs if any of these **three components** fails, meaning...





- (1) OD may occur if people do not intend to communicate appropriately
- (2) OD may occur if people intend to communicate appropriately and realize they should modify their behavior BUT are unable to do so
- (3) OD may occur if people intend to communicate appropriately, are able to modify their behavior, BUT fail to realize that they SHOULD

# MAIN ARGUMENT

- If people do not intend to communicate appropriately online, they make no effort to inhibit inappropriate communication behavior
- In certain cases, these people may even invest effort into communicating in a toxic manner
  - People with stronger sadistic personality traits are more likely to troll; these people cause conflict intentionally rather than due to a temporary, unintended lapse in self-control
  - However, these people tend to be a minority. Unconscious self-control failure complements these existing perspectives on OD because it can be used to explain OD **even in well-adjusted users** with normal self-control capacity

# SELF-CONTROL CAPACITY

- Ego depletion refers to a phenomenon where people who have exerted self-control are temporarily less able to exert self-control afterwards (i.e., exerting self-control reduces self-control capacity for a short duration)
- Studies have shown that the Color Stroop task is an effective method of inducing ego depletion

	Condition A	Condition B
Stimulus		
Response	 <i>fast response</i>	 <i>slow response</i>

# SELF-CONTROL CAPACITY

By reducing state self-control, we can simulate situations and conditions that occur in everyday lives:

- (1) Situations where a person is engaged in online interaction while self-control capacity has been depleted by taxing tasks (e.g., a long day at work)
- (2) Situations where people have a lowered self-control capacity due to parallel self-control demands (e.g., multitasking)
- (3) People who have a low trait self-control capacity (e.g., having chronic pain)

# SELF-CONTROL FAILURE

To determine if people fail to process social cues to engage self-control...

- The emotional Stroop task involves participants identifying the color in which words are presented
- But unlike the color Stroop task, the emotional Stroop task presents words that have no color meaning but differ in valence
- Participants are slower to identify the color of emotional words (positive or negative valence) than the color of neutral words (Eilola et al., 2007)
  - When the emotional Stroop task is modified to include **taboo words**, such as swear words, those taboo words elicit even longer reaction times

# CAPACITY VS FAILURE

The modified emotional Stroop task (which includes taboo words) allows us to disentangle failures to recognize social cues from failures to control one's behavior

- Taboo words are treated as context-free, salient social cues to control; they are easily recognized and inappropriate in most communication contexts
- The task-irrelevant information in the presented words (i.e., valence or taboo-quality of the words) interferes with the task of naming the color of the words
- Self-control is necessary to counteract this interference

# CAPACITY VS FAILURE

Whether depleted people recognize relevant social cues to control (i.e., taboo words) would lead to two outcomes:

- If depletion does not impede recognition of social cues, depletion should not diminish the interference effect (i.e., reactions to negative and taboo words should be delayed relative to neutral words)
- If depletion hinders the recognition of social cues, the interference effect should be diminished

# VARIABLES

The study relied on two components: manipulating the participants' state self-control capacity and detecting that the participants fail to recognize social cues to control rather than fail to control their reaction to recognized cues

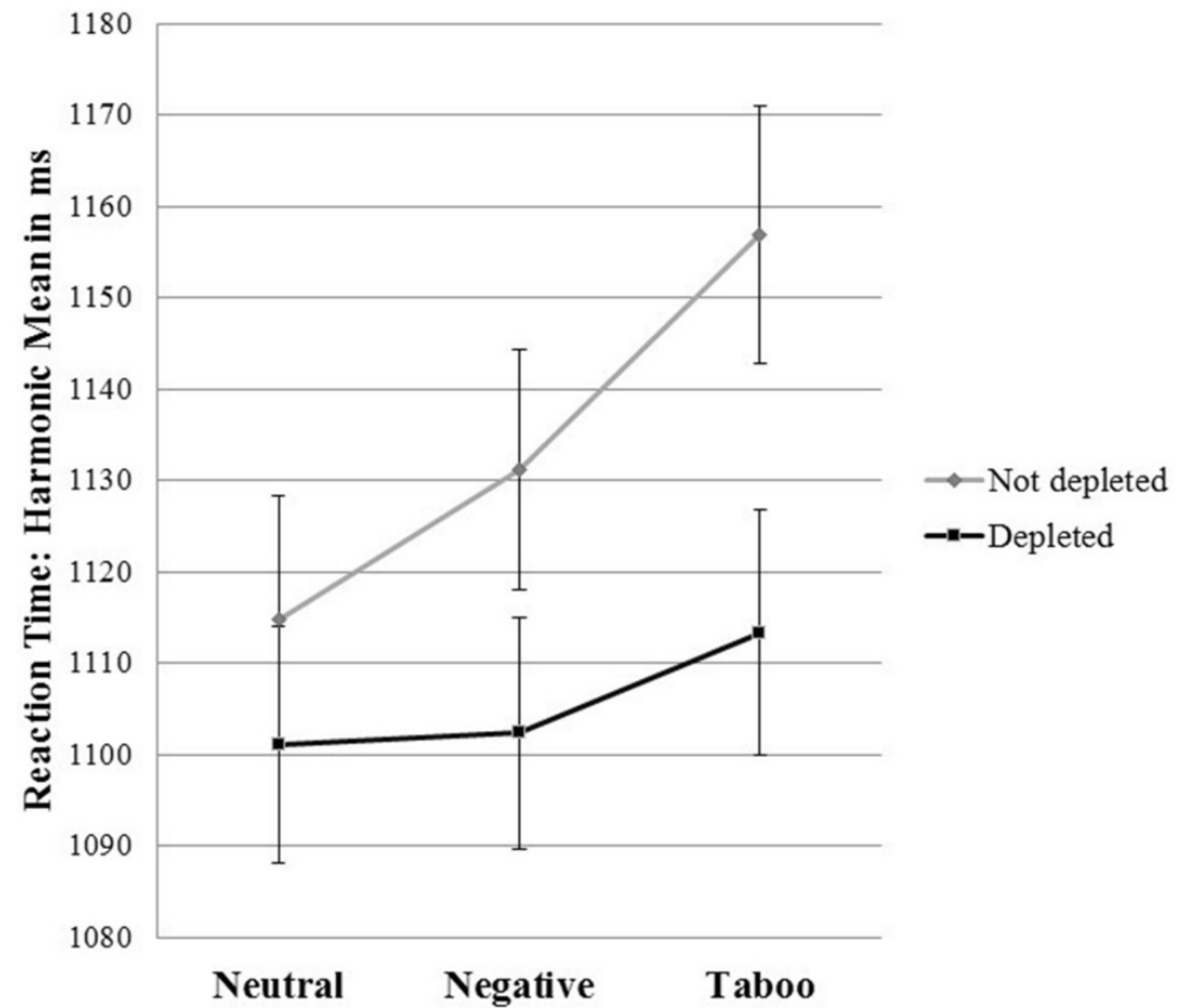
- IV: State self-control capacity (i.e., ego depletion)
- DV: Failure to recognize social cues vs. failure to control reactions to recognized social cues
- Moderator: Implicit theories on willpower

# PROCEDURE

- Participants completed a self-control scale and a questionnaire regarding their implicit theories (beliefs) on willpower
- Those in the depletion group completed a modified color Stroop task with predominantly incongruent trials; those in the control group completed a modified color Stroop task with predominantly congruent trials
- Participants then completed the emotional Stroop task
  - Stimuli included three different word types: words with neutral valence (20), words with negative valence (20), and taboo words (19). The words were displayed in one of four colors (i.e., red, green, blue, or yellow)

# RESULTS

- In the depletion condition, no significant difference was observed among the three word times (i.e., depleted participants do not react differently to different words)
- In the undepleted condition, participants reacted the fastest to neutral words, slightly slower to negative words, and significantly slower to taboo words (i.e., in line with the classic emotional Stroop effect)
- No significant difference between the undepleted and depleted conditions with neutral words and negative words, but there was significant difference with taboo words

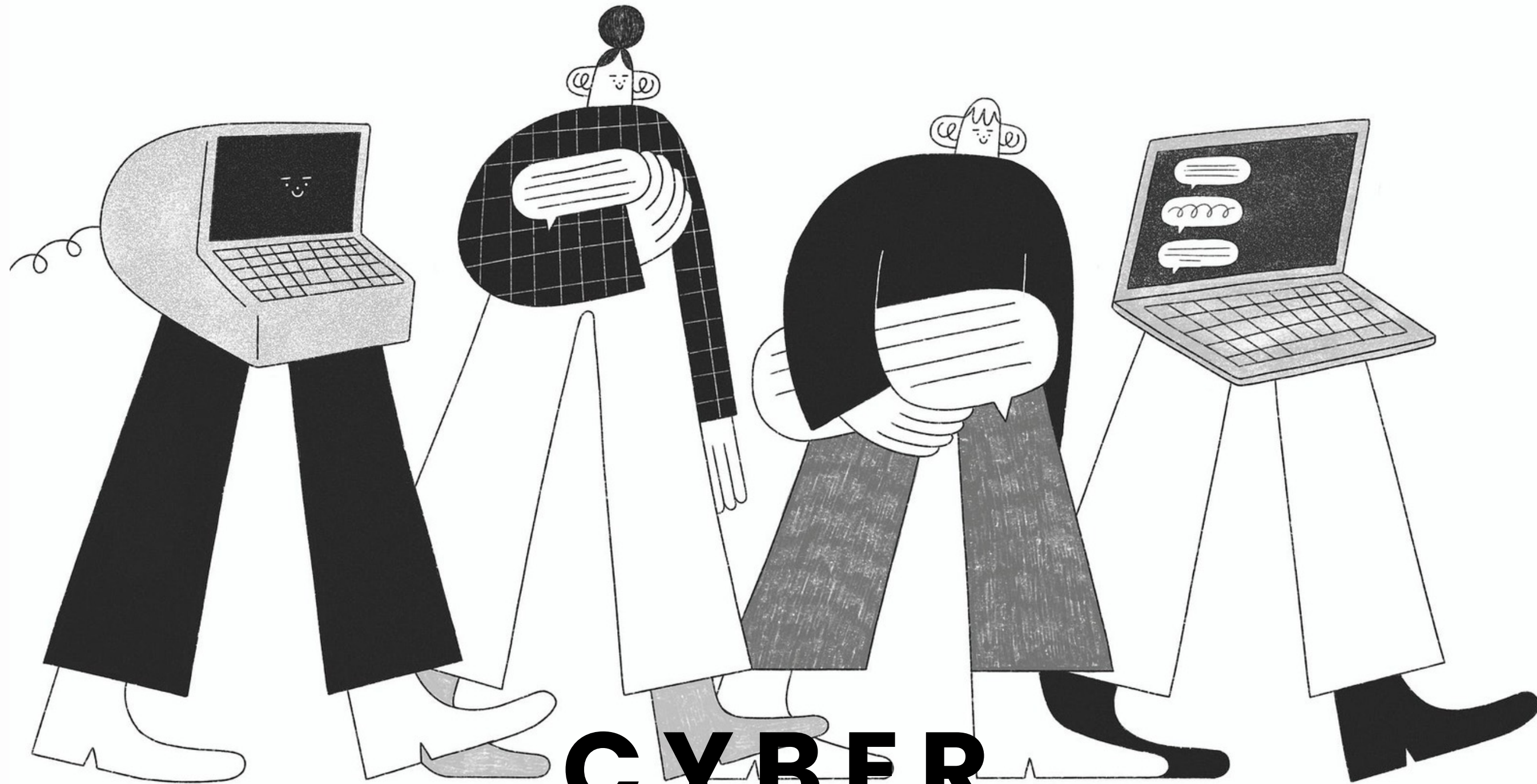


**FIGURE 1** | Interaction effect between word type and depletion condition.

# OVERALL...

Results were in line with authors' expectations/main argument

- Strong social cues (i.e., taboo words) were processed differently from weaker/neutral cues (i.e., negative/neutral words)
- Depleted participants reacted faster, while undepleted participants reacted more slowly and were able to differentiate the different cues appropriately
- If people do not realize that a communication situation warrants self-control, their motivation to communicate appropriately is irrelevant




# CYBER PSYCHOLOGY

WEEK 6: BEHAVING WELL

# The Tabi Swiper vs. TikTok's Vigilantes

A new addition to the list of bad date villains.

 Share full article



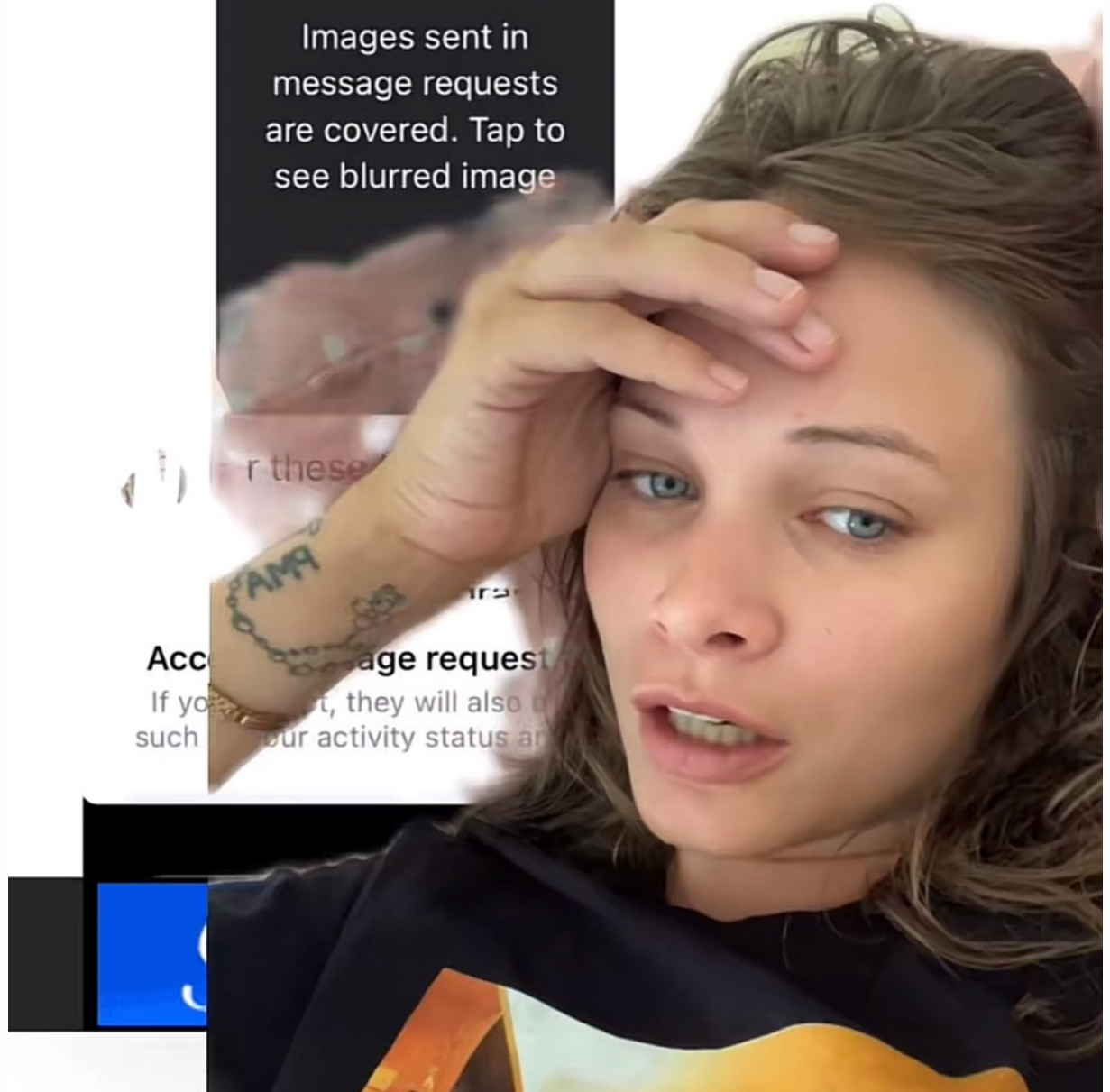
Alexis Dougé

nextlevellexuss 14h  
YESTERDAY 11:21 PM

hiiii!! just saw your tiktok and tried dming you there but it wont go though!! my friend has been dating him for months and he just gave her a pair of tabis!!!!

do you have receipts i can show her?? so freaked out for her rn

Images sent in message requests are covered. Tap to see blurred image



r these  
Acc...age request  
If yo...t, they will also o  
such...our activity status ar

# PROSOCIAL BEHAVIOR

Voluntary intentional behavior that results in benefits for another (Eisenberg & Miller, 1987)

- Every day, hundreds of thousands of people voluntarily help strangers on the Internet with no expectation of direct reciprocity or reward
- E.g., Donating funds through online charitable organizations; working on projects that create freely-available information products like wikipedia articles; offering support to one another in discussion forums

# **DETERMINANTS OF PROSOCIAL BEHAVIOR**

# PERSONALITY

Some people are more disposed toward helping than others

- Those who score high on **empathy**, or the ability to share another person's emotions, are often generous to offer help
- Empathy is positively associated with agreeableness and extraversion, which are other-oriented personality traits
  - Extraverts may experience greater success in socializing precisely because they are able to consider another person's perspective and feelings
- Unsurprisingly, empathy is negatively associated with neuroticism
  - Those who are anxious and easily stressed tend to be more preoccupied with their own self-worth and emotions

<b>TRAIT</b>	<b>ADJECTIVES</b>	<b>SAMPLE ITEMS</b>
Extraversion	Active, assertive, energetic, outgoing, enthusiastic, talkative	I feel comfortable around people. I think a lot before I speak or act (reversed).
Openness to experience	Artistic, curious, imaginative, insightful, original, broad range of interests	I have a vivid imagination. I have difficulty understanding abstract ideas (reversed).
Agreeableness	Appreciative, forgiving, generous, kind, sympathetic	I sympathize with others' feelings. I feel little concern for others (reversed).
Conscientiousness	Dependable, responsible, productive, ethical, high aspirations, not self-indulgent	I am always prepared. I often forget to put things back in their proper place (reversed).
Neuroticism	Anxious, self-pitying, tense, touchy, unstable, worrying	I worry about things. I seldom feel blue (reversed).

<sup>a</sup> Items identified as "reversed" were reverse scored, so that stronger agreement indicates lower scores on the trait.

