

# USING SOCIAL MEDIA EFFECTIVELY FOR RESEARCH COMMUNICATION



**Dr. Jean O'Dwyer & Dr Valentina Rossi**



# OVERVIEW

- Introduction to social media- what it is, why it's important and why it is integral to research communication
- Creating and shaping your message- knowing your audience
- Social media platforms –.

# WHAT IS SOCIAL MEDIA?

- “Social media are Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others.”

- – Carr, C. T., & Hayes, R. A. (2015)



# SOCIAL MEDIA FOR RESEARCH COMMUNICATION – **WHY IS IT IMPORTANT?**

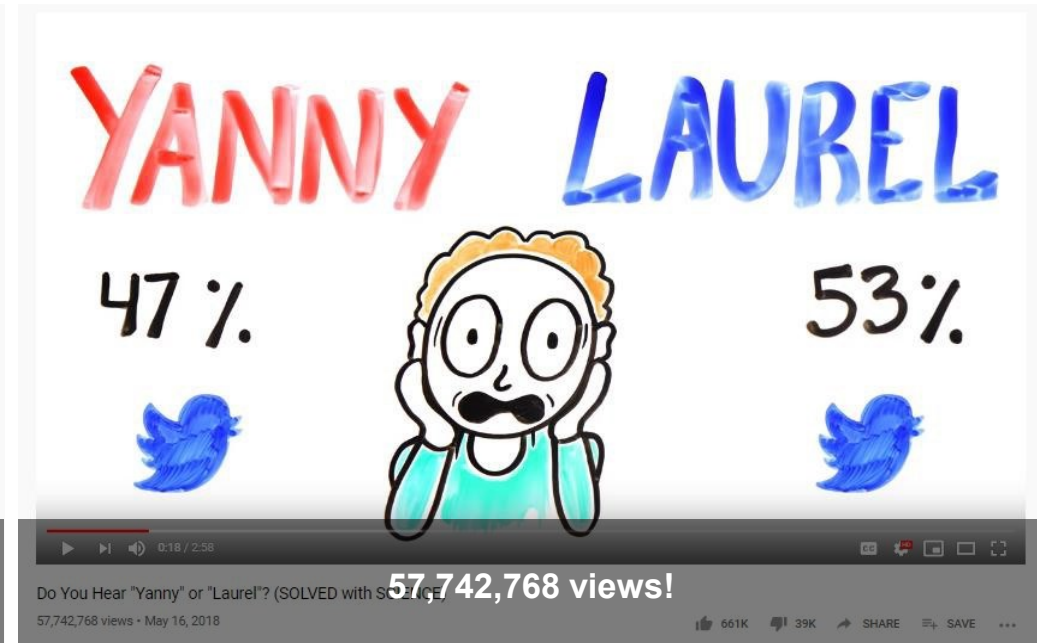
“Social media platforms ... are *the* way the world is networking and communicating. They are *how* and *where* we share information – with friends, colleagues, acquaintances and any and everyone else.”

– *Christie Wilcox, Scientist, Science Writer/Blogger*

Researchers are increasingly using social media to talk about or read about research

- 47% of AAAS members surveyed in 2018 have used social media to discuss or follow science
- 24% of AAAS members have blogged about science/research
- 16% of scientists blog at least once a month about topics related to their research; ~1 out of 5 tweet about their research (Brossard *et al.*, 2013).
- Younger scientists tend to strongly support direct communication with lay audiences (Corley *et al.*, 2011)

*Researchers themselves are now embracing roles that were conventionally taken upon by trained communicators.*