# PERSONALITY

Freis & Gurung, 2013

- Female participants were invited to take part in a Facebook discussion with two other people, who were actually confederates
- They were instructed to take turns posting a comment, and if they had nothing to say they could type “pass”
- During the discussion, a confederate mentioned that she would like to get married but wasn't legally allowed to in her state, which hinted that she was a lesbian
- The other confederate then injected harsh, bullying comments

# PERSONALITY

- More than 90% tried to intervene in some way by changing the subject, telling the bully to stop, attacking the bully in turn, etc.
- Participants who scored high on empathy were most likely to intervene by changing the subject
- Those who scored high on extraversion were likely to intervene by launching an attack of their own against the bully
- Participants were more likely to use explicit language to stop the bully if they scored higher on personal distress empathy (i.e., the tendency to experience distress and discomfort in response to other's distress)

# GROUP SIZE

Situational factors also determine the likelihood that we behave prosocially

- A key feature of the situation that influences whether a bystander offers assistance to a stranger is the number of people present in a group
- When many people are present, the chance that any one of them will help drops dramatically—this is known as the **bystander effect**
- The odds that participants would retrieve a dropped pencil or coin in an elevator were much higher when only one or two other people were present, compared to when the elevator was packed (Latané & Dabbs, 1975)

# GROUP SIZE

In an offline situation, bystanders in a large group may not even **notice** that a person needs help if they don't speak up or attract attention (e.g., it's difficult to see that a person dropped their pencil in a crowded elevator)

- Research suggests that helping may be less likely to occur in dense cities simply because of this “noticing” factor
- The noise from a lawn mower decreased participants' tendency to help another person with a broken arm when they dropped a book; participants didn't even notice the cast when their senses were bombarded (Mathews & Canon, 1975)

# GROUP SIZE

Even if a bystander does notice the need the situation/event, the next step is to **interpret it**

- You may see a person stumble and fall on the sidewalk, but your interpretation of that will affect whether you provide help
- Humans are highly social creatures – we tend to rely on one another to interpret what's going on around us
- This extends to cues about the relative seriousness of a given situation

# GROUP SIZE

Latané & Darley, 1970

- Researchers rigged a room vent so that it would start pouring out smoke
- When a male participant sitting alone in the room saw the smoke, the chances that he reported it was 75%; when other men were present, the bystander effect occurred
- “Taking their cues from one another, they built a shared illusion that nothing was amiss even when the smoke started to make them rub their eyes, cough, and choke”

# GROUP SIZE

As group size increases, each individual also feels **less responsibility** for offering their assistance (Darley & Latané, 1968)

- Participants were asked to sit alone in separate cubicles, and take part in a group discussion over an intercom system
- There was only one real participant and a confederate in each group, but each participant was led to believe that they were in a group of 2 / 3 / 6
- The confederate would casually mention that he was prone to seizures; participants later heard sounds of choking, gasping, crying, then total silence

# GROUP SIZE

- Participants who thought that they were the only one present were most likely to render help; more than a third ignored the incident when they thought there were others present in the group
- The responsibility to help and take action is spread thin when more people are around – this is known as **diffusion of responsibility**
- Even if you notice the event and interpret it as a call for help, you may still ignore it because you assume someone else will step in... of course, everyone else is likely thinking the same thing

# GROUP SIZE

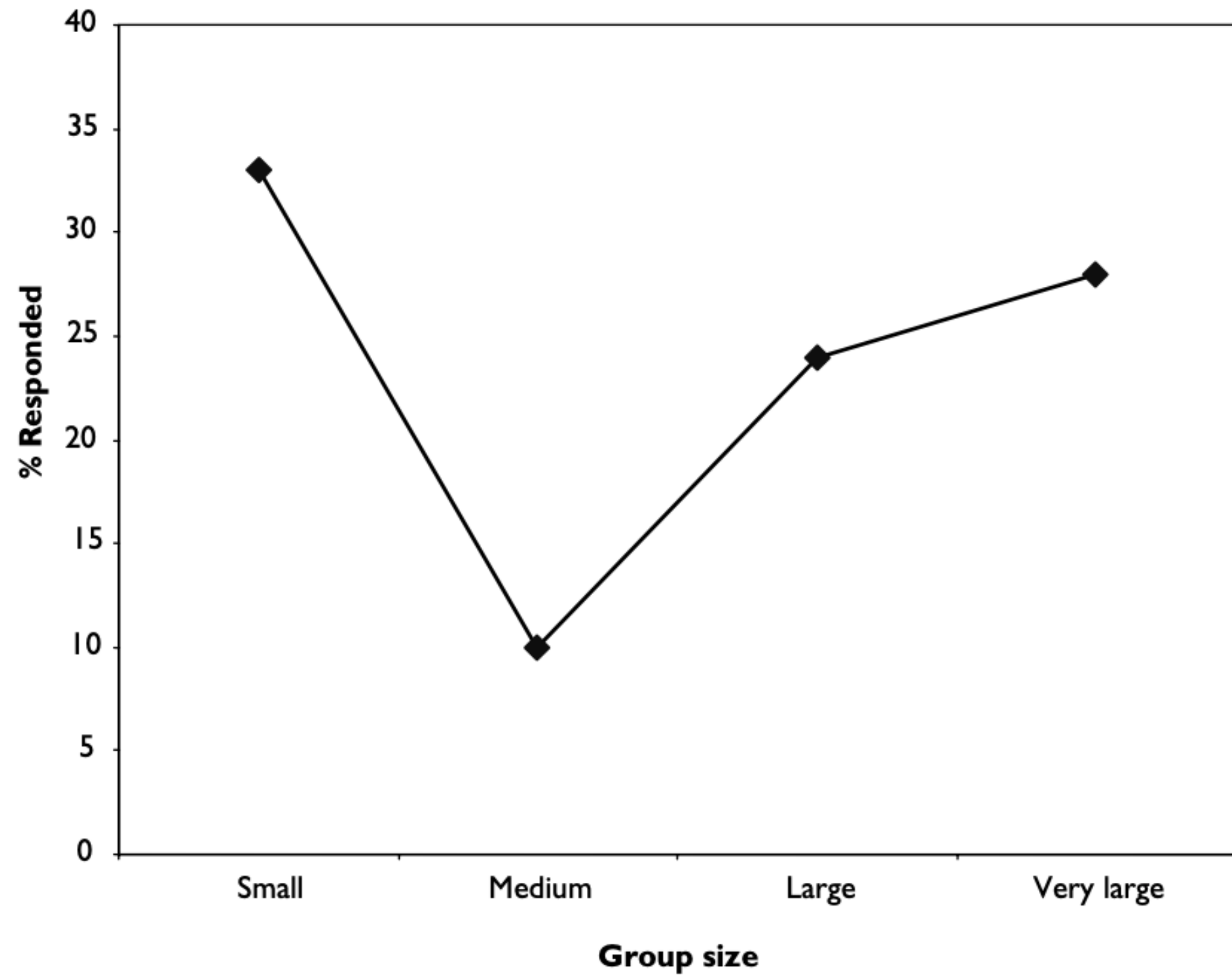
The bystander effect may occur more readily online, as **ambiguity** is heightened

- In online spaces, a large number of users gather in a relatively cue-poor setting (i.e., text-only interaction, little personal information, etc.)
- Individuals may have difficulty determining how many people have already read an uncivil comment, whether the victim has read it, and/or how much distress it caused them
- Online spaces are also not temporally confined; because people interact asynchronously, the perceived presence of other bystanders may be more exaggerated

# GROUP SIZE

Voelpel et al., 2008

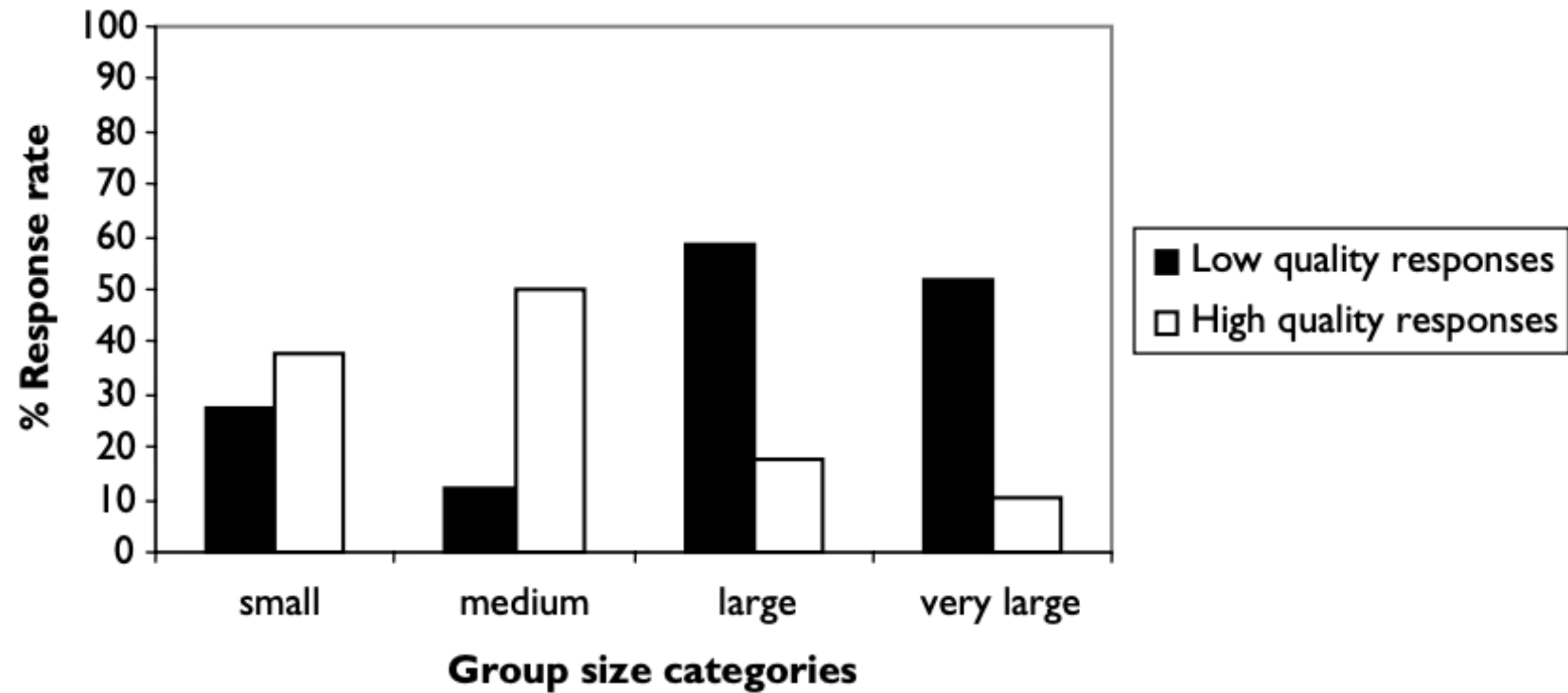
- Researchers examined the sharing patterns in 333 different Yahoo! groups with almost 200,000 members by posting a simple query to each group: *“I’m so happy that I found this group. However, I have one question: Does anyone know how I can upload more than one picture at once. Thanks, Sam.”*
- Number of members in each group varied from just a handful to more than 10,000 members
- As the bystander effect predicts, the researchers were most likely to receive a reply from someone in the small groups, with fewer than 100 members



**Figure 1** Response likelihood in terms of group size categories

# GROUP SIZE

- In small groups, the pressure to help might be higher, because of a heightened sense of we-ness (i.e., group identity)
- In large online groups, members are relatively anonymous
  - Even if they make a contribution which is perceived by others to be inappropriate, the costs/risks associated with it are relatively low since future contact with the person in need is less likely
- In medium-sized groups, members are likely to experience greater pressure to contribute and greater risk of embarrassment from poor quality responses



**Figure 2** High and low quality responses per group size category

# GROUP SIZE

Can the features of online environments be used to **reverse the bystander effect**?

- Participants were told they would be viewing posts from a real, ongoing discussion forum, and that they could respond or simply move on to the next message (Van Bommel et al., 2012)
- However, the messages were actually preprogrammed to simulate personal stories of people in distress, to see if participants would be moved to respond in a prosocial way
- The website displayed the names of each participant, the names of others who were online, and the total number of people in the “live” forum

# GROUP SIZE

- Participants who thought they were the only ones in the forum were more likely to respond to the message, compared to those who thought there were 30 other people online
- But the bystander effect was reversed when participants were made to experience greater **public self-awareness** (by making their name appear in red on the website while others' names appeared in black / pointing a webcam with the indicator light switched on)
- Those who thought they were in a forum with 30 others were MORE likely to respond than those who thought they were the only one in the forum

# TIME PRESSURE

People who are in a hurry are less likely to stop to help someone in need (Darley & Batson, 1973)

- Students at the Princeton Theological Seminary were asked to prepare a short speech that would be videotaped in another building on campus
- To instill a feeling of being rushed for time, some students heard that the filmmakers “were expecting you a few minutes ago . . . you’d better hurry”
- Others heard that “it will be a few minutes before they’re ready for you,” to reduce time pressure

# TIME PRESSURE

- An “intermediate hurry” group was just told to “go right over”
- On the way to the videotaping, students came across a confederate slumped on the floor, coughing and groaning
- 10% of students who thought they were late stopped to offer assistance, compared to 45% of those in the “intermediate hurry” group and 63% of those who thought they had extra time

# TIME PRESSURE

Online environments reduce time pressure as most activities are **asynchronous**


- This means people can do something prosocial at a time of their own choosing – they can help at any hour of the day, from any place with Internet access
- The use of smartphones also opens up **microvolunteering** opportunities, as people are always look to fill short periods of spare time on their phones
  - Websites are springing up where people can volunteer in the span of just 30 minutes or less
  - E.g., The Open Elm Project encourages people to record the sighting of Dutch elm trees on the Isle of Man in the UK, to help conservationists try to save that endangered species

# **How you can help with penguin research by browsing images at home**

Many penguin populations are under threat but you can help researchers keep an eye on them through a citizen science project called Penguin Watch

Penguin Watch ([www.penguinwatch.org](http://www.penguinwatch.org)), which launches on 17 September 2014, is a project led by Oxford University scientists that gives citizen scientists access to around 200,000 images of penguins taken by remote cameras monitoring over 30 colonies from around the Southern Ocean. The project brings together scientists from the Australian Antarctic Division and the UK, who normally work on opposite sides of Antarctica.

Recent evidence suggests that populations of many species of penguin, such as chinstrap and Adélie, are declining fast as shrinking sea ice threatens the krill they feed on. By tagging the adults, chicks, and eggs in remote camera images Penguin Watch volunteers will help scientists to gather information about penguin behaviour and breeding success, as well as teaching a computer how to count and identify individuals of different species.





Penguin Watch ✓

Language English ▾

ABOUT
CLASSIFY
TALK
COLLECT

The 'Time-lapse' workflow is out of images. You will see a 'Finished' banner and a 'Time-lapse' banner. But don't worry, photos fresh from Antarctica are coming soon to the Penguin project! More info: <https://bit.ly/3epJvgW>.





FIELD GUIDE

Individually mark rockhopper penguin adults, chicks and eggs in the foreground of the image by clicking at the centre of each one's visible area.

Click and drag the marks to recentre them as needed.

Remove any accidental marks using the black-and-white cross.

You can '*Hide previous marks*' if required - for example if your markings are hiding unmarked penguins. But be careful not to click on the same penguin more than once!

More help on how to identify adults and chicks can be found in the *Field Guide* (see tab on the right of your screen).

Continue

◀ ● ○ ○ ○ ○ ▶

**TASK**
**TUTORIAL**

For each penguin in the image, select 'adult' or 'chick' from the list, then click to mark its centre. Please also label any penguin 'eggs' and 'other' animals.

🎯	Adults	0 drawn
🎯	Chicks	0 drawn
🎯	Eggs	0 drawn
🎯	Other	0 drawn

**NEED SOME HELP WITH THIS TASK?**

Hide previous marks

# SLACKTIVISM

The Internet makes it easy for people to support causes

- Research on the **foot-in-the-door phenomenon** shows that people are more likely to agree to a large request if a smaller one precedes it
- In a study, researchers pretended to be volunteers for a safe-driving campaign and approached some home-owners to ask if they would be willing to put a tiny “be a safe driver” sign in their windows (Freedman & Fraser, 1966)
- Two weeks later, they came back and asked if they could put a large, ugly sign in the front yard; 67% agreed compared to 17% who had not been approached with the smaller request

# SLACKTIVISM

- Many organizations think that clicking “like” is the online equivalent of the foot-in-the-door that will lead to further action
- But others think it leads to **slacktivism**, where people think they’ve done their part by doing something small, and earned some kind of moral license to stop contributing

*Look, if you make a Facebook page we will “like” it—it’s the least we can do.  
But it’s also the most we can do.<sup>43</sup>*

# SLACKTIVISM

The key determinant is whether the token support is given **publicly or privately**

- If your token of support is observable, and your friends are aware of it, you may be less likely to go the extra mile later because you have already created the impression you desired
- But if your token of support is given privately, you may be willing to offer more meaningful support because of the desire to reduce cognitive dissonance (to be consistent in beliefs and behavior)

# SLACKTIVISM

Kristofferson et al., 2014

- Participants who signed a petition for a charity in front of others were stingier with their time when asked to do something more meaningful later (i.e., stuffing envelopes for the charity's mail campaign)
- Participants whose initial token was made privately offered almost twice as much of their time
- This suggests that organizations may be able to encourage more meaningful support if their token support (e.g., clicking "like" on the post) is not publicly broadcast to friends and family

# MOOD

Are you more helpful to others when you're in a really good mood? Or do you make yourself try to feel better when you're down by doing some good in the world?

- Research suggests that the answer is likely both
- When people experience situations that make them feel good (e.g., finding some money, succeeding on a task, receiving a free gift), they tend to be more helpful
- But people who are in a bad mood also turn to helpful deeds in order to put their gloom behind them

# WHO HELPS WHOM?

Offline, helping behavior is often influenced by **physical attractiveness** and **similarity**, which fosters liking

- Participants were more likely to facilitate the delivery of a completed graduate school application form that was found in an airport booth when the applicant photo was more attractive (Benson et al., 1976)
- Students who received a request for help with a 40-question survey from a hypothetical student with the same surname were more likely to comply with the request, with a shorter response delay (Guèguen et al., 2006)

# WHO HELPS WHOM?

Online, people may have little or no information about the requestor's physical appearance as conveyed by visible attributes (e.g., age, gender, race)


- However, through social networks, we may gain more information about how similar we are to others
- E.g., If you interact with people in a subreddit about Japan, chances are that you either live in Japan or have some sort of interest in the country
- The Internet allow people with niche interests to find one another, regardless of geographic distance, which may promote prosocial behavior


# **R/ASSISTANCE: A CASE STUDY IN ALTRUISM**




# r/Assistance

[+ Create Post](#)[Join](#)

Top ▾ Today ▾  ▾

 [Community highlights](#) ▾

 [u/kawaiikittyrei](#) · 23 hr. ago

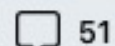
## \$32 to save my deceased mom's things from being auctioned off tomorrow 9/24

Hello everyone. I hate to have to make a request here, but I have no other options. This is a very long post but I wanted to be as detailed as possible when asking for financial assistance, so I hope you read to the end, if not, I do have a TLDR at the end. My mom died in 2020 from heart failure and I've had her belongings in a storage unit since then. I had to stop working in the last year to take care of my grandma whose pulmonary hypertension and congestive heart failure have gotten so bad that she's bedridden and on home hospice. Because of this, I've let my own expenses fall. Honestly, when it comes to my expenses, it is what it is, she's my priority anyway....

**REQUEST FULFILLED**




46



51



 Share

 [u/Outrageous-Beach-945](#) · 9 hr. ago

## Giving out to someone in need

Prefer an Amazon wishlist but I'll try to pick first come first serve. I pretty much got every payment app just let me know. ( UPDATE ) I sent 15 to 2 people. Hope it helps!

**OFFER**




32



40



 Share

### Redditors Helping Redditors

Redditors helping active Redditors ranging from financial assistance and wishlist fulfillment to advice, support, contest votes, and surveys. This is a subreddit of regular people who can help with short term support.

 Created Aug 23, 2010

 Public

**315K**

Members

**97**

● Online

**Top 1%**

Rank by size 

### COMMUNITY BOOKMARKS

[Our Rules](#)

[Helpful Information](#) ▾

[Message the Mods](#)

[Post Types](#) ▾

PLEASE READ FIRST!

Welcome to our subreddit. Please read

# ONLINE ALTRUISM

Traditionally, **altruism** refers to any act that either does good to others, or prevents others from harm

- **Online altruism** refers to altruism made possible by a platform, through coordination, addressed to strangers, and involving significant cost or self-sacrifice to the giver
- Even though users of r/Assistance report that they had been scammed on online giving platforms in the past, or suspect that they had given to bad actors who lied about their circumstances, many see online altruism as “more good” than giving to organizations

# ONLINE ALTRUISM

This is likely due to two main reasons

- Online altruism is seen as **more inclusive** – anyone can ask for assistance on these platforms, even if they don't qualify for help from charities or governmental assistance
- The **emotional experience of giving** online is heightened, compared to giving offline

# USER EXPERIENCE

## (1) Internet strangers are not scary anymore

- Younger users compared themselves to their parents and older generations, and shared that they felt differently about people online
- Online friendships have become more normal over time, and there is a general trust and familiarity when it comes to meeting people through apps/on the Internet
- These users also described a sense of responsibility and care towards individuals behind computer screens, demonstrating **an expanded circle of care**

*Our grandparents... would have gone against getting in a [rideshare] car with a stranger. It's a little different now and [less of] that wariness since we grew up with [trusting digital strangers], we're so used to it there, we're less likely to be worried.*

Besides familiarity with online strangers, those who give on r/Assistance also have an expanded circle of care. One giver stated: "I realized that this is kind of the way forward, we can't just isolate and say take care of your own, we kind of have to help everybody out if we can." Many folks explained that giving on online platforms

# USER EXPERIENCE

(2) Individual impact is fulfilling and fun

- Users indicated that they find online altruism more fulfilling because they can see their individual impact
- Their contribution is not pooled with that of others, to be used towards abstract causes
- Rather, they are singlehandedly saving someone's day and can "see" the direct impact of their contribution

*I've made donations to charities and things like that, but it sort of feels like you're just a drop in the bucket, you know, it's a lot different when you can help someone and go, okay, I know that this is going to you personally, you know, you feel like you're making a bigger impact on an individual.*

Some even try to increase their impact further by giving to requesters who may be less attractive to other givers. For example, one giver on the subreddit explained, "I'm looking at [the subreddit] every day and most posts are filled up pretty quickly. So, I wait until it seems obvious that a post is not going to get fulfilled. And then I read it."

# USER EXPERIENCE

## (2) Individual impact is fulfilling and fun

- Online altruism also carries an element of fun, even if it comes at a slight expense
- Popular forms of online altruism involve pizza — the request is always for pizza, and the giver always purchases pizza either through delivery or a gift card
- Other forms are centered around holidays, such as allowing givers to purchase Christmas presents for children who would not otherwise receive a gift



r/Assistance • 3 days ago

JoshM3250



## Heartbroken because I can't get my kids pizza tonight

REQUEST FULFILLED

So it's apparently National Pizza Day, which my 12-year old texted from school to remind me. But she doesn't know that we have exactly \$6.53 in the bank until Monday, and all avenues of credit and borrowing exhausted. Been going through a really rough time financially and we've been able to cobble just enough together to make it until Monday, on a wing and a prayer.

I know this request sounds mundane and frivolous, but I'd love to be able to get a pizza or two tonight and not have to burst her bubble or explain why we can't. Does anyone have a free code to a pizza chain place, an unused gift card, or maybe rewards they can share?

Thanks for reading my request!



**Icy\_Session3326** · 2d ago · Edited 2d ago

How much does it cost for a pizza where you live?

Edit : shaking my head at the sad person who downvoted my comment

⊖ ↑ 62 ↓ Reply Share ...



**JoshM3250** OP · 2d ago

We live in Pittsburgh and I'd say a pizza from a local place is maybe \$15, and a special with a chain like Papa Johns or Pizza Hut is \$7-10.

⊖ ↑ 22 ↓ Reply Share ...



**No\_Impression1365** · 2d ago

I can send like \$5 or so to contribute if you have cash app

⊖ ↑ 19 ↓ Reply Share ...



**Icy\_Session3326** · 2d ago

Between us we will get this child pizza 🤔👏

I only have PayPal btw OP

⊖ ↑ 25 ↓ Reply Share ...



**JoshM3250** OP · 2d ago

Thank you for your kind offer! I've been getting many messages but someone else has helped before I could get to this message. Thank you both!

↑ 30 ↓ Reply Share ...

# USER EXPERIENCE

## (3) Less embarrassment, more convenience

- Users explained that giving online is much easier and more convenient; physical actions are simple, social interaction is less complicated
- One user indicated that “it’s far more convenient to give online since I can do it without having to go anywhere”

# PLATFORM MECHANISMS

## (1) Storytelling

- One commonality among online platforms is the ability for requestors to share a story explaining why they are asking for assistance
- This personal appeal contrasts with more abstract data-driven appeals (e.g., statistics about food insecurity in the UK)
- These stories simply need to be compelling (e.g., a user shared, “I just bought someone cat food and litter this morning. I always have a special place in my heart for those struggling to feed their animals.”)



**Thebeatybunch** · 18h ago ·

OP, it's done now.

My apologies for taking longer than 30 minutes.

Executive Management Week at work and our last meeting of the day went over. Some people just won't stop talking! 😊

Take care of your mom's belongings!

I lost mine 10 years ago, August, and I still have her entire apartment in my 2nd building. I don't think I'll ever get rid of it.

I'm sorry this happened to you and I'm so sorry for your loss.



17



Reply



Award



Share



# PLATFORM MECHANISMS

## (2) User profiles and giver vetting

- Many givers perform their own vetting and diligence by looking through the requestor's user profile
- Some simply look for signs of a genuine user, such as normal social media usage and an account that has not been recently created
- This ability to look through a requestor's post history, Twitter feed, or Facebook profile helps givers feel more confident about the authenticity of the requestor and better empathize or affiliate with them

# PLATFORM MECHANISMS

## (3) Integration

- While there are purpose-built platforms like GoFundMe, most channels of online altruism are integrated within platforms that users engage in their daily lives, for reasons other than giving
- Many users said that they browse r/Assistance daily, partly because it shows up in their Reddit newsfeed and they are already on Reddit.
- In this way, opportunities for online altruism are strongly integrated into users' online life

# **JOURNAL ARTICLES**

- What is the main argument put forth by the authors?
  - Describe the relationship between happiness and prosocial behavior, and explain the importance of spillover and crossover processes.
- What were the proposed hypotheses/expected findings?
- How were they tested?
- Do the results support the proposed hypotheses? Do you agree with the results?

**FEEL GOOD,  
DO GOOD ONLINE**

Erreygers et al., 2018

# HAPPINESS & PROSOCIALITY

Happiness and prosocial behavior mutually reinforce each other through a positive feedback loop

- Prosocial spending (i.e., spending money on someone else) increases happiness, which in turn stimulates prosocial spending (Akinin et al., 2012; 2023)
- This is supported by **Broaden-and-Build Theory** which proposes that experiencing positive emotions broadens people's perspectives and actions, which help build enduring resources and relationships

Catalyst	Features	Attention, thoughts, actions to contribute broadening	Long term building effects
Joy	Feeling playful, bright, light, spring in the steps, inner glow	Play, pushing limits, being creative	Enduring physical, social stress handling, intellectual resources
Pride	Upright posture, slight smile	Sharing news from achievement with others, envisioning of new achievements in future	Fuels self-esteem, and achievement motivation
Interest	Sense of possibility or mystery, fascination, feeling open and alive	Exploring, taking in new information and experiences, expanding the self, learning more	Knowledge and intellectual complexity
Contentment	Feeling that everything is right as it is	Savouring current life circumstances, integration of the circumstances into new view of self and world	Produces self-insight and alters worldviews
Gratitude	Feeling of appreciation of something that has come to our way	Creative and wide array of actions to promote the well being of other people	Builds and strengthens social bonds and friendships, builds social resources, motivates permanent faithfulness and spiritual growth
Love	Contains and overlaps all the other positive feelings	Exploring, savouring, and enjoying people and life at large	Inspired and uplifted interactions to build and strengthen social bonds and attachments

# MAIN ARGUMENT

Emotional states originating in one context can spill over to another context, and even cross over from one person to another

- Parents' happiness may indirectly, via transmission to adolescents' own happiness, predict adolescents online prosocial behavior
- **Spillover** refers to the transmission of emotional states from one context to another **within** individuals (e.g., from work to home)
- **Crossover** refers to the transmission of emotional states **between** individuals (e.g., from parents to children)

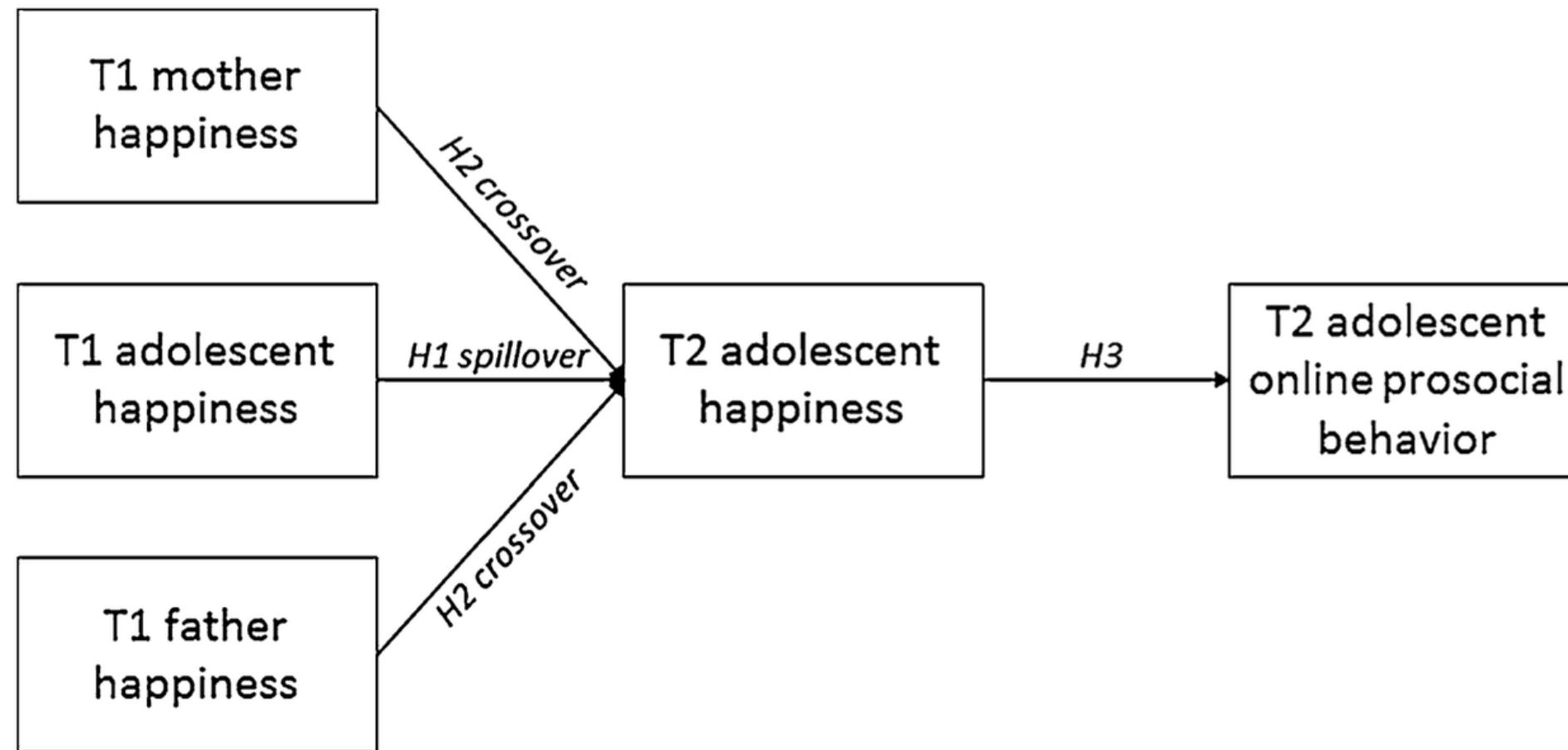
# **HYPOTHESES**

(H1) Spillover: adolescents' happiness after school predicts their happiness at home

(H2) Crossover: parents' happiness after work predicts their children's happiness at home

(H3) Adolescents' happiness at home predicts their online prosocial behavior

When combined, these hypotheses result in a mediation model in which adolescents' and parents' T1 happiness predict adolescents' T2 online prosocial behavior via their T2 happiness



**Fig. 1** Diagram of the hypotheses of the spillover and crossover of happiness and its effect on online behavior

# VARIABLES

- IV: Adolescents' happiness after school (T1); both parents' happiness after work (T1)
- Mediator: Adolescents' happiness at home (T2)
- DV: Adolescents' online prosocial behavior (T2)
- Control: Use of digital technologies

# PROCEDURE

Using a daily diary design, participants reported their emotions and online prosocial behavior across five consecutive days (Monday to Friday)

- Happiness was measured right after school/work (T1) and right before adolescents went to bed (T2)
  - Rate current level of happiness
- Online prosocial behavior was only assessed at T2
  - Online prosocial behavior scale; adolescents rated how often they engaged in these behaviors online after coming home from school
- Use of digital technologies was only assessed at T2
  - Rate how often they used digital technologies for interpersonal contact throughout the day

# PROCEDURE

The design allows for hypotheses to be tested at two levels: **within-person** (i.e., day-level) and **between-person** (i.e., averaged across the five days)

- At the within-person level, we look at whether daily changes in adolescents' and parents' happiness after school/work → adolescents' happiness at home → online prosocial behavior at home later that day
- At the between-person level, we look at whether adolescents' and parents' average happiness after school/work → adolescents' average happiness at home → average tendency to engage in online prosocial behavior later at home

# RESULTS

Spillover: Adolescents' happiness at T1 positively affected their happiness at T2  
(H1 )

- Within: On days that they reported higher than average levels of happiness after school, they also reported higher levels of happiness at home
- Between: Those who reported higher than average levels of happiness after school also reported higher than average levels of happiness at home

# RESULTS

Crossover: Only mothers' happiness at T1 positively affected daughters' happiness at T2 (H2 ~~OX~~)

- Within: On days that mothers reported higher than average levels of happiness after work, their daughters felt happier at home later in the evening
- Between: No significant results

# RESULTS

Adolescents' happiness at T2 was positively associated with their online prosocial behavior (H3 ~~OX~~)

- Within: This only applied to girls, meaning that on days where girls reported more happiness at home, they reported more online prosocial behavior
- Between: Not significant

Altogether, on days that girls felt happier after school/their mothers were happier after work (T1), they were happier at home (T2), and behaved more prosocially online

# OVERALL...

- Adolescents who reported higher than average happiness after school also reported higher than average happiness at home across the week
  - This stability of happiness is consistent with research indicating that people differ in their average levels of happiness
- Happiness crossed over from mothers to daughters, but not sons; happiness did not cross over from fathers to children
  - Mothers are more often involved in parenting, and are particularly important sources of advice and understanding; they are also more involved in the emotional lives of their children, and talk more with their daughters (with a focus on positive emotions)
- Note that happiness at home (T2) and online prosocial behavior were assessed at the same time point

- Define the extended chilling/warming effect of social media.
  - What are the key factors that determine whether social media has a chilling or warming effect?
  - How do the authors of each paper approach the study of prosocial behavior? Do their perspectives concur or differ?
- What were the authors' proposed hypotheses/expected findings?
- The paper provides empirical evidence from two studies. What was each study designed to assess? Summarize the procedure and key findings of each study, and indicate if they align with the authors' hypotheses.

# **THE EXTENDED WARMING EFFECT OF SOCIAL MEDIA**

Lavertu et al., 2020

# THE EXTENDED CHILLING EFFECT

- The **extended chilling effect** of social media refers to the constraining of behavior offline (NDIM) as a consequence of the perceived expectations that online audiences hold
  - Individuals amend their behavior to avoid undesired impressions in the eyes of others (e.g., they are likely to apologize for bumping into another person on the street)
  - This is known as **negatively directed impression management** (NDIM)

# THE EXTENDED WARMING EFFECT

- The **extended warming effect** of social media refers to an increase in prosocial behavior offline (PDIM) as a consequence of the perceived expectations that online audiences hold
  - Individuals amend their behavior to curate a desired impression of themselves (e.g., they may wear a suit to an interview to appear professional)
  - This is known as **positively directed impression management** (PDIM)

# PUBLIC SELF-AWARENESS

The key trigger for the extended chilling/warming effect is **an increase in public self-awareness**

- This refers to situations where online audiences become salient in an offline setting
- Research has shown that actual and perceived surveillance impacts behavior; surveillance increases socially desirable behaviors while at the same time reducing more undesirable behaviors
- According to **self-awareness theory**, when a person is aware of an audience, they perform a form of mental calculation that factors in the discrepancy between their current image and their desired image, which drives behavior that reduces this discrepancy

# CHILLING OR WARMING?

Whether the saliency of online audiences leads to chilling or warming effects on an individual's behavior depends on...

- The individual's goals and impression management orientation
  - Do they desire to mitigate undesired impressions or create desired impressions? Most people will be predisposed toward one type of impression management style
- The situational context
  - Is there an imminent threat to the individual's public image (i.e., a self-presentational predicament)? Imminent threat tends to be associated with NDIM

# EXTRINSIC MOTIVATION

Extrinsic motivation for prosocial behavior is linked to the reward or gratification a person feels, which includes being perceived in a positive light by others (Ariely et al., 2009)

- Extrinsically motivated prosocial behavior (i.e., prosocial behavior that occurs in the presence of an audience) is more likely when an individual perceives a need to...
  - (i) reinforce, repair or improve their own self-image
  - (ii) be consistent with perceived social norms
  - (iii) communicate a surplus of resources like time, money or moral values

# HYPOTHESES

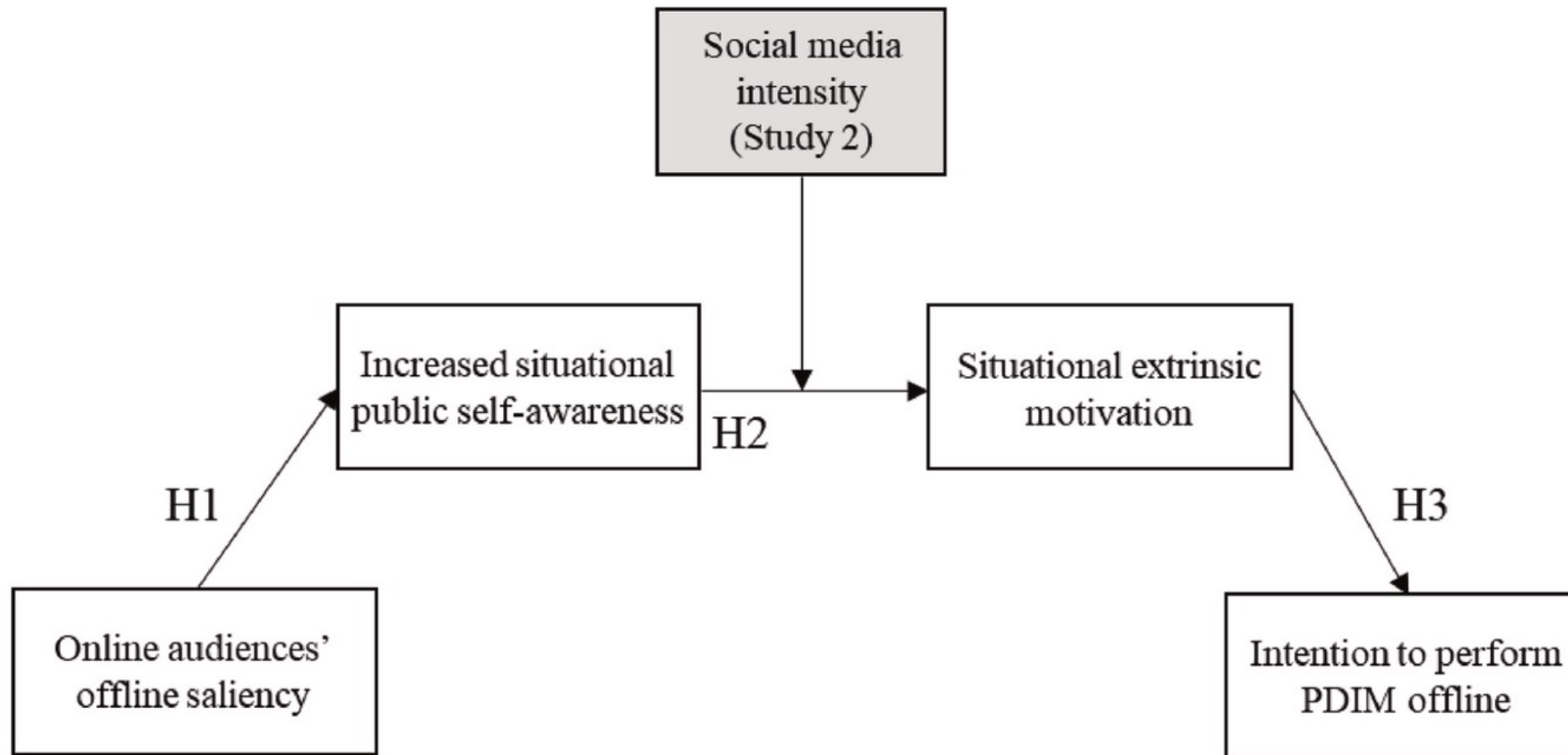
(H1) When online audiences become salient in an offline setting, public self-awareness increases

(H2) Increased public self-awareness will lead to increased extrinsic motivation to present a desired online persona

(H3) This extrinsic motivation will lead to greater intentions to engage in PDIM offline (i.e., to perform prosocial behaviors)

(H4) Social media intensity (actual use and perceived importance of social media) will moderate the relationship between public self-awareness and extrinsic motivation

- When public self-awareness increases, an individual who is a high intensity user of social media will feel a greater motivation to pursue extrinsic reward



**Fig. 1.** Hypothesized behavioral process underpinning the extended warming effect of SNSs.

# STUDY 1

Participants were asked to imagine an encounter with a representative from a fictitious charity called “Water for Children”

- In the **high audience saliency condition**, the participants were told that the fundraiser was wearing a portable camera and requested a photo for the charity’s social media page, before asking for a donation
- In the **low audience saliency condition**, no camera or suggestion of social media were mentioned

# STUDY 1

- Public self-awareness and extrinsic motivation were assessed using scales
- Participants' intention to perform PDIM offline was measured using a composite created from two responses – the likelihood of giving money to the charity, and the amount of money they would be willing to give
- Participants' general awareness of their online audiences offline was assessed using three items (e.g., “I am aware that other people look at my social media profile(s)”; “I am aware that the content I post online can be diffused outside my own online network”)

# STUDY 1

Offline saliency of online audiences intensified public self-awareness (H1 ○). This led to greater extrinsic motivation (H2 ○), resulting in greater intention towards offline PDIM (H3 ○)

- While Study 1 supports the role of public self-awareness and extrinsic motivation as mediators in this process, the stimulus was extremely overt (i.e. participants were told a photo would be taken of them)
- No boundary conditions (i.e., constraints) for this effect were examined

# STUDY 2

Study 2 addresses these limitations by employing a subtler stimulus for online saliency and examining individuals' levels of social media intensity

- Social media intensity refers to the intensity by which an individual adopts social media, considering both actual usage and perceived importance
- The greater importance a certain identity holds within a person's self-concept, the greater their motivation is to enhance or protect it
  - Greater social media intensity should be linked to greater extrinsic motivation

## STUDY 2

Participants were asked to imagine an encounter with a representative from a fictitious charity called “Monkey’s Palm”

- In the **high audience saliency condition**, participants were told that their friend had been taking pictures all day, posting some of these photos on social media
- In the **low audience saliency condition**, participants were not informed of this
- The same scales were used in Study 2 for situational public self-awareness, extrinsic motivation, and general online audiences awareness

## STUDY 2

- PDIM was measured differently by examining a broader range of potential prosocial behaviors
  - How likely would you sign the petition?
  - How likely would you take the flyer?
  - How likely would you give money?
- Social media intensity was measured using a scale (e.g., “I am proud to tell people I’m on social media”)
- Trait-based public self-awareness was measured as a control variable

## STUDY 2

- Offline saliency of online audiences intensified public self-awareness (H1 ○); greater extrinsic motivation also led to greater intention to engage in offline PDIM (H3 ○)
- More importantly, the role of social media intensity moderated the relationship between public self-awareness and extrinsic motivation (H4 ○)
- Results showed that the warming effect remains, even when a subtle audience saliency manipulation is employed, and this effect is exacerbated for higher intensity social media users

# OVERALL...

- People intend to act more prosocially, based on the knowledge that if these behaviors were to be communicated online, they would experience extrinsic gains from their audience
- Actual audiences stimulate public self-awareness, but the PRESENCE of possible audiences through surveillance devices (e.g., cameras) also stimulates public self-awareness
  - Public self-awareness may be an unconscious byproduct of a social-media-using society; when social media users surround themselves with other social media users, self-awareness is intrinsically higher



# CYBER PSYCHOLOGY

WEEK 9: THE BRAIN ON THE INTERNET

# **THE ONLINE BRAIN**

“Over the last few years I’ve had an uncomfortable sense that someone, or something, has been tinkering with my brain, remapping the neural circuitry, reprogramming the memory. **My mind isn’t going—so far as I can tell—but it’s changing.**”

I’m not thinking the way I used to think. I feel it most strongly when I’m reading. I used to find it easy to immerse myself in a book or lengthy article... Now my concentration starts to drift after a page or two. I get fidgety, lose the thread, begin looking for something else to do. I feel like I’m always dragging my wayward brain back to the text. The deep reading that used to come naturally has become a struggle.”