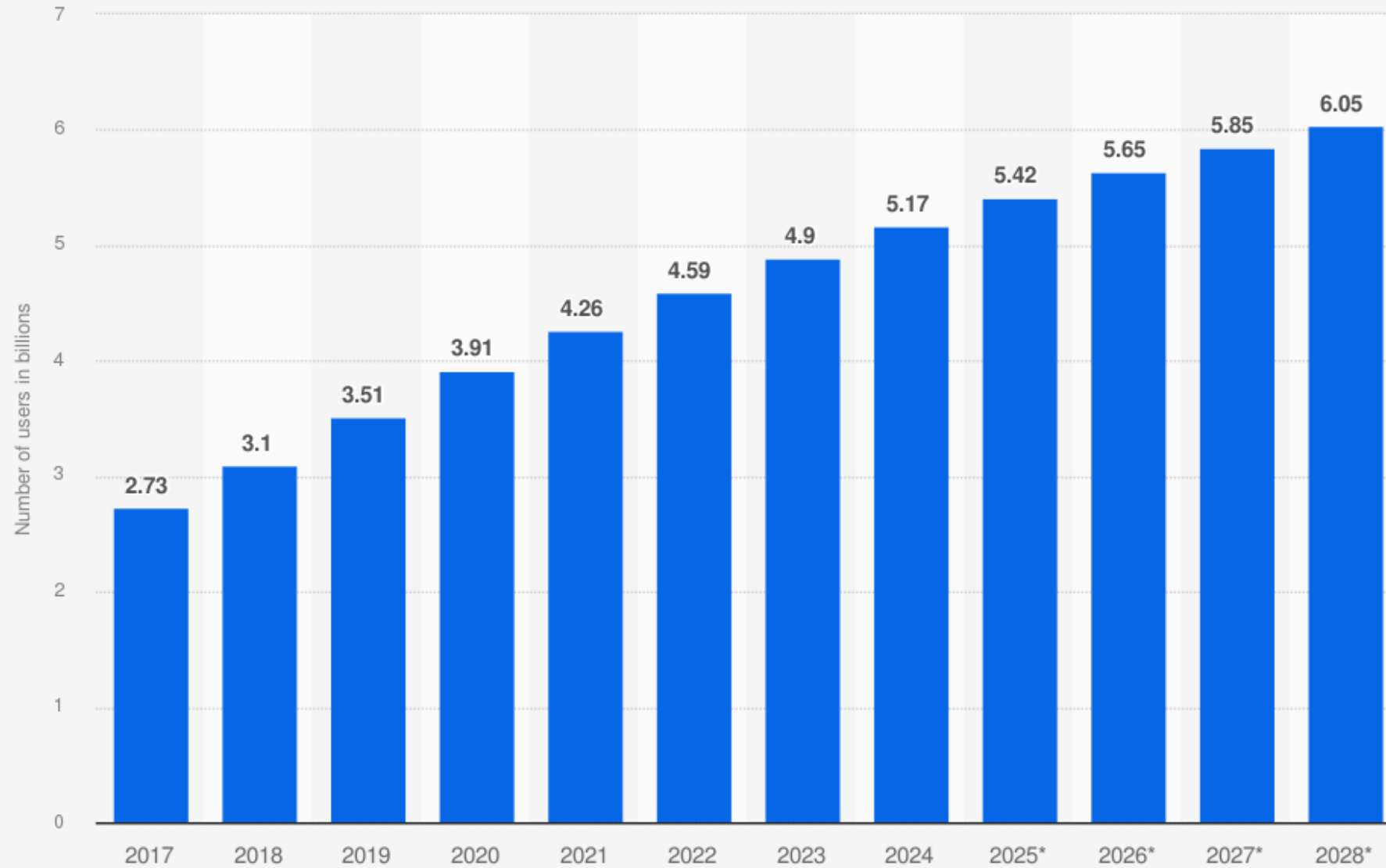




- The internet (and social media) has become a major source of information for many people, especially those who follow specific areas of interest and for younger people
- Social media use in general is on the rise