— *Nicholas Carr, The Shallows: What the Internet is Doing To Our Brains*

# THE BRAIN

A large body of research has shown that the brain is capable of changing throughout the lifespan in response to environmental demands and stimuli

- **Neuroplasticity** refers to the brain's ability to adapt to its environment and to change with experience
- This occurs through a multitude of mechanisms (e.g., forming new connections; sculpting existing connections to be more efficient, etc.)

# THE BRAIN

Within the brain, nerve cells (i.e., neurons) signal to each other and form connections that enable us to do everything, from eating and breathing to thinking and feeling

- These connections may be likened to roads or pathways, meaning the more often they are used, the more established they become
- This is largely experience-driven, such that pathways which are often activated by the environment tend to be strengthened, while pathways that go largely unused tend to be eliminated



# THE BRAIN

The brain also reorganizes and restructures in response to challenging situations and novel environments

- Both aspiring London taxi drivers and non-taxi drivers demonstrated similar memory performance and hippocampi sizes at baseline (Maguire et al., 2000)
- However, those who earned their licenses demonstrated better memory performance and larger hippocampi four years later compared to non-taxi drivers

*To achieve the required standard to be licensed as an “All London” taxi driver you will need a thorough knowledge, primarily, of the area within a six-mile radius of Charing Cross. You will need to know: all the streets; housing estates; parks and open spaces; government offices and departments; financial and commercial centres; diplomatic premises; town halls; registry offices; hospitals; places of worship; sports stadiums and leisure centres; airline offices; stations; hotels; clubs; theatres; cinemas; museums; art galleries; schools; colleges and universities; police stations and headquarters buildings; civil, criminal and coroner’s courts; prisons; and places of interest to tourists. In fact, anywhere a taxi passenger might ask to be taken.*

# **“ALWAYS ONLINE” TECH**

The mass proliferation of “always online” technologies (high-performance smartphones; mobile Internet access) has profound consequences for our lives

- Online communication with others used to require intentionality, planning, and even specific arrangements of hardware and devices
- Today, online communication (or at least to be accessible) has become the new normal of our time, and abstaining from it is what requires intentionality, planning and specific arrangements

# “ALWAYS ONLINE” TECH

Instead of only using technology to receive or retrieve information/entertainment at certain points in time, for a specific amount of time, many of us have developed the habit of being online and connected with others almost permanently

- We are simultaneously connected to information from the Internet (i.e., **permanently online**) and connected to other individuals through smart devices (i.e., **permanently connected**)
- While online, we may not even engage with messages or tasks; we are just “there” online and “together” with others

# THE “ALWAYS ONLINE” BRAIN

This shift from an “offline world” to the “online world” constitutes a disruptive change that affects our thinking, feeling, and behavior

- What happens to the mind of a person who is permanently online (PO) and permanently connected (PC)?
- What are the cognitive processes that are engaged/affected by behaviors such as staring and swiping on our smartphones while walking, talking with friends, driving cars, sitting on the toilet, lying in bed, and even on dates with our partners?

# THE “ALWAYS ONLINE” BRAIN

The POPC mind is affected on two levels by...

- (1) The close, intense, and **personal relationship** users have with their smartphones and the constant access it provides to an online communication environment
- (2) Communication-related **default expectations** that users face as a result of living in an “always online world”

# ONLINE VIGILANCE

Many users have developed strong habits of frequently checking their devices for relevant communication (e.g., text messages, social media posts, news, etc.) throughout the day

- Specific applications and functionalities (e.g., setting alarms, the device's camera) further add to the overall time we spend on our smartphones
- This has led to an **online vigilance** in the daily experience of smartphone users which rests on the assumption that attending to our smartphones is possible and goal-serving virtually everywhere and anytime

# (1) SALIENCE

Online content and personal connections have become highly **salient** (i.e., noticeable, important)

- We are often cognitively “online” and reflecting on what is happening beyond our given situation (i.e., while we are at home, doing sports, meeting friends, waiting in line), even when we may not be actively using our smartphones
- Part of our mind is constantly devoted to thinking about what is going on in our online environment: What are my friends talking about right now? Which important pop-culture event is happening at the moment? What am I missing out on? Should I post a photo of my lunch?

## (2) REACTIBILITY

Smartphone signals serve as cues that trigger automatic, habitualized responses

- We have a strong tendency to attend to incoming messages and notifications almost immediately; this **reactibility** occurs because such behavior has been reinforced over time (e.g., when going online generates positive feelings/experiences)
- Our mind is trained to be willing and ready to respond, both during episodes of nonusage (e.g., when our smartphone vibrates) and usage (e.g., when we are already attending to our smartphone and have to decide whether to open a new telegram message)

## (3) MONITORING

Smartphones allow us to **monitor** our online environments and keep track of recent developments with relevant others, similar to how we might scan offline environments for relevant information or changes

- Social media platforms such as WhatsApp, Instagram and Facebook do not only operate with push messages that trigger smartphone signals, but deliver information in "threads", "feeds" and "timelines" that offer a near-live knowledge of what is happening in our online environment
- This also provides us with a sense of experientially "sharing" the social life of our online friends in near-real time

# SMARTPHONE USE & COGNITION

The close, personal relationship that users have with their smartphones means that...

- We think of the online world very often (**salience**)
- Habitually react to cues sent out by the online world (**reactibility**)
- And enter the online world on a regular basis in order to keep track of recent developments (**monitoring**)

These three dimensions are likely to determine the difference in cognitive outcomes between heavy smartphone users and those who are either light or non-smartphone users

# DEFAULT EXPECTATIONS

“Everybody I know has a smartphone, so...”

- Many can afford and now own a smartphone, and have established dense networks of communication connections among one another
- From an individual perspective, the assumption that others will behave similarly (i.e., exhibit comparable levels of salience, reactivity and monitoring) influences how we and the groups we belong to are expected to communicate/respond in specific situations
- E.g., If I assume that my inner circle of online friends practice high reactivity, then I expect that at least some (if not all of them) would be accessible as a source of advice and support at any time

# **(1) PERMANENT ACCESSIBILITY**

The expectation that resources that the Internet has to offer will be available at any time and under any circumstances

- This refers to all kinds of information, including news, academic knowledge, business-related advice, and directions to unfamiliar locations
- This also applies to the network of individuals with whom the user is connected—through social media and chat applications, both close and weak ties become available to us all the time

## **(2) PERMANENT OBSERVATION**

The expectation that users' online activities are permanently being observed by others, and that their communication behavior needs to be adjusted

- Many users participate in active networks of daily information exchange, with high frequencies of contact
- This active social network may cause users to perceive their digitally connected life as happening on a virtual stage on which they have to perform

## **(3) PERMANENT COMMUNICATION**

The expectation that other users are communicating with each other frequently, without necessarily including all members of the group

- New chat groups can be formed quickly, and one can never know if their “friends” are running separate communications
- This may cause fears of missing out or of being cyber-ostracized, and lead to a greater motivation for users to be particularly active in communication

# EXPECTATIONS & COGNITION

The default expectations that users face as a result of living in an “always online world” means that...

- One or several of these expectations are likely to be relevant/activated in any given situation during the course of the day, especially for heavy smartphone users
- This has important implications for the cognitive processes that support our smartphone use (e.g., juggling multiple competing demands for our attention, and the integration of knowledge/memory structures)

# **ATTENTION & MULTITASKING**

# ATTENTION

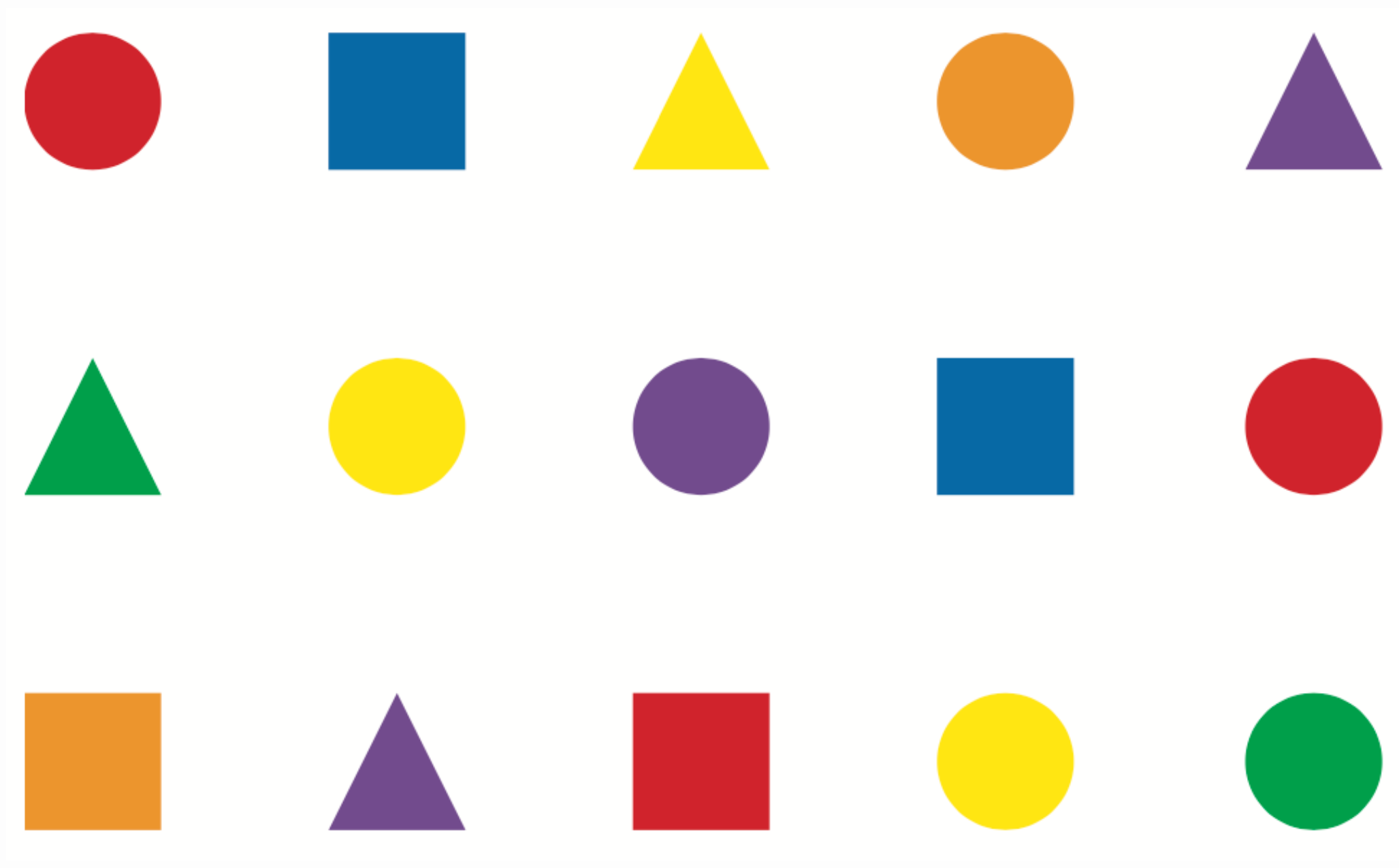
Attention is a **finite resource**—there are many things that we could potentially give our attention to, but attending to some things necessarily means withdrawing from others

However, the Internet contains a vast amount of information; conservative estimates suggest that if you tried to print the entire Internet (including the Dark Web) it would equate to 305.5 billion pages

# ATTENTION

How do we selectively direct our attention?

- There are times when directing attention requires effortful control and concentration
- However, there are also times when our attention can be directed in an automatic, habitual, and effortless manner



**YELLOW**

**RED**

**BLUE**

**PURPLE**

**GREEN**

**ORANGE**

**YELLOW**

**GREEN**

**BLUE**

**RED**

**GREEN**

**PURPLE**

**ORANGE**

**RED**

**BLUE**

**congruent**  
word meaning matches font color

**Green**

**Yellow**

**Red**

**Black**

**Red**

**Green**

**Red**

**Black**

**Green**

**Red**

**Yellow**

**Black**

**incongruent**  
word meaning does not match font color



**Slower to respond when the meaning  
of the word conflicts with the font  
color that must be named**

# REACTIBILITY

Smartphones have introduced widespread, habitual “checking” behaviors characterized by quick and frequent inspections of our devices for incoming information

- This is likely a result of behavioral reinforcement from “information rewards” that are received immediately upon attending to our devices
- The tendency to switch between different computer windows, open new hyperlinks, and perform new searches is likely driven by readily available information rewards waiting in unattended media streams (Yeykelis et al., 2014)

To recap the main finding, the data provides evidence for habit-formation in smartphones use, mainly attributable to their capacity of providing quick access to rewards like social networking, communications, and news. *Checking habits* are automated behaviors where the device is quickly opened to check the standby screen or information content in a specific application. These habits are triggered by various different cues outside the device, such as situations and emotional states. The automated behaviors take the users, very quickly, to different screens that provide informational value or rewards. These rewards help users avoid boredom and cope with a lack of stimuli in everyday situations as well as make them aware of interesting events and social networks. Looking at qualitative data, we found that users themselves do not necessarily describe habit-formation as problematic. Even when the phone usage is dominated by frequent checking, people described the use as, at worst, slightly annoying. Our conclusion is that

# SALIENCE

Attention is also affected by salience

- Salience can be determined by a variety of basic aspects, including color, size, shape, and motion (e.g., our attention is automatically drawn to someone wearing a bright hat)
- More importantly, attention to salient stimuli is something that can be learned, which lowers our threshold in determining which aspects of the environment captures our attention
- E.g., We are likely to turn when we hear our own name, even in a crowded room full of multiple ongoing conversations

# DISTRACTIONS

Distractions are caused by task-irrelevant stimuli that interrupt goal-directed behavior

- Such distractions should be ignored when we want to focus on a task that requires our attention in order to fulfill a certain goal (e.g., smartphone notifications serve as a form of distraction when we are writing a paper or talking to someone)
- This can be external (i.e., from the environment), such as receiving a smartphone notification, or internal (i.e., from within a person), such as when a user starts thinking about their unanswered messages

# **DISTRACTIONS**

When faced with internal or external smartphone distractions, users may...

- Ignore the distraction and focus their attention on the task
- Stop the task to pick up their smartphone instead
- Multitask (e.g., open up telegram on their computer before switching back to their word document)

[T]he ability to multitask is considered to be a desirable job skill by many employers, which is not surprising given that, on average, workers shift between tasks every three minutes. (Monk et al., 2008: 299)

We are moving from a world where computing power was scarce to a place where it now is almost limitless, and where the true scarce commodity is increasingly human attention. (Satya Nadella, CEO Microsoft, 10 July 2014 (<http://news.microsoft.com/ceo/bold-ambition/>))

# MULTITASKING

But does multitasking really exist?

- Multitasking is presented as a mechanism through which individuals are able to achieve more in a shorter space of time, but it technically doesn't really exist
- What most people would call multitasking is actually more accurately viewed as **task-switching**—the illusion of multitasking occurs when we switch between tasks at such speed that it appears that we are actually doing these things concurrently

# MULTITASKING

Task-switching occurs in sequence (rather than in parallel), through a process that allows an individual to select information for attention, process that information, and then act upon it

- This means that task-switching is linked to attention-switching, as attention has to be redirected from one task to another
- Because attention is a limited resource, by dividing resources between tasks, poorer performance tends to be evident
- Those who “multitask” take longer to complete their tasks and make more errors compared to those who focus on a single task (Rubinstein et al., 2001)

# MULTITASKING

- Many believe that **multitasking makes them more productive**; however, research has shown that office workers take an average of 25 minutes to recover from interruptions and return to their original task (Mark et al., 2005)
- Another misconception is that **multitasking allows us to look at a problem with a “fresh eye”**; participants who were required to switch between a sudoku puzzle and a word search scored much lower than participants who worked on the tasks sequentially, indicating that the costs of switching (having to recall the rules, details and steps taken so far) outweigh the benefits of a “fresh eye” (Buser & Peter, 2012)

# MULTITASKING

How does the use of smartphones while engaging in another activity affect our daily lives?

- Participants were tasked to walk a predetermined route, during which they would encounter a unicycling clown (Hyman et al., 2010)
- Only 25% of those who walked and talked on a mobile phone reported having seen the unicycling clown, compared to 61% of those who walked while listening to music and 71% of those who walked in pairs
- Even for a very concrete and well-practised skill such as walking, the deficit in attention when accompanied by the use of a mobile phone is tangible

# MEDIA MULTITASKING

Media multitasking is the practice of engaging in more than one form of media at any given time (Ralph et al., 2013)

- Those of us who like to surf the web ... whilst listening to music on our iPads ... with the TV on ... whilst we send a text ... when we are doing work.
- Rideout et al. (2010) found that those aged 8–18 have significantly increased the amount of time they spend using more than one medium at any given time; a quarter of participants said that they engaged in using two or more types of media concurrently

# MEDIA MULTITASKING

Ophir et al. (2009)

- To identify light vs. heavy media multitaskers (MMT), participants completed a questionnaire to determine the average number of media they simultaneously consumed
- Results showed that heavy MMT tended to be **negatively affected by distractions** (i.e., they had greater difficulty ignoring irrelevant stimuli from their environment), while light MMT were **unaffected by distractions** (i.e., they were able to successfully ignore irrelevant stimuli)

# MEDIA MULTITASKING

- Heavy MMT also performed worse in task-switching than light MMT, as they were unable to ignore information related to previously completed tasks when switching to the next task
  - This is contrary to the expectation that “extra practice” afforded by frequent media multitasking would confer benefits in task-switching scenarios
- The process of consuming multiple streams of media at one time creates an attentional bias in high MMT, such that they are constantly on the lookout for new information in their environment, even if it is irrelevant to the current task

# MEDIA MULTITASKING

Loh & Kanai (2016)

- Generations that grow up with Internet technologies (i.e., **digital natives**) display starkly different cognitive profiles from generations that adopt such technologies later in life (i.e., **digital immigrants**)
- Digital natives gravitate towards a **shallow mode** of information processing characterized by rapid, nonlinear shifts in attention; reduced contemplation; and decreased information retention

# OVERALL...

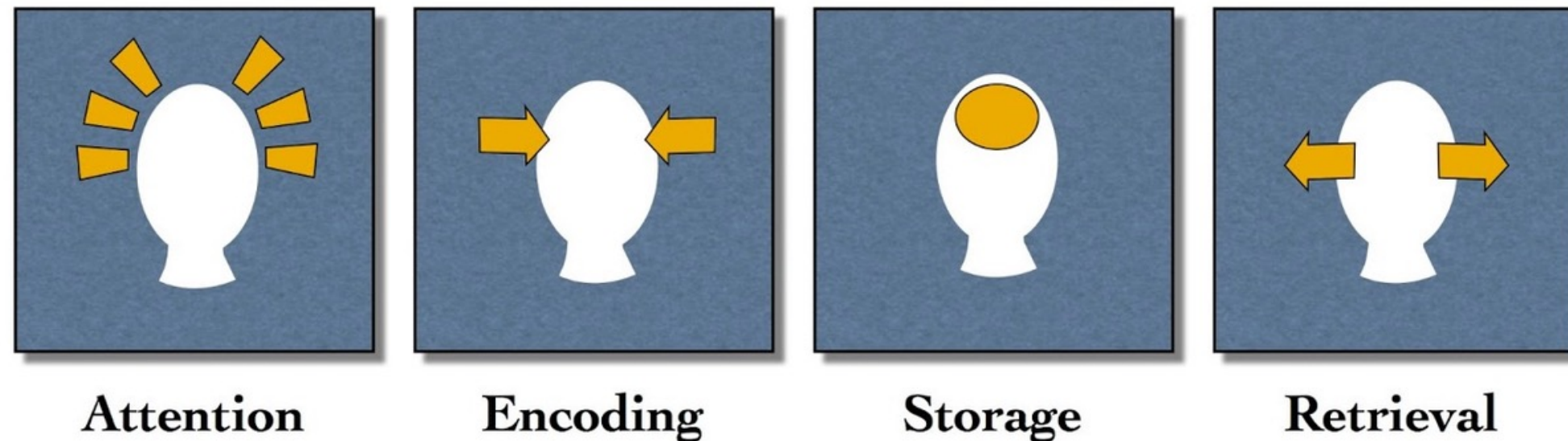
Available evidence indicates that **media multitasking negatively impacts cognition** by reducing our ability to effectively focus our attention and ignore incoming distractions

- Heavy MMT require greater cognitive effort to maintain concentration when faced with distractions (Moisala et al., 2016)
- Short-term engagement with an extensively hyperlinked online environment (i.e., online shopping for 15 minutes) leads to poorer sustained attention for a time even after coming offline (vs. reading a magazine; Peng et al., 2018)

# **MEMORY & KNOWLEDGE**

# MEMORY

- There are many forms of memory (long-term, short-term, etc.) but for the purposes of this class we will be focusing on memory processes
- The formation of a memory typically involves three main processes: (1) **encoding**, or the reception and interpretation of information; (2) **storage**, or the maintenance of information over time; and (3) **retrieval**, or the accessing of information when needed



# MEMORY

Though it may seem as if constant access to a limitless database of knowledge should improve cognition, research has shown that this negatively affects how we remember our own lives, the places we have been, and those with whom we have interacted

- Participants were asked to type a series of newly learned trivia facts into the computer (Sparrow et al., 2011)
- Half were told the computer would store their information for them and that they would be able to access it later; half were told that the information would be erased

# MEMORY

- Those who believed they would maintain access to the information performed more poorly on a recall task
- Being explicitly instructed to remember the information vs. not being told to do so had no impact on participants' rates of recall
- This effect was referred to by the authors as **digital amnesia**, and demonstrates that the expectation of having access to information causes us to be less inclined to encode and store that information in our memory

# TRANSACTIONAL MEMORY

Transactional memory is a shared system for encoding, storing, and retrieving information

- The mind can often increase efficiency by utilizing **external memory aids** to support memory processes (e.g., setting a calendar reminder for a doctor's appointment in two weeks)
- The mind can also "**offload**" necessary information to other minds (e.g., one person could be responsible for knowing where to find food while another could be responsible for knowing how to prepare it)

# TRANSACTIONAL MEMORY

Transactional memory systems consist of two key elements: **internal memory** (“What do I know?”) and **external memory** (“Who knows what?”)

- By reducing redundancy, transactional memory systems work to encode, store and retrieve information more effectively than any individual could on their own
- At a group level, members with higher relative self-disclosed expertise tend to become responsible for knowledge in that domain, allowing for the division of cognitive labor and more efficient performance

# TRANSACTIONAL MEMORY

Although beneficial at a group level, transactional memory systems tend to reduce an individual's ability to recall the specifics of the externally stored information

- **Cognitive offloading** reduces the amount of cognitive resources that need to be allocated towards remembering a piece of information
- E.g., Participants who photographed objects in a museum remembered fewer details about the objects and their locations compared to participants who simply observed the objects without photographing them (Henkel, 2014)

# TRANSACTIVE MEMORY

The Internet has been described as a “**supernormal stimulus**” as its breadth and immediacy far surpasses any naturally occurring transactive partner to which our minds might have adapted

- Compared to a human transactive memory partner, the Internet is more accessible, has more expertise, and can provide access to more information than an entire human transactive memory network
- The Internet also **does not require individuals to remember what information is stored or even where it is located**

# TRANSACTIONAL MEMORY

These features leave Internet users with very little responsibility for internal knowledge and may reduce the extent to which users rely on social others, or other more traditional external memory aids

- That is, other options for cognitive offloading (books, friends, etc.) become redundant as they are outcompeted by the novel capabilities for external storage and retrieval facilitated by the Internet
- E.g., After a six-day Internet search training, participants reported greater impulses towards using the Internet to answer questions, suggesting that online information gathering quickly trains people to become dependent on the Internet when faced with unknown issues (Liu et al., 2018)

# TRANSACTIONAL MEMORY

Sparrow et al. 2011

As we become more symbiotic with technology, we remember less actual information and instead remember where information can be found

- Participants were asked to type a series of newly learned trivia facts into the computer; for one third of the questions, participants were told that the information they entered was saved
- For another third, they were told that the information was saved into one of six folders (facts, data, info, names, items and points)
- For the last third, participants were told that the information they had typed was immediately deleted

# TRANSACTIONAL MEMORY

- Results showed that participants were better able to recall the name of the folder in which the relevant information was located, rather than the information itself
- This is in line with the notion that the mind is a **cognitive miser**, which extends to the habitual use of internet search engines as a substitute for deep cognitive analysis

# OVERALL...

- The Internet clearly serves as a “supernormal stimulus” that changes the way we store, retrieve, and even value knowledge
- Our constant connection with the online world through personal devices indicates that we are set to become more reliant on the Internet for **factual information** as time goes on
- In fact, the Internet is also fast becoming a supernormal stimulus for **spatial information** (through providing constant access to online maps and global positioning system)

# **JOURNAL ARTICLES**

- What is the main argument put forth by the authors?
- The paper provides empirical evidence from a total of nine studies. What was each study designed to assess? Summarize each study's procedure and key finding, and identify any limitations.
- Do the results support the authors' main argument? Do you agree with the results?

# **SEARCHING FOR EXPLANATIONS: INFLATED ESTIMATES OF INTERNAL KNOWLEDGE**

Fisher et al., 2015

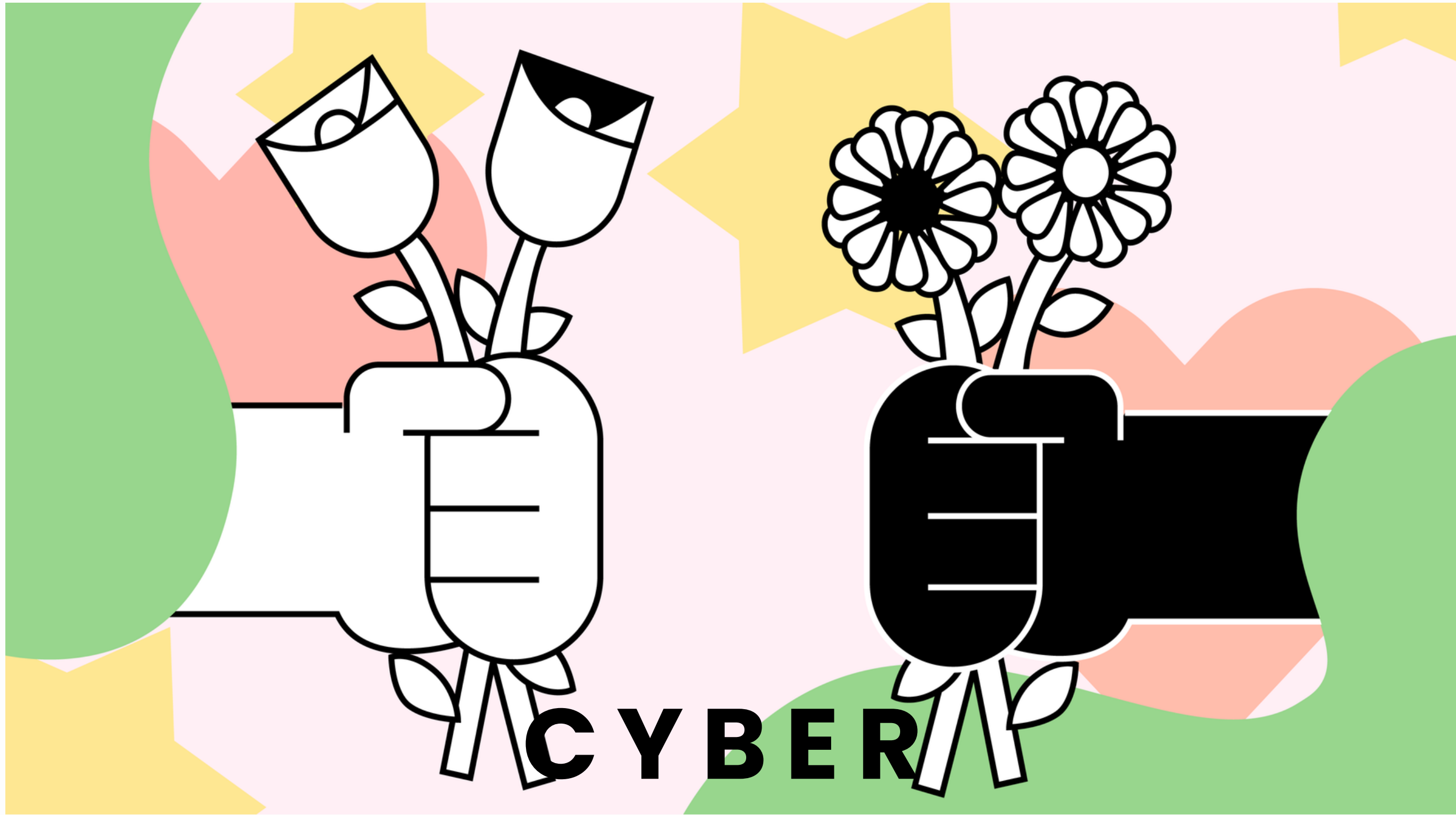
# MAIN ARGUMENT

- Features of the Internet (accessibility, speed and expertise) make it difficult for users to monitor their reliance on the Internet
- As a result, users become miscalibrated regarding their personal knowledge
- Illusions of competence may emerge as users overestimate the amount of information stored internally, and experience a “feeling of knowing” even when the content is inaccessible

Experiment	Method	Results (self-assessed knowledge ratings)	Conclusions
1a	Internet condition uses Internet to look up explanations to common questions; no Internet condition does not.	Internet > no Internet	Internet condition gives higher self-knowledge ratings than no Internet condition
1b	Same as Experiment 1a, but all participants make self-assessed knowledge ratings both before and after induction phase.	Preinduction, no difference between Internet and no Internet	Searching the Internet increases self-assessed knowledge from baseline
1c	Internet condition searches constrained to specific sources; no Internet condition sees identical explanations	Controlling for induction phase ratings, Internet > no Internet	Time, content, and autonomous search activity do not explain the effect
2a	Same as 1a, but DV for self-assessed knowledge questions = fMRI “brain activity”	Internet > no Internet	Participants are not misinterpreting the dependent measure
2b	Same as 1a, but DV for self-assessed knowledge questions = “on your own, with no outside sources”	Internet > no Internet	Participants are not misinterpreting the dependent measure
3	Same as 1a, but questions for self-assessed knowledge phase are autobiographical explanatory questions	No difference between Internet and No Internet conditions	Effect not explained by general overconfidence
4a	Link condition clicked on a link to explanation instead of searching; Other search engines condition used 5 alternative engines for searching	Other search engines > Link	Effect driven by active search independent of search engine
4b	Answer condition searched for induction questions easily found on Internet; no Answer condition searched for matched-content questions not answered in any search result	Both answer and no answer conditions > no Internet baseline	Effect holds even without direct answers to search query
4c	Recent results condition searched for induction explanations in Google search returning irrelevant recent results only; zero results condition returned zero search results.	Both recent results and no results conditions > no Internet baseline	Effect holds even without any results for search query

# RESULTS

- One's self-assessed ability to answer questions increased after searching for explanations online in a previous, unrelated task (Experiment 1a-b)
- This effect held even after controlling for time, content, and features of the search process (Experiments 1c)
- The effect derives from a true misattribution of the sources of knowledge, not a change in understanding of what counts as internal knowledge (Experiment 2a and b) and is not driven by a "halo effect" or general overconfidence (Experiment 3)
- Rather, this illusion appears to be driven by the act of searching itself (Experiment 4a-c)



# PSYCHOLOGY

WEEK 10: WELLBEING IN A DIGITAL ERA

# **DIGITAL WELLBEING**



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i don't wanna be on my phone but i need my phone to figure out where i'm going on a walk and i need my phone to get to my audiobook and i need my phone to call my brother and i need my phone to get in touch with my friends which is fine but i don't want to be on my phone.

so i walk and that's fine and i'm using the phone in an okay-way in that moment. but sometimes i am using the phone like it is a weapon and that's stupid because no it's not. ive seen a weapon those are different this is a phone. but it's also in my hands until 2 AM and i haven't slept. at 4AM. i don't even mean to do it half the time i'm opening the phone to check the weather or to check my email which are things-that-are-okay but then i am in my phone for hours somehow, and i missed the dawn while i was on instagram. i don't even like instagram.

i don't want to be on my phone im not good at it so i try to put distance there but then i'm distancing myself from my friends. we meet up in person but my pictures are on my phone and the menu is on the phone (mon dieu) and so is venmo. so i need the phone to be with my friends and that's fine because it can record concerts and fun activities and i can take pictures of them smiling with pumpkins.

but i don't want to be on the phone because i go to look at the pictures of the pumpkins and i hate how i look in it but it's fine. and somewhere between the pumpkins and 3AM i have lost so much time. i don't even know what i'm doing on it only that i don't enjoy it any longer. it is this long blank void. forever and ever. restless like how mushrooms feel restless beside a dead body.

i don't want to be on my phone so i pick up the phone and i type into google *things to do in my area* and i save them to my phone and i'll need my phone to get to the tickets and i'll need my phone to book the appointment and i'll need it, i'll need it

### **uncle-fruity**

Genuinely, there are some ways you can cut down on your phone usage to help you spend less time on it. Physical calendar to write events on. Limiting your shopping to only in person or desktop computers. Refusing to eat places w/o a physical menu (bc it's also a really bad standard for poor folks who don't have smartphones). Paying your friends back in cash. And it takes a little more effort & communication, but not constantly being on your phone will improve your life.

### **posydoodle**

i think you are all missing the point of the post. modern life has made it extremely difficult to function without a smartphone. not having one is doable but it's not easy and it can be isolating and make certain tasks impossible. our phones are a necessity whether we like it or not, and it's a damn shame how addictive and unhealthy they can be

# WELLBEING

How can wellbeing (the idea of a good life) be achieved?

(1) Subjective/hedonic wellbeing

- The state of “feeling good”
- Hedonism is derived from the word hēdonē (pleasure), which holds the idea that wellbeing consists of seeking pleasure and avoiding pain
- Generally involves the presence (or prevalence) of positive affect and the absence of negative affect, alongside high levels of life satisfaction

## **Life Satisfaction**

Typically assessed by a rating of overall satisfaction with life, sometimes accompanied by domain-specific assessments (e.g., satisfaction with work, health, partner relationship, relationship with children).<sup>a,b</sup> Viewed as a more enduring, long-term aspect of well-being.

*Sample item: “From 0 (worst possible) to 10 (best possible), how would you rate your life overall?”*

## **Positive Affect**

Typically assessed with frequency ratings (how often in the past week, month, year) one felt cheerful, in good spirits, extremely happy, calm and peaceful, full of life).<sup>c</sup>

*Sample item: “During the past 30 days, how much of the time did you feel cheerful?”*

## **Negative Affect**

Typically assessed with frequency ratings (how often in the past week, month, year) one felt hopeless, so sad nothing could cheer you up, nervous, restless or fidgety, that everything was an effort, worthless.<sup>c</sup>

*Sample item: “During the past year, how much of the time did you feel hopeless?”*

# WELLBEING

## (2) Eudaimonic wellbeing

- Eudaimonia consists of the words eu (good) and daimōn (spirit), which roughly translates to human flourishing
- Has been conceptualized as being one's true self, living a meaningful life, or fulfilling one's intrinsic needs
- Wellbeing goes beyond personal feelings of happiness to involve personal growth and virtuous pursuits (e.g., kindness, gratitude), with meaning in life being a critical component of eudaimonia

## **Personal Growth**

*High scorer:* Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness.

*Sample item:* “For me, life has been a continuous process of learning, changing, and growth.”

## **Purpose in Life**

*High scorer:* Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.

*Sample item:* “I have a sense of direction and purpose in life.”

# WELLBEING

Hedonia (seeking pleasure and comfort) and eudaimonia (seeking to develop the best in oneself) are likely to contribute to wellbeing in different ways

- People whose lives are rich in both hedonic and eudaimonic wellbeing experience the highest degree of benefits, suggesting that **a combination of both may be associated with the greatest wellbeing**
- Hedonic activity may feel good in the moment, but is unlikely to produce positive affect in the long-run; eudaimonic activity may not feel particularly good in the moment, but is likely to exhibit delayed or even cumulative effects on positive affect

# **SOCIAL MEDIA USE & WELLBEING**

## (1) Media enjoyment

- Refers to a positive affective reaction to media content
- Online platforms such as YouTube and Spotify provide entertaining audiovisual media content, which is likely to drive further social media use and contribute to the positive affect component of subjective well-being

# **SOCIAL MEDIA USE & WELLBEING**

## (2) Social capital & social support

- Use of social media may help increase the availability of social capital and social support
- Higher levels of online social capital and perceived online social support are positively related to wellbeing indicators, such as higher levels of life satisfaction (Burke et al., 2010) and lower levels of stress (Nabi et al., 2013)

# **SOCIAL MEDIA USE & WELLBEING**

## (2) Social capital & social support

Does social support received through social media platforms offer the same benefits for wellbeing as social support received through face-to-face settings?

- Social media facilitates the availability of informational support (Trepte et al., 2015)
  - Context collapse brings together people from different countries and backgrounds into a shared space, increasing the amount of information available online

# **SOCIAL MEDIA USE & WELLBEING**

## (2) Social capital & social support

- However, emotional support and tangible support are less easily provided online
  - Context collapse requires users to account for diverse recipients from various social groups, each with distinct role expectations, making authentic requests for emotional support difficult on social media platforms
  - Many forms of instrumental support require physical proximity (e.g., helping with childcare and housework; offering transportation)

# **SOCIAL MEDIA USE & WELLBEING**

## (2) Social capital & social support

- Results showed that social media users feel similarly satisfied with how support is rendered online and offline
- However, only social support transacted in offline contexts contributed to overall life satisfaction over the span of two years
- Both online and offline social support should be leveraged in a way that provides an optimal basis for psychological health and well-being

# SOCIAL MEDIA USE & WELLBEING

## (3) Self-affirmation & social sharing of emotions

- Social media platforms provide new avenues of self-presentation through user profiles, status updates, and the sharing of pictures/videos
- Majority of users tend to present themselves in a positive light, emphasizing or selectively presenting the attractive and desirable facets of the self
- This opens up new opportunities for **self-affirmation**, or the process of bringing to awareness positive and cherished aspects of the self, especially in response to self-threat (e.g., negative performance feedback)

# SOCIAL MEDIA USE & WELLBEING

## (3) Self-affirmation & social sharing of emotions

- Exposure to users' own positive self-presentation after a self-threatening situation increases their wellbeing
  - Participants who examined their own self-affirming Facebook profile after negative feedback showed higher levels of positive affect than participants who examined the nonaffirming profile of a stranger (Toma & Hancock, 2013)
- Online self-presentation also facilitates the **social sharing of emotions**
  - Sharing positive emotions and experiences online increases positive affect, leading to increased wellbeing (Choi & Toma, 2014)

# SOCIAL MEDIA USE & WELLBEING

## (3) Self-affirmation & social sharing of emotions

- **Capitalization** refers to a phenomenon where social sharing boosts sharers' positive affect above and beyond the positive affect generated by the event itself
  - Sharing personal thoughts and feelings with others helps to maximize the salience, memorability, and significance of events
  - Feedback from others online also amplifies the meaningfulness of the event; this can occur even through brief, superficial interactions (e.g., likes and short wall comments on Facebook)

# SOCIAL MEDIA USE & WELLBEING

## (4) Social comparison

- The wellbeing of social media users is not only affected by their own online self- presentation, but also by that of others
- **Downward** social comparison (i.e., with users who fare **worse** on the given dimension of comparison) is likely to be an effective mood management strategy which benefits wellbeing
- **Upward** social comparison (i.e., with users who fare **better** on the given dimension of comparison) is likely to result in greater self-discrepancies and reduced satisfaction with the self

# **SOCIAL MEDIA USE & WELLBEING**

## (5) Deficiently self-regulated/excessive social media use

- Social media content serves as a frequent source of distraction and a challenge to self-control in our daily lives
- Enjoyable media content can become a tempting alternative in situations where users are faced with less attractive task and obligations, leading to greater procrastination and excessive social media use

# **SOCIAL MEDIA USE & WELLBEING**

## (5) Deficiently self-regulated/excessive social media use

- The relationship between excessive social media use and wellbeing is likely to be reciprocal
  - Excessive social media use may be a form of dysfunctional coping in response to stress, anxiety, boredom, or loneliness
  - Excessive social media use may also be a source of impaired wellbeing that results in lower levels of interpersonal functioning (i.e., reduced interpersonal interactions) and psychopathological symptoms (i.e., depression, anxiety, or stress)

# **POPC AS AN AMPLIFIER**

The technological aspects of being POPC are likely to intensify the effects of social media use on wellbeing

- Many processes and mechanisms that are beneficial to wellbeing are constantly available and can be used flexibly when needed (e.g., mood management via media enjoyment, self-affirmation, or social support)
- However, the constant presence of our online environment makes it difficult to disengage from the harmful effects of social media use (e.g., unhealthy social comparison, greater self-control challenges, and excessive social media use)

# POPC AS AN AMPLIFIER

A POPC mindset is also likely to significantly impact our wellbeing

- High levels of **reactibility** may support the availability of online social capital and social support, but also increase the risk of frequent disruptions and distractions
- High levels of **monitoring** may open up new opportunities for mood management, as users are unlikely to miss hedonically pleasant content (e.g., memes, cat videos, gossip), but also lead to a constant stream of self-relevant information that triggers unhealthy social comparison
- High levels of **saliency** may support users in reaping greater benefits through online interactions (self-affirmation and the social sharing of emotions), but also increase the risk of Internet addiction and problematic social media use