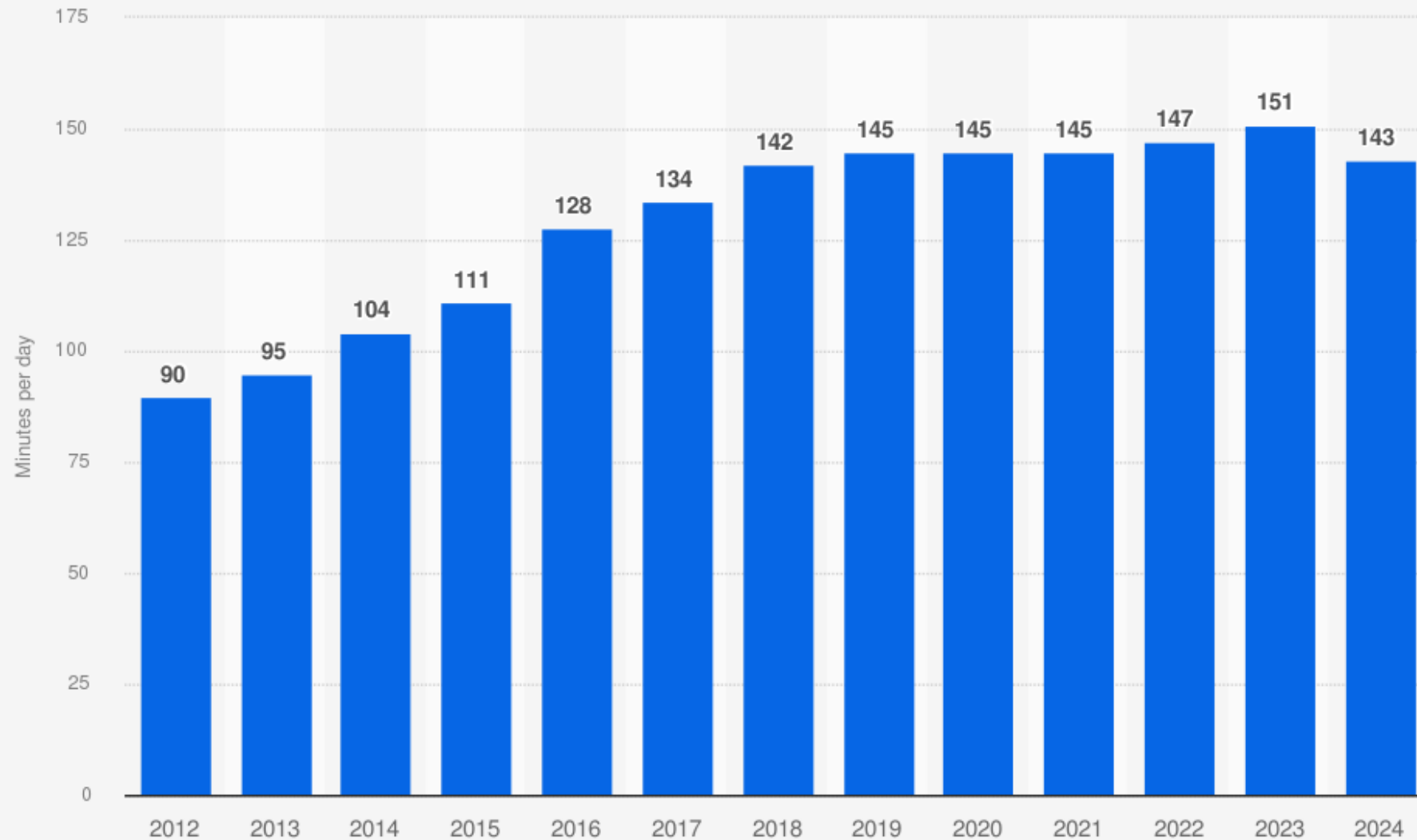
## Number of social media users worldwide from 2017 to 2028 (in billions)