# POPC AS AN AMPLIFIER

POPC may also present new challenges for our wellbeing

- POPC may create **interpersonal tension** when the use of smartphones/social media interferes with an ongoing social interaction
  - Both **reactibility** and **monitoring** significantly increase the risk that users engage in online communication either reactively or proactively while they are simultaneously in an offline social interaction
  - Phubbing has detrimental effects on relationship satisfaction and wellbeing

# POPC AS AN AMPLIFIER

- POPC may create conflict by increasing the **permeability of different spheres of life**
  - Through the constant availability resulting from POPC, users are facing an increased risk of encountering setting-inconsistent online interactions
  - E.g., Users may receive private messages at work or work-related messages during leisure time
  - While setting-inconsistent technology use may increase our well-being (e.g., the opportunity to cope with private problems during working hours), they can also create role conflict and tensions between the spheres of work and leisure

# **DIGITAL STRESS**

# DIGITAL STRESS

Digital stress is an important factor in understanding the relationship between social media use and wellbeing outcomes

- “Stress resulting from a strong and perhaps almost permanent use of information and communication technology... that is triggered by permanent access to an inconceivable amount and diversity of social content”
- Digital stress involves the **subjective experience** of an event, condition, or stimulus (i.e., a stressor) in relation to an individual’s relational context and perceived coping resources

# **DIGITAL STRESS**

- Individuals may be presented with a common stressor (e.g., a given quantity of notifications) but their experience of digital stress should vary according to their perceived coping resources and relational contexts
- E.g., Receiving a large number of new messages/notifications may be perceived as a stressor if they are perceived as overwhelming and unmanageable; this should result in the experience of digital stress, which may lead to downstream symptoms of depression or anxiety

# DIGITAL STRESS

## (1) Availability stress

Although smartphones and social media afford near constant access to sources of social contact, they also create the opportunity for distress, guilt and anxiety due to internalized expectations of constant availability

- Facebook users identified pressure to “stay connected to friends no matter the place or time” as a significant stressor (Fox & Moreland, 2015)
- Perceived obligations to respond as a result of technological features (e.g., “seen” or “read” functions) was associated with greater anxiety regarding one’s belongingness in a social group (i.e., fear of ostracism; Mai et al., 2015)

# DIGITAL STRESS

## (2) Approval anxiety

The degree of uncertainty and psychological arousal regarding others' responses and reactions to one's posts, photos, messages, and digital profile

- Approval anxiety is likely reflected in how extensively a user edits their digital profile to maintain a positive self-presentation
- Users face two conflicting pressures when curating their online self-presentation: the desire to appear desirable and attractive, and the need to remain authentic to avoid negative social consequences (e.g., criticism, damaged trust) or lost opportunities as a result of misrepresentation

# DIGITAL STRESS

## (2) Approval anxiety

- Social media platforms that render shared content more permanent and public seem likely to lead to more approval anxiety than media that are ephemeral (e.g., Snapchat) or private (e.g., Telegram)
- Platforms that encourage the sharing of photos (i.e., greater “visualness”) or steer users toward public acknowledgement (i.e., quantifying their ‘likes’ or ‘shares’) may also exert unique pressures toward approval anxiety

# DIGITAL STRESS

## (3) Fear of missing out (FOMO)

Distress resulting from the real, perceived or anticipated social consequences of others engaging in rewarding experiences from which one is absent

- Social media is both a place where social interaction occurs and a means by which offline activities are presented for others' consumption
- These rewarding experiences refer to the communication that takes place online as well as the positive experiences of others advertised online
- FOMO was associated with generally poorer mood and lower levels of life satisfaction, and explained variation in problematic social media use (Przybylski et al., 2013)

# DIGITAL STRESS

## (4) Connection overload

Distress resulting from the subjective experience of receiving excessive input from digital sources (e.g., notifications, text messages, posts)

- Note that unlike the previous three components, connection overload is not explicitly social in nature
- Although the messages and notifications that users may be overloaded by are often social in nature, the visibility of this information is often a product of the platform and specific smartphone settings, not just the frequency of the messages

# DIGITAL STRESS

## (4) Connection overload

- Connection overload can result when the amount of information available exceeds the capacity of the individual to process or handle it
  - This can be operationalized in terms of objective units of information (e.g., number of notifications or texts received)
  - However, connection overload is better operationalized in terms of a user's subjective experience of receiving digital information (i.e., one's perception of being overloaded)

# DIGITAL STRESS

## (4) Connection overload

This distinction between objective quantity and subjective experience is critical

- When defining “connection demands” in terms of objective units (e.g., number of log-ins, followers, notifications, texts received), greater connection demands was positively associated with participants’ wellbeing (LaRose et al., 2014)
- However, when participants’ subjective experience of connection overload was taken into account, greater connection demands was negatively associated with participants’ wellbeing

Digital stress component	Working definition of the component	Similar or related constructs
Availability Stress	Distress (including guilt and anxiety) resulting from beliefs about others' expectations that the individual respond and be available by digital means	Mobile entrapment (Baron 2008; Hall and Baym 2012); Mobile maintenance expectations (Hall and Baym 2012); Accessibility stress/availability demands (Thomee et al. 2010) Social pressure (Halfmann and Rieger 2019)
Approval Anxiety	Uncertainty and anxiety about others' responses and reactions to one's posts or to elements of one's digital footprint	Social comparison (Fox and Moreland 2015) Digital self-presentation (Kim and Lee 2011; Morin-Major et al. 2016) Need to belong/need for popularity (Beyens et al. 2016)
Fear of Missing Out	Distress resulting from the real, perceived, or anticipated social consequences of others engaging in rewarding experiences from which one is absent	Fear of missing out (Przybylski et al. 2013; Reinecke et al. 2017) Fear of missing out (Beyens et al. 2016)
Connection Overload	Distress resulting from the subjective experience of receiving excessive input from digital sources, including notifications, text messages, posts, etc.	Availability demand (Thomee et al. 2010) Communication load (Reinecke et al. 2017) (Social) information overload (Hefner and Vorderer 2016) Information overload (Misra and Stokols 2011)

# ACTIVE VS. PASSIVE SOCIAL MEDIA USE

The effects of social media on wellbeing also depends on how users engage with social media platforms

- Passive Facebook use (e.g., browsing) was associated with decreased subjective wellbeing, while active use (e.g., posting updates, sending private messages) had no effect on reports of subjective wellbeing (Hall, 2018; Verduyn et al., 2015)
- Passive social media use was associated with depression, while active social media use was associated with overall wellbeing, depression, eudaimonic, and social well-being (Hancock et al., 2019)

# **ACTIVE VS. PASSIVE SOCIAL MEDIA USE**

- Highly interactive social media use (e.g. one-on-one messaging) is associated with less digital approval stress because such forms of use limit the number of communication partners (Hall, 2017) and increases feeling of relatedness or connection (Hall, 2018), compared to less interactive forms of use (e.g., posting publicly or scrolling through feeds)
- This may account for why active social media use, which includes posting, commenting on others' posts, and sending direct messages, tends to have more positive outcomes than passive use (Hancock et al. 2019)

# POPC AS AN AMPLIFIER

A POPC mindset is also likely to amplify users' experience of digital stress

- High levels of **reactibility** may increase the amount of sent/received messages, creating a self-reinforcing spiral of connection overload
- High levels of **monitoring** may contribute to feelings of connection overload even in moments when no incoming messages or notifications demand the user's attention
- Both **reactibility** and **monitoring** may create digital stress through media multitasking, especially when users feel the need to be constantly available or to alleviate their fear of missing out

# POPC & AUTONOMY

The impact of social media use on stress and wellbeing likely depends on the extent to which being POPC **enhances or diminishes autonomy**

- Autonomy is a critical factor for eudaimonic wellbeing, and a vital prerequisite for personal growth and flourishing (Ryan & Deci, 2001)
- Perceived autonomy is also essential for intrinsic motivation, which is a central source of wellbeing
  - Extrinsically-motivated activities are performed “to achieve some separable outcome” (e.g., attainment of a reward or avoidance of punishment)
  - Intrinsically-motivated behavior is performed “for the inherent satisfaction of the activity itself”, thus representing the autonomous goals of the individual rather than external pressures or expectations

# POPC & AUTONOMY

- Social media use in conjunction with **online vigilance** should enhance perceived autonomy
  - For these users, extensive use of social media feels natural and is an expression of their individual dispositions; POPC should therefore have a positive effect on their wellbeing
- Social media use in conjunction with **default expectations** and social norms should diminish perceived autonomy
  - For these users, extensive use of social media are driven by social pressure and the fear of being ostracized; POPC should therefore have a negative effect on their wellbeing (impaired enjoyment, lower levels of positive affect)

**DIGITAL WELLBEING  
INTERVENTIONS**

# THE QUEST FOR DIGITAL WELLBEING

How do we obtain a healthy balance between connectivity and disconnectivity?

- While users may reap ample benefits from constant connectivity, they also struggle with it
- Smartphone use may interfere with social activities, distract from work and study, lead to procrastination, cause sleep and health problems, and induce negative emotions such as stress and anxiety

# DIGITAL WELLBEING INTERVENTIONS

The quest for digital wellbeing has led to a new industry of digital wellbeing interventions

- This includes digital detox programs, self-help literature, and various digital tools (e.g., the Forest app) with a shared goal of assisting users in “regaining control” over their screen time
- Smartphones have also integrated dedicated digital wellbeing tools into their operating systems to help users “set limits” to their digital media use with the goal of “keeping life front and center”
- However, research on the effectiveness of digital wellbeing interventions appears inconclusive

Forest is an app that helps you stay focused on the important things in life.



Whenever you want to stay focused, plant a tree.



Your tree will grow while you focus on your work.



Leaving the app halfway will cause your tree to die.

## Grow your own forest

Stay focused daily and turn hard work into a land of lush forest.



# MOBILE CONNECTIVITY PARADOX

The mobile connectivity paradox refers to the experience of being caught between autonomy and a loss of control, which becomes visible in our **ambivalence** (i.e., mixed/conflicting feelings) towards mobile connectivity

- Ubiquitous connectivity may substantially increase our autonomy; we can perform our social roles, manage our social networks, and access personalized information and services anywhere, anytime
- E.g., When our train is delayed, we can use our laptop to catch up on work, text our friend to inform them that we'll be late, and stream music from our phones to relax
- But this can also challenge our autonomy over our thoughts and behaviors by directing attention away from our primary activities

# MOBILE CONNECTIVITY PARADOX

Many of us recognize the importance of mobile connectivity for self-governed living, but we are also concerned about the time we spend on screens and the pressure we face to remain constantly connected

- As a result, we struggle with decisions on whether, when, and where to connect and (perhaps more importantly) disconnect
- This paradoxical experience lies at the core of the quest for digital wellbeing: How can we optimally embed mobile connectivity in our life so that it supports individual autonomy without contributing to a loss of control?

# DIGITAL WELLBEING

What is digital wellbeing?

- Digital wellbeing is often implicitly defined by juxtaposing it against undesirable smartphone habits (i.e., drawing a parallel between smartphone use and unhealthy eating habits) or against afflictions that represent digital illbeing (e.g., technology addictions)
- However, the concept of wellbeing is generally not understood as the absence of an undesirable state, but rather as a state of “optimal psychological experience and functioning” (Deci, & Ryan, 2008)

# DIGITAL WELLBEING

A simple way to conceptualize digital wellbeing is to consider it the opposite of digital media addiction

- This is diagnosed by gauging an individual's behavior against widely recognized addiction symptoms, such as suffering from withdrawal when technology is removed, requiring more usage to attain the same effect (tolerance) and being mentally preoccupied with the technology or its use
- A lack of addiction symptoms should then equate with digital wellbeing
- However, this assumes that digital wellbeing arises only when our relationship with technology is “not problematic/negative”

# DIGITAL WELLBEING

Individuals may also develop a positive relationship with digital technology through hedonic and eudaimonic experiences, which positively contribute to wellbeing

- Hedonic experiences occur when we derive pleasure from digital media, such as when we enjoy entertaining content on our phones
- Eudaimonic experiences occur when digital media use adds meaning to our lives (e.g., it supports the achievement of our personal goals)
- Through hedonic and eudaimonic benefits, our digital wellbeing may actually increase

# DIGITAL WELLBEING

A holistic definition of digital wellbeing should therefore consider the joint occurrence of both positive and negative experiences

- All too often, restricting screen time is proposed as a simple solution to attain digital wellbeing, but by attempting to eliminate the negative outcomes of connectivity we also risk sacrificing its positive outcomes
- According to the mobile connectivity paradox, the problems we experience with ubiquitous connectivity are an inherent and inescapable downside of the benefits it provides us with

# DIGITAL WELLBEING

Because we cannot have one without the other, digital wellbeing is a matter of **“optimizing the ambivalence”**

- That is, we should carefully adjust our connectivity so that we can achieve an equilibrium between maximal controlled pleasure and functional support, and a minimal degree of functional impairment and loss of control
- Individual differences, device-specific factors, and a culture of connectivity are likely to interact to influence our experience of digital wellbeing
- Digital wellbeing interventions, then, can be understood as potential disruptors of the effects of these factors on digital wellbeing

# **JOURNAL ARTICLES**

- Define social media overuse and social media disconnection, and explain the relation between the two concepts.
- The authors propose three metaphors to further our understanding of why, how, and when social media disconnection may be beneficial. Identify each of these metaphors and explain its implications for social media disconnection.
- What is the authors' stance on social media disconnection? Do you agree with the authors?

# **DRUG, DEMON, OR DONUT?**

Abeele et al., 2022

# **S O C I A L M E D I A O V E R U S E**

Social media overuse refers to the experience of using social media too much

- 51% of teens in the US find that they spend too much time on social media
- 71% of teens in the UK find that social media distracts them from their homework; 54% find that it interferes with their social interactions
- This reflects **concerns about the quantity** (i.e., duration and frequency) of social media use leading to time displacement, interference and overload

# **SOCIAL MEDIA DISCONNECTION**

Social media disconnection refers to the placement of temporary limits to digital connectivity

- E.g., Taking breaks from social media, using apps to limit social media access
- Social media disconnection is often suggested as a way to address social media overuse
- However, evidence regarding its effectiveness is mixed as it remains unclear which mechanisms these interventions speak to and how they approach the problem of social media overuse

# **S O C I A L M E D I A A S A D R U G**

Approaches social media overuse as a problem of addiction

- Social media platforms are likened to drugs, because they get our brains hooked on dopamine, the neurotransmitter associated with pleasure
- Individuals lose control over their technology use as the pleasure derived from social media weakens the brain's capacity for behavioral inhibition (i.e., the ability to resist impulses/urges), making it harder for them to stop or reduce their usage

# **S O C I A L M E D I A A S A D R U G**

Emphasis on neuro-biology limits the agency of individuals

- It implicitly assumes that individuals are at risk of social media overuse due to underlying deficits in executive control (the cognitive processes responsible for self-regulation and decision-making)
- E.g., Traits such as impulsivity and low inhibitory control are potential risk factors

# **SOCIAL MEDIA AS A DRUG**

Individuals should counteract social media overuse through longer-term detox interventions that allow the brain to “reset its dopamine balance”

- Such interventions show limited effects, suggesting that the risk factors that may lead to overuse also limit the success of disconnection
- Taking a break from social media only restored a sense of agency over social media use in individuals with high cognitive reflection tendencies (i.e., the tendency to think carefully and deliberately before acting; Turel, 2021)

# **S O C I A L M E D I A A S A D E M O N**

Approaches social media overuse as a “demon” that needs to be “tamed” or “fought”

- Social media platforms are emphasized as having an addictive design, which constantly draws our attention and keeps us engaged
- Individuals are “enslaved” to patterns of habitual and impulsive social media use, over which they have no conscious control

# **S O C I A L M E D I A A S A D E M O N**

Responsibility for overuse is shifted, in part, from individuals to the design and influence of social media platforms

- Social media platforms are seen as complicit in individuals' overuse by exploiting human vulnerabilities for their benefit
- E.g., The mere presence of a smartphone triggers vigilance and distraction, especially when notifications are received; regardless of personality traits or predispositions, individuals naturally tend to engage with social media cues

# **S O C I A L M E D I A A S A D E M O N**

Individuals should reclaim agency over their social media use by “taming” technology, which involves a combined action of:

- Adjusting their technological environment to remove or incapacitate “addictive features” (e.g., smartphone notifications)
- Implementing alternative technologies and features (e.g., screen time apps that set limits to which apps can be used when, and for how long)

Such interventions are beneficial in preventing harmful effects on wellbeing in the short-term, but longer-term behavior change and effects on wellbeing are limited

# SOCIAL MEDIA AS A DONUT

Approaches social media overuse as behavior that is inadequate (i.e., quality) and disproportional (i.e., quantity) to the person and context

- Akin to how food choices tend to be evaluated against characteristics of the person and the context
- Shifts our understanding of social media overuse from an experience that can be measured in terms of absolute quantity and quality, to one that needs to be evaluated situationally while accounting for person-specific factors
- Implies that **social media overuse experiences can occur momentarily** in the form of social media fatigue or digital stress

# **S O C I A L M E D I A A S A D O N U T**

Recognizes that individuals' agency in making adequate choices depends on their capacity (1) to regulate social media use in line with their individual dispositions, and (2) to manage the context in which social media use is embedded

- E.g., Some individuals are predisposed to enjoy social media use more than others; certain contexts necessitate constant, prolonged social media use
- Individuals need to balance short-term benefits with potential longer-term drawbacks, or they risk perceiving social media use as self-control failure

# **SOCIAL MEDIA AS A DONUT**

Just as with food, individuals should manage social media use through moderation and context-dependent choices

- Within-person processes (e.g., personal habits, thoughts, emotional responses to social media), situational appraisals (i.e., how individuals assess social situations), and coping resources are key
- Social media use can be regulated by physical locations (e.g., in school where smartphones are banned) or by mindfulness trainings that can offer coping strategies to promote healthier social media use

# OVERALL...

Each of these approaches to the problem of social media overuse is useful

- The drug metaphor is directly relevant to users who have severe and persistent problems controlling their social media use
- The demon metaphor helps to explore how users can reduce or overcome such social media temptations in their daily lives
- The donut metaphor provides a broader picture of challenges that users face by taking into account the personal nature and situatedness of social media overuse

This implies that **there is no “one-size-fits-all” recommendation** for social media disconnection

**Overview of three different problems in relation to social media overuse and the suggested digital disconnection mechanisms that may mitigate them.**

	Social Media as a Drug	Social Media as a Demon	Social Media as a Donut
What is at stake? Root cause of problem User agency	Addiction/health Individual susceptibility Agency is limited due to innate susceptibilities	Distraction Addictive design Agency needs to be reclaimed from social media platforms	Well-being Inadequate fit User has agency, but it is challenged by person-, technology- and context-specific elements
Focus of disconnection	Complete abstinence, re-training of the 'faulty brain' to break the dopamine link	Removing/weakening the distracting potential of tech, using persuasive design to support exerting social media self-control	Disconnection interventions tailored to persons and/or contexts to 'optimize the balance' between benefits and drawbacks of connectivity, mindful use
Digital disconnection examples	Digital detox, cognitive behavioral therapy	Muting phone, disabling notifications, putting phone in grey-scale, using apps that reward abstinence (e.g., Forest)	Locative disconnection, disconnection apps that extensive tailoring to persons and contexts, mindfulness training

- What is the main argument put forth by the authors?
- What were the proposed hypotheses/expected findings? Any specific theories or theoretical frameworks?
- How were they tested?
- Do the results support the proposed hypotheses? Do you agree with the results?

**BATCHING SMARTPHONE  
NOTIFICATIONS CAN IMPROVE  
WELL-BEING**

Fitz et al., 2019

# MAIN ARGUMENT

Notifications are not inherently bad or good

- What poses a problem is how and when notifications are delivered – they arrive at unpredictable times with varying personal relevance, and because we typically attend to them within minutes, they regularly interrupt ongoing activities
- Often compared to slot machines (Schüll, 2012), smartphone notifications exploit our natural bias for novel, variable rewards in an intermittent reinforcement schedule

# EXPECTED FINDINGS

Experiencing digital alerts in regular batches may help alleviate their costs, while preserving their benefits

- Participants experienced more time pressure, expended more mental effort, and felt more frustrated when they were interrupted by notifications at random intervals while completing standard work tasks than when uninterrupted
- When participants turned off notifications for a day, however, researchers found that the **alerts have locked us in a dilemma**: without notifications, participants felt less distracted and more productive, but they also felt anxious as they were unable to be as responsive

# **HYPOTHESES**

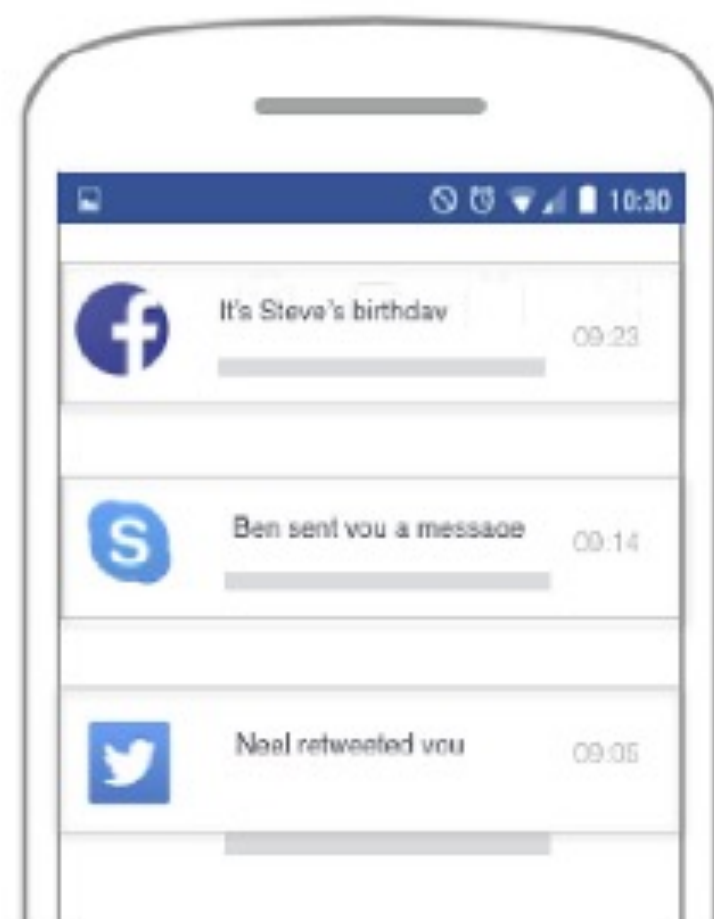
(H1) Batching notifications should decrease inattention and ultimately increase wellbeing compared to default delivery of notifications

(H2) While receiving no notifications at all may yield some of the same benefits, these benefits may be offset by the anxiety associated with missing important updates

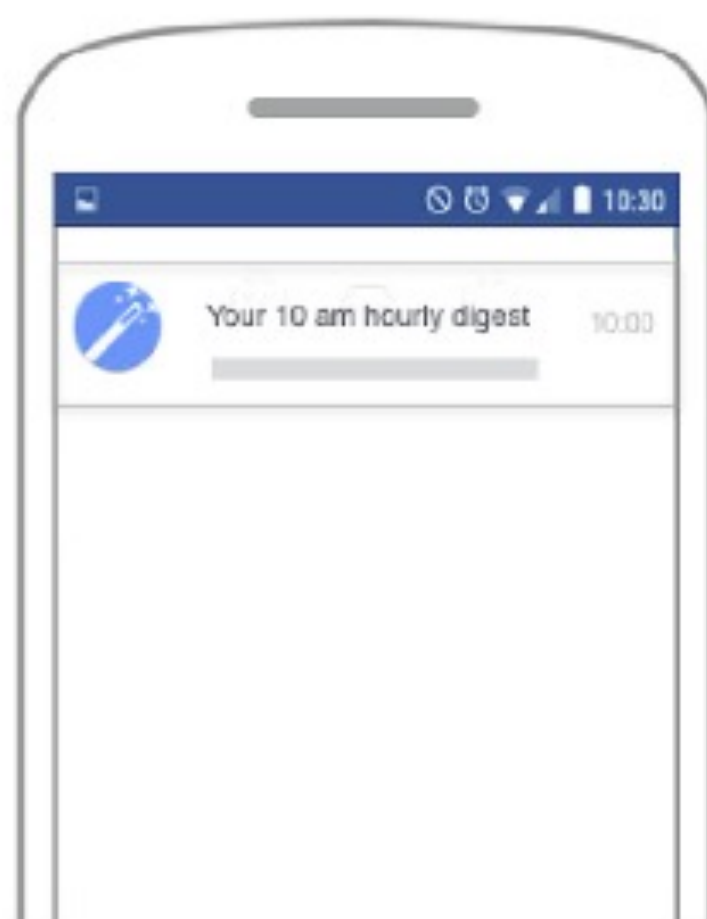
# VARIABLES

- IV: Receiving notifications as usual, batched in predictable intervals (three times a day/once every hour), or never
- Mediator: Attention, phone-related FOMO
- DV: Wellbeing (stress, perceived productivity, anxiety, positive affect/negative affect, enjoyment of work, social connection, depression, mindfulness), phone-specific feelings and behaviors (feeling interrupted by notifications, control over phone, phone unlocks, perceived phone overuse, phone addiction, social pressure, nomophobia)

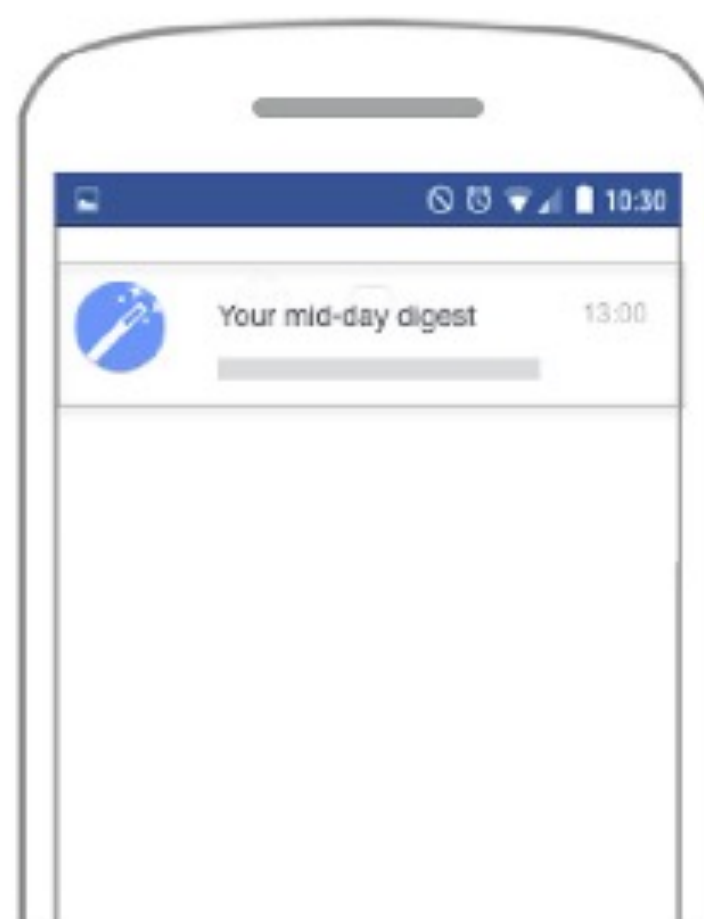
**As Usual (Control)**



**Batched Hourly**

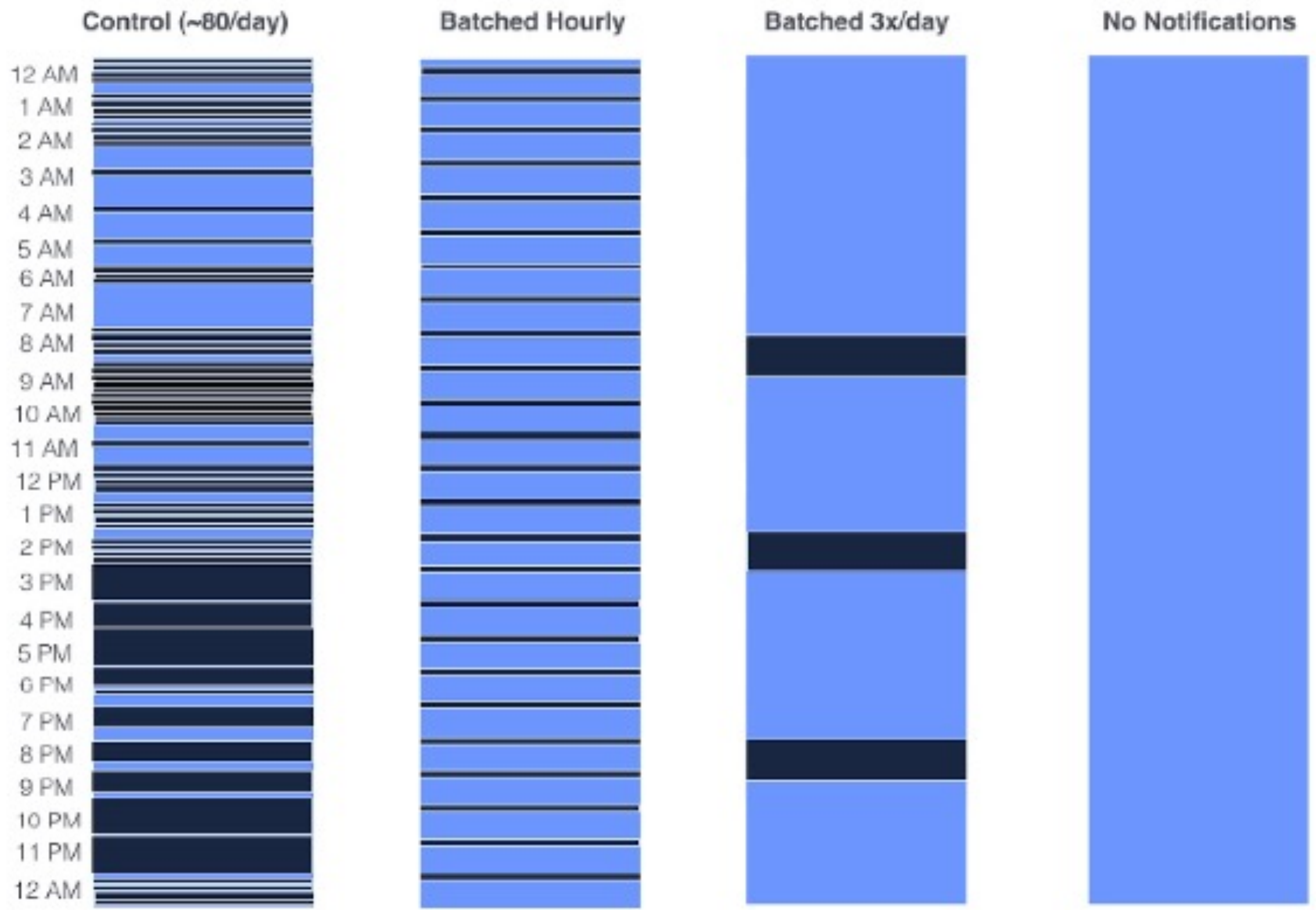


**Batched 3x/Day**



**No Notifications**





# PROCEDURE

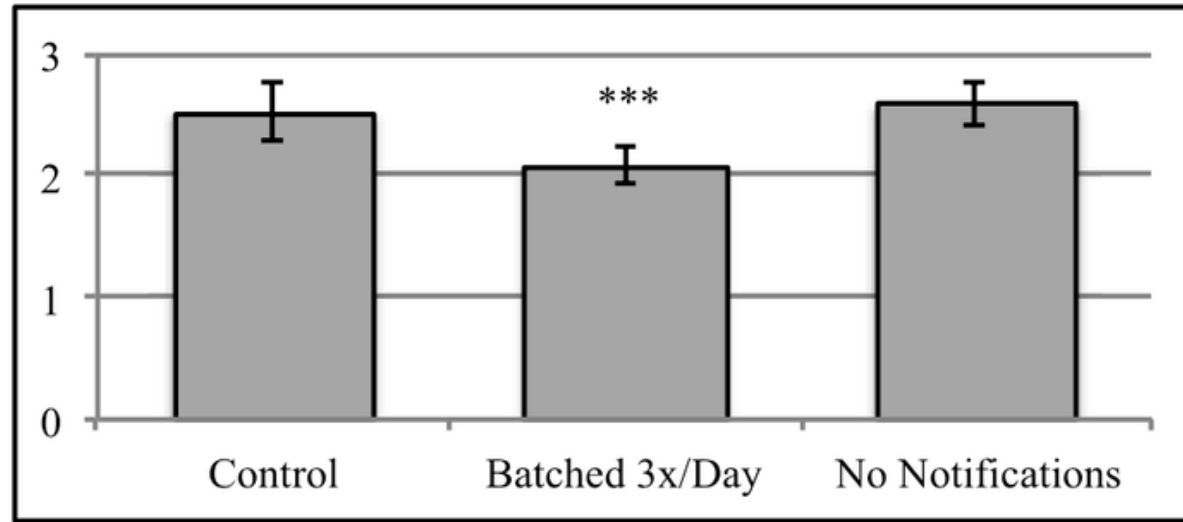
A two-week field experiment was conducted

- In the first week (baseline), participants received notifications as they normally do, and were asked to complete a daily survey
- In the second and third week of the study (experimental phase), participants continued to complete the same measures
  - They were randomly assigned to receive their notifications normally, batched in predictable intervals (every hour on the hour OR in a batch three-times-a-day at 9am, 3pm, and 9pm), or not at all
  - Only the delivery of notifications was manipulated

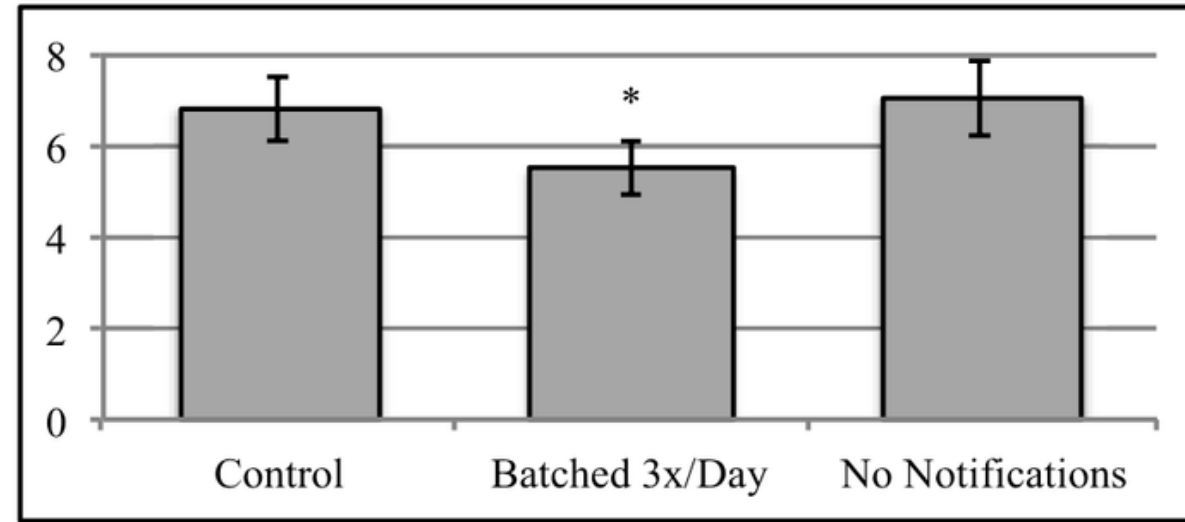
# PROCEDURE

- Participants could always access any specific notifications by opening the associated app, giving them the flexibility to check for important or urgent notifications whenever necessary
- A wide range of measures were administered to assess different aspects of well-being, attention, fear of missing out (FOMO), and various phone-related behaviors
- Two different approaches of measuring these outcomes: single-item measures administered daily and multi-item scales administered weekly