Source  
Statista  
© Statista 2025

Additional Information:  
Worldwide; Statista; 2017 to 2024

## Daily time spent on social networking by internet users worldwide from 2012 to 2024 (in minutes)



### Sources

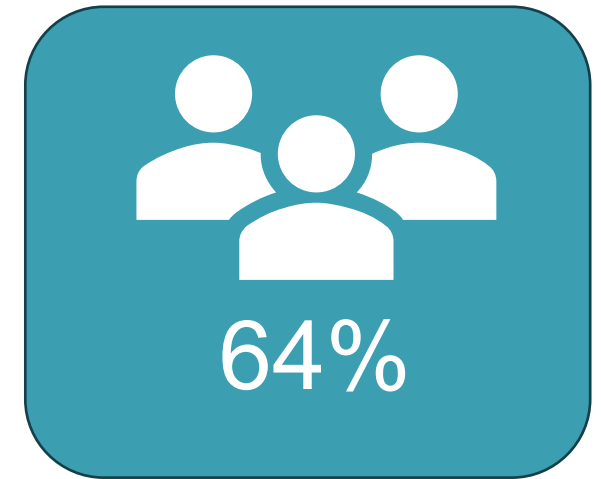
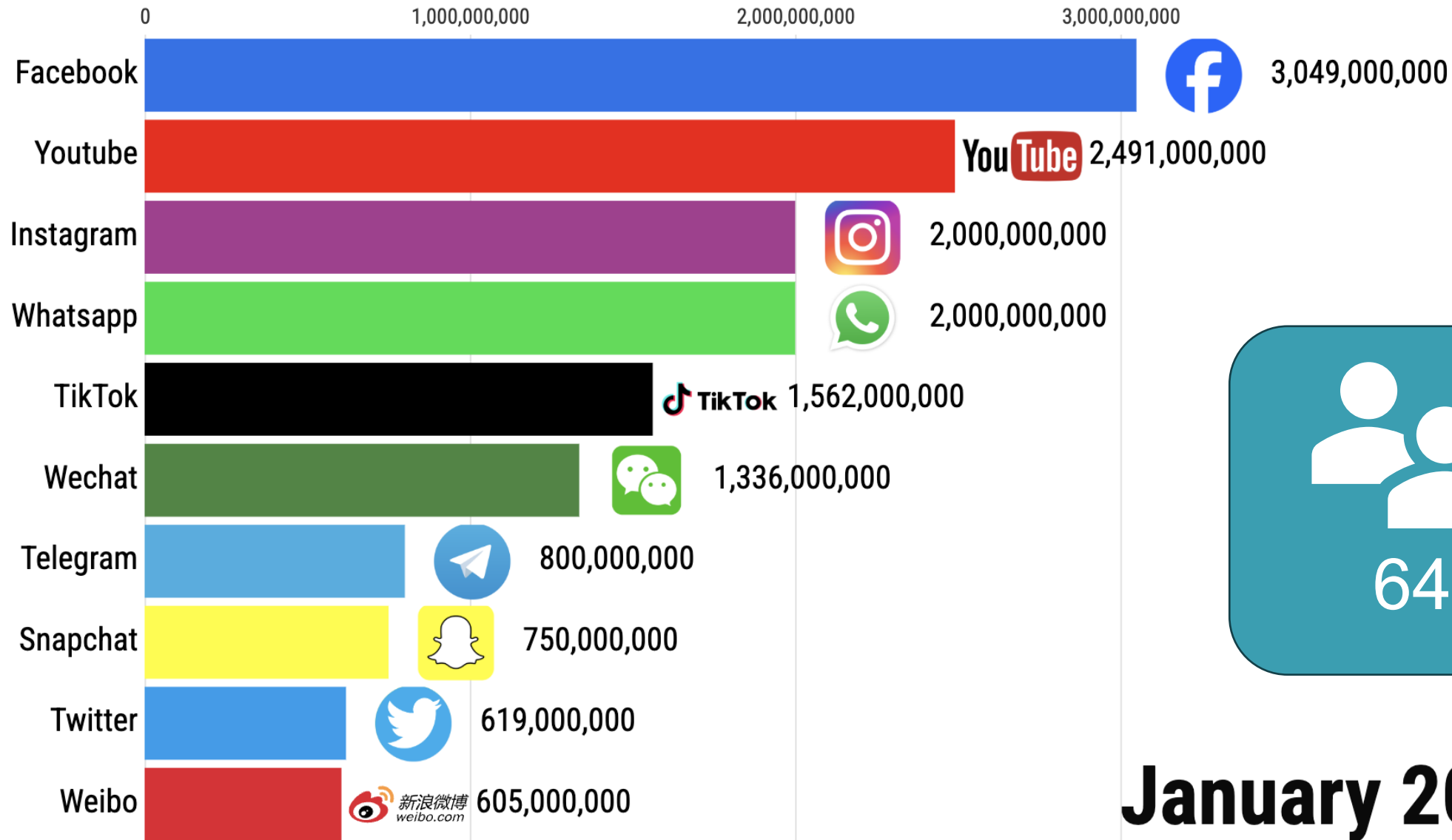
GW; We Are Social; DataReportal; Hootsuite  
© Statista 2025

### Additional Information:

Worldwide; GW; DataReportal; 2012 to 2024; 16-64 years; social media  
and messaging; Online survey