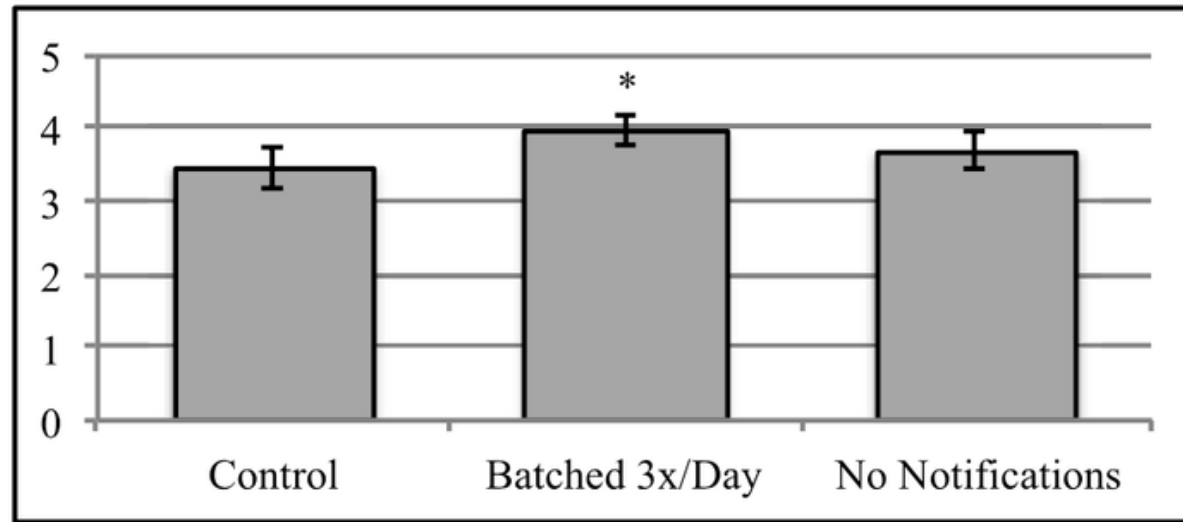
**A. Inattention**



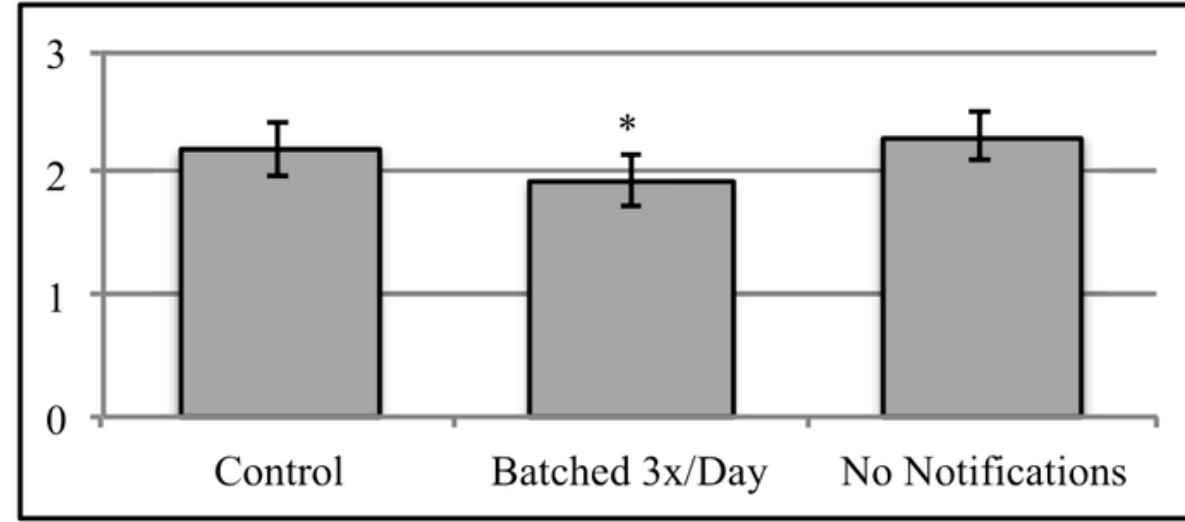
**B. Stress**



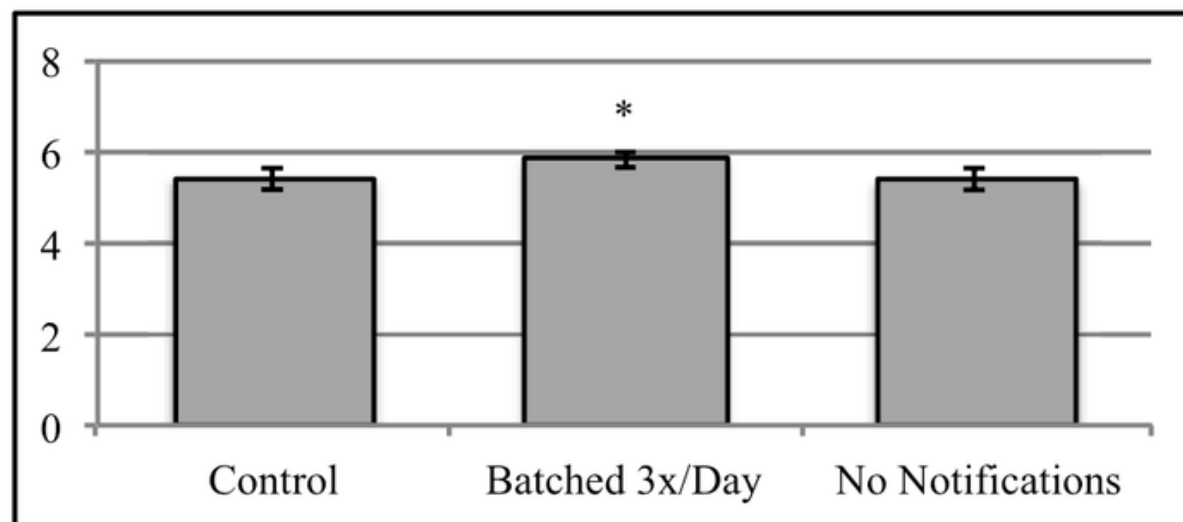
**C. Perceived Productivity**



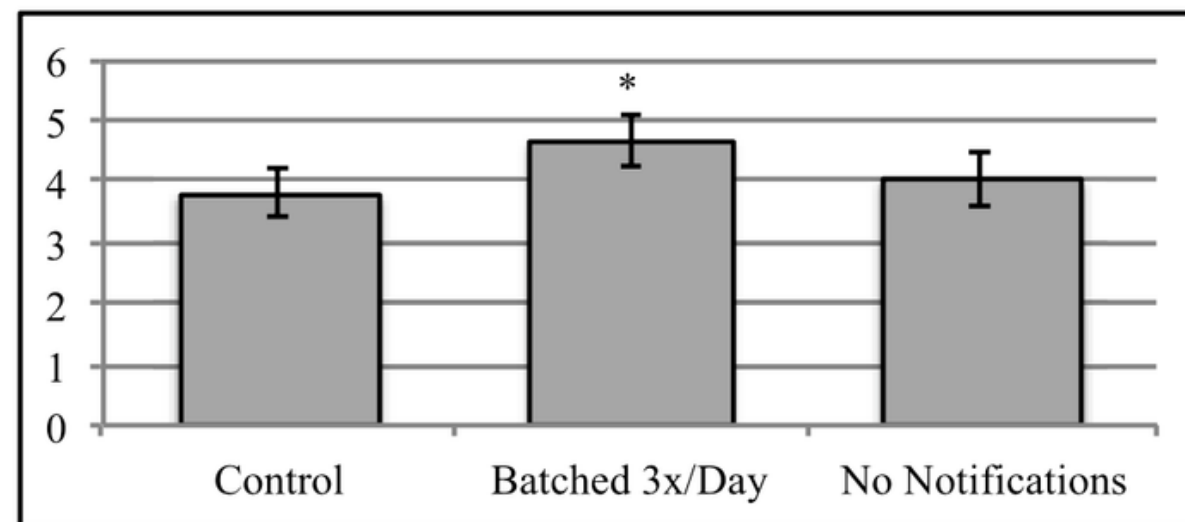
**D. Negative Feelings**



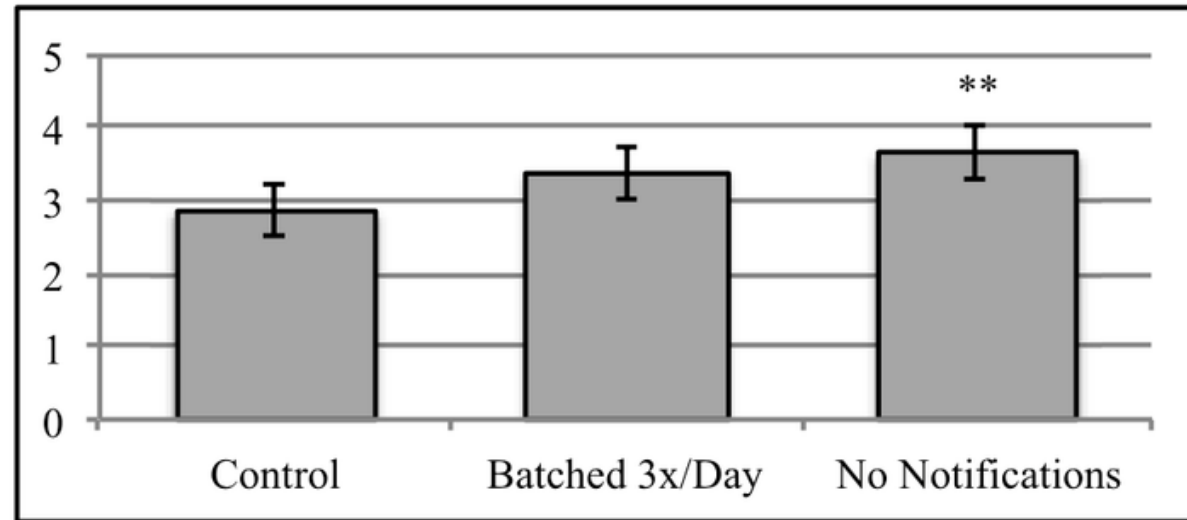
**E. Happiness**



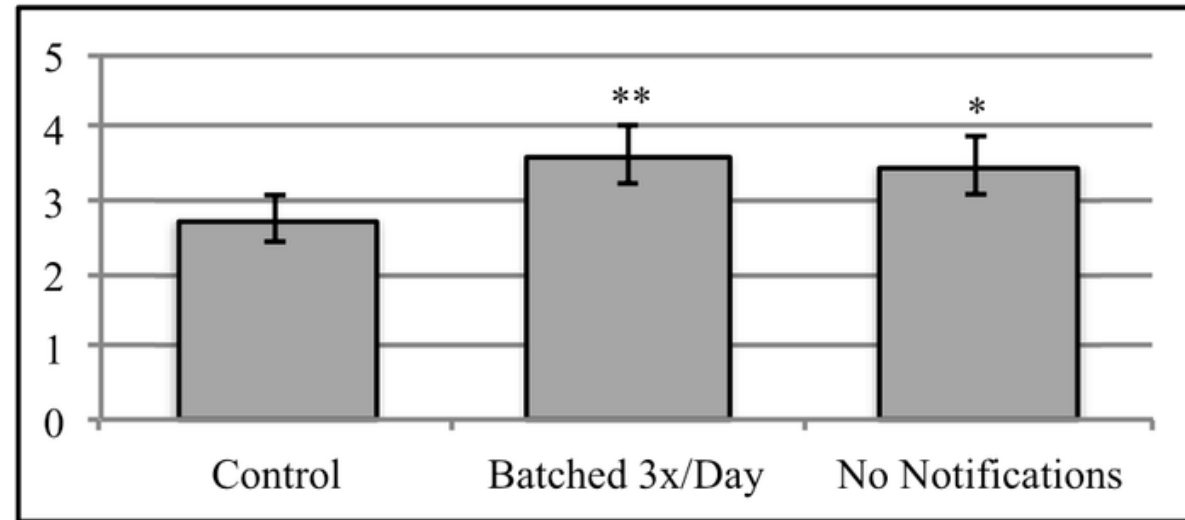
**F. Control Over Phone**



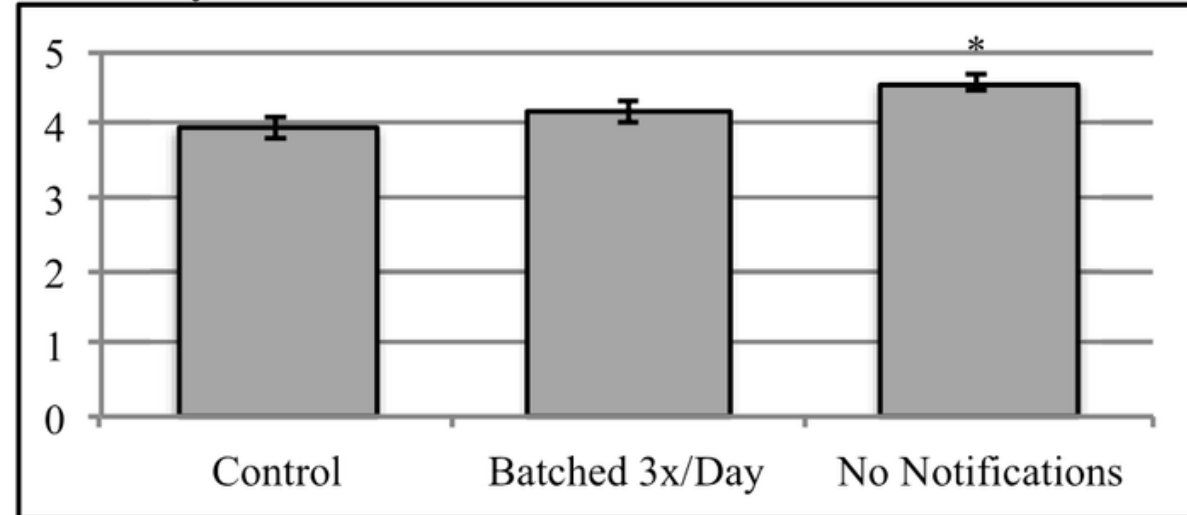
**A. Phone FoMO**



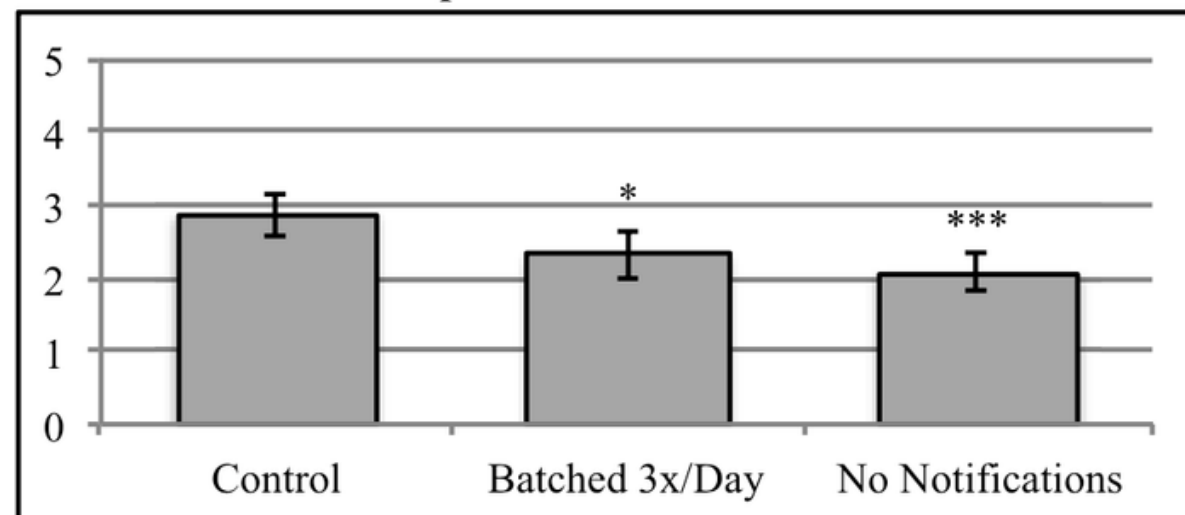
**B. Notification FoMO**



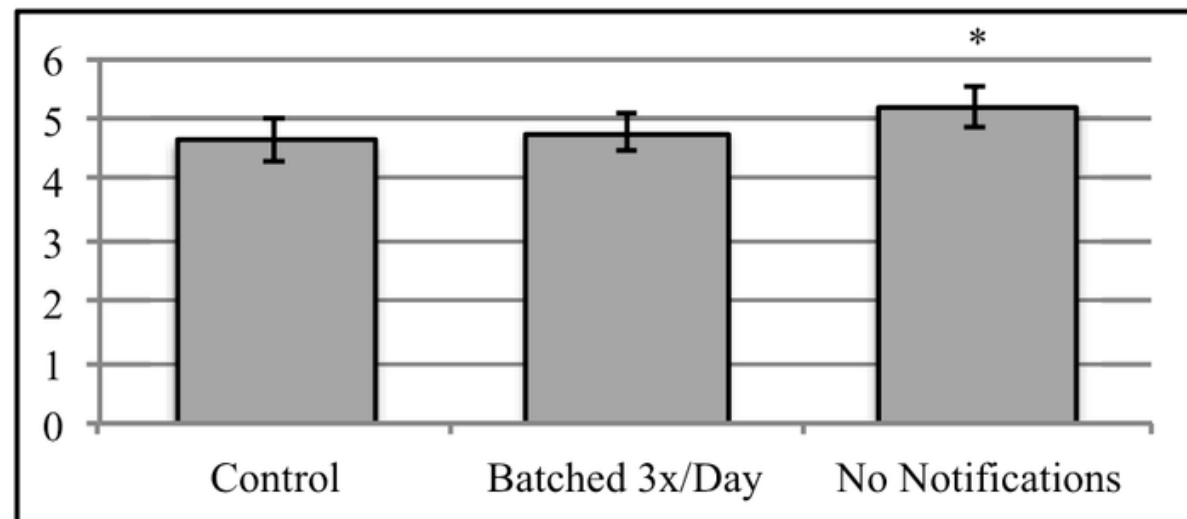
**C. Anxiety**



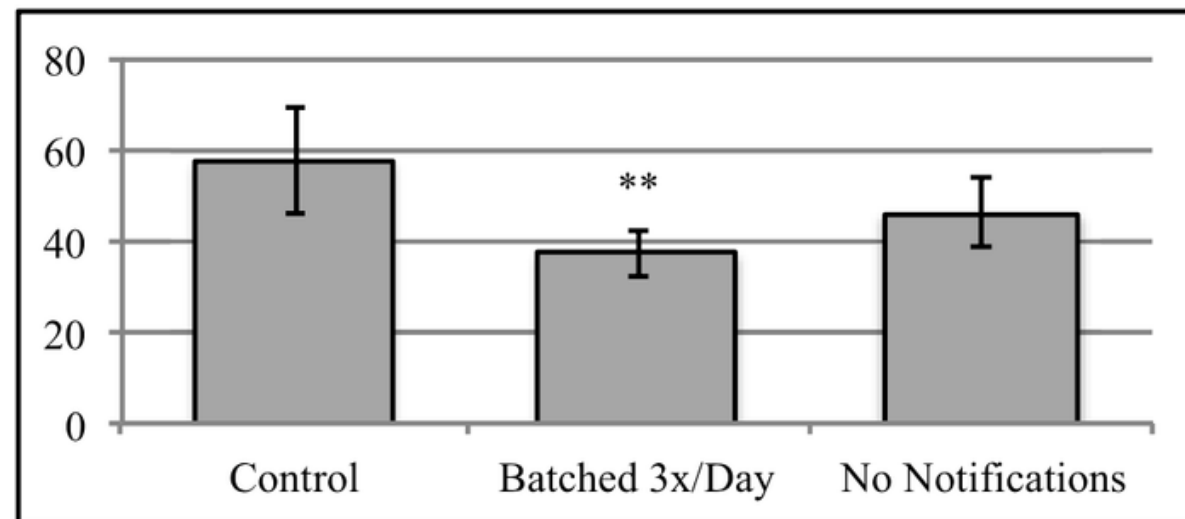
**D. Notification Interruption**




**E. Intentional Phone Checks**



**F. Unlocks**




# RESULTS

Batching notifications decreased inattention and ultimately increased wellbeing (H1 )

- Compared to those in the control group, participants whose notifications were batched 3x/day unlocked their phones fewer times and felt more control over their phone
- They experienced lower inattention, higher concentration, improved well-being (better mood, less negative affect and stress), and perceived themselves as more productive at the end of the day
- However, these participants also experienced more fear of missing out on notifications

# RESULTS

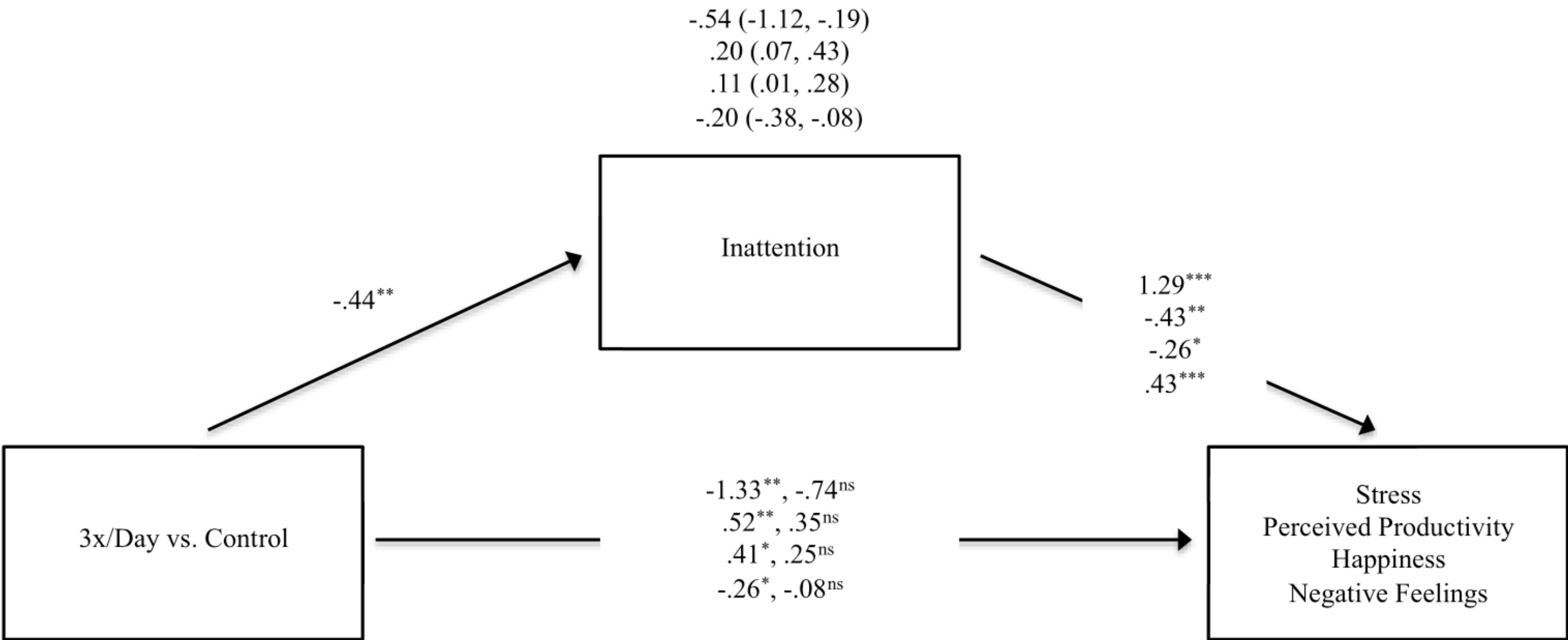
Delivering no notifications at all either had no benefits or produced negative effects (H2 )

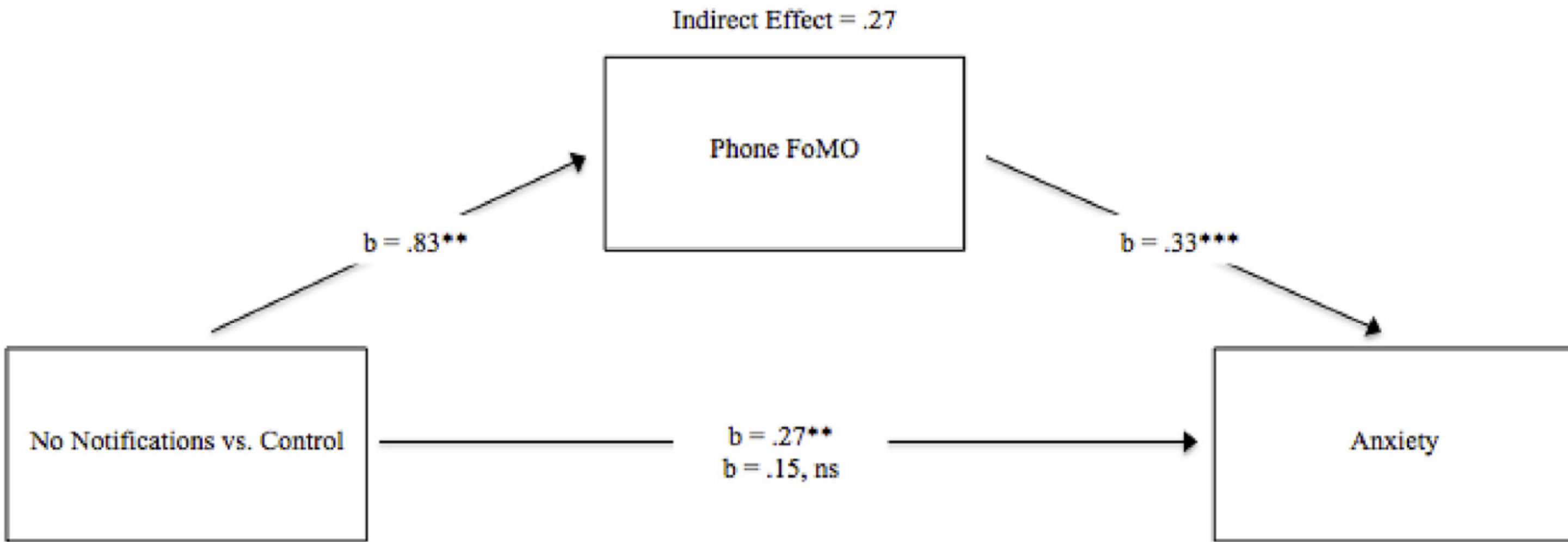
- Compared to those in the control group, participants who did not receive any notifications felt less interrupted by notifications
- However, they did not feel a greater sense of control over their phone use and did not experience a reduction in inattention (i.e., an improvement in concentration)
- Instead, they experienced higher levels of anxiety, phone-related fear of missing out, and feelings of missing out on important notifications

# RESULTS

Inattention partially explains the positive effects of receiving notifications batched three times a day; phone-related fear of missing out fully explains the negative effects of not receiving any notifications

- Inattention fully mediated the effects of batching three-times-a-day on feeling less stressed, more productive, experiencing more positive affect and less negative affect...
- Phone-related fears of missing out fully mediated the effects of never receiving notifications on participants' feelings of anxiety





# RESULTS

The **belief-reality-ideal gap**: People receive more notifications than they realize. Are people aware of how many notifications they receive? And would they like to receive fewer of these alerts?

- Participants' beliefs and ideals were assessed, and compared to how many notifications they actually received (recorded by the batching application)
- People want to receive about half the number of notifications that they think they receive, and they dramatically underestimate how many notifications they actually receive