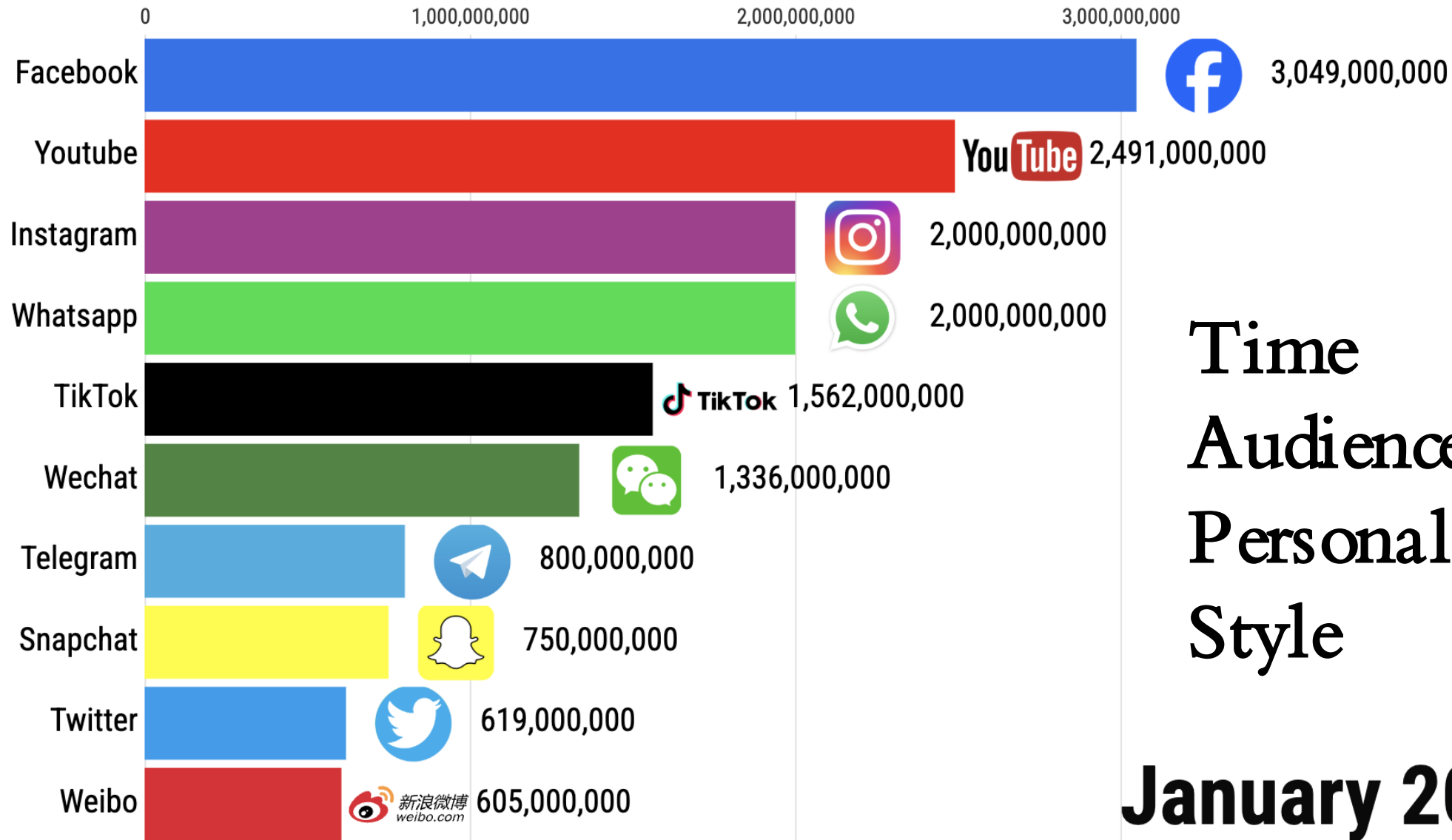


# Most popular social media platform(s)?



**January 2024**

# The best social media platform(s)?



Time  
Audience  
Personality  
Style

**January 2024**

# Social media platform(s) for Research Communication

PEOPLE	CONTENT
 <ul style="list-style-type: none"><li>• 25-34</li><li>• Boomers</li></ul>	<ul style="list-style-type: none"><li>• Photos &amp; links</li><li>• Information</li><li>• Live video</li></ul>
 <ul style="list-style-type: none"><li>• 18-25</li><li>• 26-35</li></ul>	<ul style="list-style-type: none"><li>• How-tos</li><li>• Webinars</li><li>• Explainers</li></ul>
 <ul style="list-style-type: none"><li>• 18-24, 25-34</li><li>• Millennials</li></ul>	<ul style="list-style-type: none"><li>• Inspiration &amp; adventure</li><li>• Questions/polls</li></ul>
 <ul style="list-style-type: none"><li>• 25-34, 35-49</li><li>• Educated/wealthy</li></ul>	<ul style="list-style-type: none"><li>• News</li><li>• Discussion</li><li>• Humor</li></ul>
 <ul style="list-style-type: none"><li>• 26-55</li><li>• Professionals</li></ul>	<ul style="list-style-type: none"><li>• Long-form content</li><li>• Core values</li></ul>
 <ul style="list-style-type: none"><li>• 10-19</li><li>• Female (60%)</li></ul>	<ul style="list-style-type: none"><li>• Entertainment</li><li>• Humor</li><li>• Challenges</li></ul>
 <ul style="list-style-type: none"><li>• 13-17, 25-34</li><li>• Teens</li></ul>	<ul style="list-style-type: none"><li>• Silly</li><li>• Feel-good</li><li>• Trends</li></ul>

You can reach out to older people  
Contrast disinformation

PRO

Longer videos to explain more complex concepts

Supports photos, videos (reels) and short stories  
It has a very positive and supportive vibe.

Some researchers and institutions might keep their profiles

Good to share new published research among other researchers. Good for finding jobs

Young audience

Young audience



Live streaming, gaming



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CONS

The specific age range

Time consuming, require planning and preparation

Time consuming, algorithm always changing


Planning and preparation

Controversial. Sometime very negative vibe, argumentative

Only professionals, no broad audience

Time consuming

Short timed content

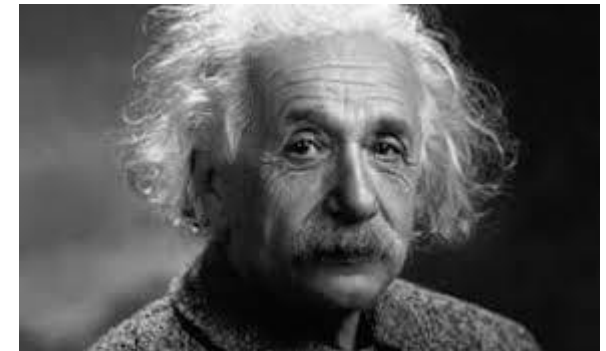


# SOCIAL MEDIA FOR RESEARCH COMMUNICATION

## – WHY SHOULD RESEARCHERS USE IT?

- Boost professional profiles
- Networking, recruiting students
- Reach new audiences
- Act as a public voice for research
- Make research accessible
- Online outreach can help get funding!
- **Open research & collaboration**

*"Those that have the privilege to know, have the duty to act."  
- Albert Einstein.*



# WHY SHOULD RESEARCHERS USE SOCIAL MEDIA?

- Studies show connections between public communication, increased visibility of research, and greater numbers of citations.
  - *Do altmetrics work? Twitter and ten other social web services.* PLoS One 2013
  - *Building buzz: (Scientists) communicating science in new media environments.* Journalism Mass Comm Quarterly 2014
- Researchers who engage in public communication tend to be more academically productive.
  - *Scientists who engage with society perform better academically.* Sci Public Policy 2008

# WHY SHOULD RESEARCHERS USE SOCIAL MEDIA?



? About this Attention Score

In the top 5% of all research outputs scored by Altmetric

MORE...

Mentioned by



## SUMMARY

News

Blogs

Policy documents

X

YouTube

More...

<b>Title</b>	Bacteria that Travel: The Quality of Aircraft Water
<b>Published in</b>	International Journal of Environmental Research and Public Health, October 2015
<b>DOI</b>	10.3390/ijerph121113938 <a href="#">↗</a>
<b>Pubmed ID</b>	26529000 <a href="#">↗</a>
<b>Authors</b>	Harald Handschuh, Jean O' Dwyer, Catherine C. Adley

[↗ View on publisher site](#)

[✉ Alert me about new mentions](#)

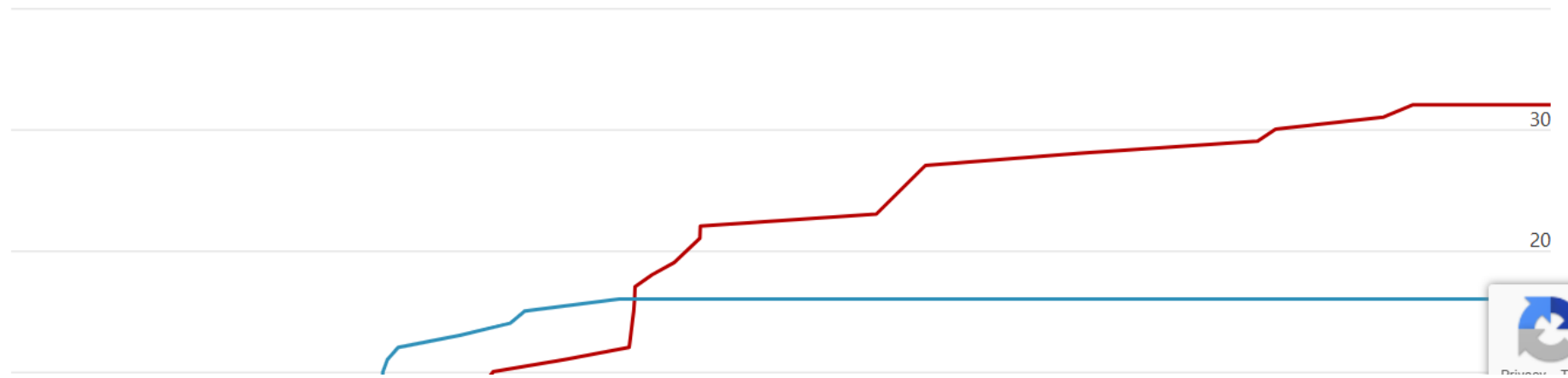
Timeline

X Demographics

Mendeley readers

Attention Score in Context

## Attention over time





# COMMUNICATING RESEARCH- THINGS TO REMEMBER

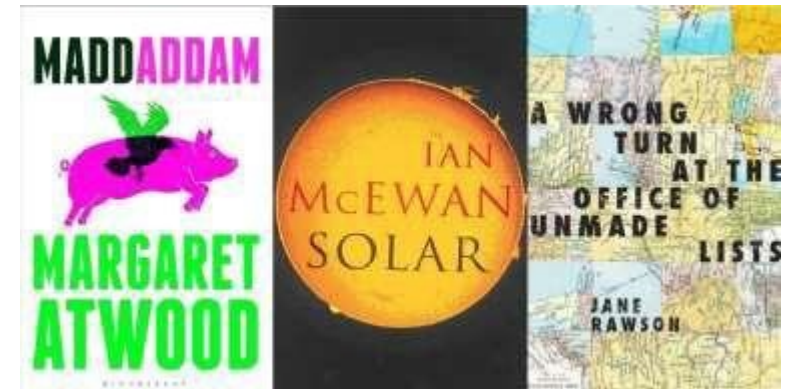
- Social media is SOCIAL. Two-way communication and engagement is **key**.
- Respond (sensibly).
- Social media is not a replacement for actual research output!



# WHAT GETS SHARED?

- **Public** – can people SEE it?
- **Practical Value** – *Is this useful information?*
- **Stories** – Stories are fundamentally about social interaction – and social interaction is central for human beings.

*“Fiction is great – it can help us really feel the horror of what we’re headed for, change our lives in a deeper way than scientific projections alone could do, and give us ideas to help us adapt to the change.” – [Jane Rawson](#)*



# Telling A Story

Think about a graphical abstract of your paper (or project), what is the story?  
What are you trying to do? Why it is important? Why should we care?

Tell YOUR story! Who are you, how did you get into university studies, why are you pursuing a PhD, what's your project about, were you always interested in doing science, what's your day like?

**Collaborate with creative people!**

Comics, illustrations, podcasts, live interviews

By communicating about your own journey you can inspire others to follow your steps, or empower them into pursue their dreams

Research communicators out there are always looking for full time scientists to engage in conversation  
**Create a professional profile on a social media**

# STORYTELLING



## Curiosity Rover

@MarsCuriosity

NASA's latest mission to explore the surface of Mars. Roving the Red Planet since Aug. 5, 2012 (PDT) (Aug 6 UTC).

📍 Gale Crater, Mars

🔗 [mars.jpl.nasa.gov/msl/](https://mars.jpl.nasa.gov/msl/)

🕒 Joined July 2008

✉ Tweet to Curiosity Rover



Curiosity Rover  @MarsCuriosity · Jan 30

Memories light the corners of my mind  
Misty infrared memories...

Your watch is over, @NASASpitzer. More than 16 years of data gathering is done, but your science lives on. [go.nasa.gov/2vBoaKO](https://go.nasa.gov/2vBoaKO)

#SpitzerFinalVoyage



💬 22

🔄 513

❤️ 2.3K



Curiosity Rover @MarsCuriosity · Apr 16

Fist pump! I passed the 10k mark on Mars.  
Next stop: Logan Pass:  
[go.nasa.gov/1E73RII](https://go.nasa.gov/1E73RII)



🔄 1.2K

★ 1.9K



[View photo](#)



Curiosity Rover @MarsCuriosity · Jun 4

Spring break on Mars! Activities on hold during solar conjunction.  
Here's why: [go.nasa.gov/1JoKUN2](https://go.nasa.gov/1JoKUN2)

[youtu.be/TZw74PKoajU?li...](https://youtu.be/TZw74PKoajU?li...)

📺 YouTube



**Mars in a Minute: What Happens When the Sun Blocks our Signal?**

How can you communicate with Mars spacecraft when the Sun is in the way?  
Learn more about "solar conjunction" in this 60-second video.

[View on web](#)



# BLOGGING DRIVEN BY VISUALS

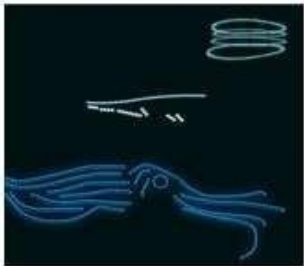
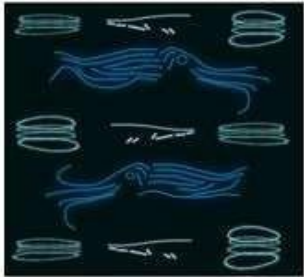
Click Me

Buzz Hoot Roar

## For Love or Supper: Why Critters Light Up

Breaking news: Hundreds of underwater species radiate neon greens, reds and oranges as they shimmy through the ocean's depths.<sup>1</sup> But sea creatures aren't the only animals at ease in the limelight. Buzz Hoot Roar guest-author Matt Shipman offers a few good reasons why sea *and* land animals put on the ultimate light show.

**1. TO SPOTLIGHT THEIR NEXT MEAL.** ONE OF THE ONLY FISH TO PRODUCE RED LIGHT, THE STOPLIGHT LOOSEJAW (MALACOSTEUS NIGER) EMITS A ROSY GLOW FROM ORGANS LOCATED NEAR ITS EYES.



BECAUSE MOST OTHER DEEP-WATER FISHES CAN'T SEE RED LIGHT ...



THIS INVISIBLE SPOTLIGHT GIVES THE LOOSEJAW A SECRET WEAPON IT CAN USE TO TARGET ITS PREY.<sup>2</sup>

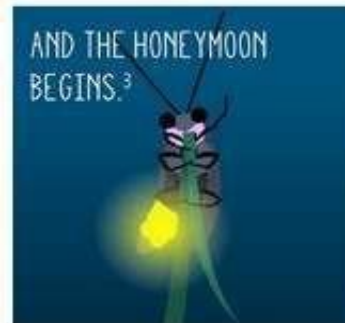
**2. TO WOO (OR TRAP) THEIR ONE TRUE LOVE.** MALE BIG DIPPER FIREFLIES (PHOTINUS PYRALIS) USE THEIR LIGHT-UP BOTTOMS TO FLASH SIGNALS AT FEMALES.



IF THE SIGNALS CATCH A LADY'S INTEREST,



SHE SENDS BACK HER OWN BIOLUMINESCENT RESPONSE,



AND THE HONEYMOON BEGINS.<sup>3</sup>



BUT BEWARE, BIG DIPPER DUDES!



FIREFLY FEMALES IN THE GENUS PHOTURIS SOMETIMES LURE IN PHOTINUS MALES -AND EAT THEM!<sup>4</sup>

THIS IS, OF COURSE, DOUBLY DISAPPOINTING FOR THE MALES.



# FOSSILS IN COLOR

WRITTEN +  
ILLUSTRATED  
BY MORTIMER  
SCHILKE

BASED ON RESEARCH BY DR. VALENTINA ROSSI

WHEN MOST PEOPLE THINK ABOUT PALEONTOLOGY, THEY  
THINK ABOUT BONES AND TEETH

STUDYING FOSSILIZED BONES AND LIVING  
RELATIVES HAS BEEN ESSENTIAL FOR  
RECONSTRUCTING WHAT LIFE MAY HAVE  
LOOKED LIKE ON EARTH LONG AGO

BUT OCCASIONALLY, SOFT TISSUES CAN BECOME FOSSILIZED TOO

HAIR, FEATHERS, AND  
SKIN, ARE ESPECIALLY  
RESISTANT TO DECAY

SOMETIMES, WHEN ORGANISMS DIE, THEY  
ARE IMMEDIATELY COVERED UP BY SEDIMENT

THIS PROTECTS THEM FROM SCAVENGERS, AND IT ALSO  
PROTECTS THEM FROM OXYGEN, WHICH SLOWS  
DECOMPOSITION. SEDIMENT CAN ALSO PROVIDE  
MINERALS THAT AID IN FOSSILIZATION



WHAT DO THESE SOFT TISSUES  
HAVE TO TEACH US? WHAT  
ARE WE STILL GUESSING IN OUR  
DEPICTIONS OF EXTINCT LIFE?

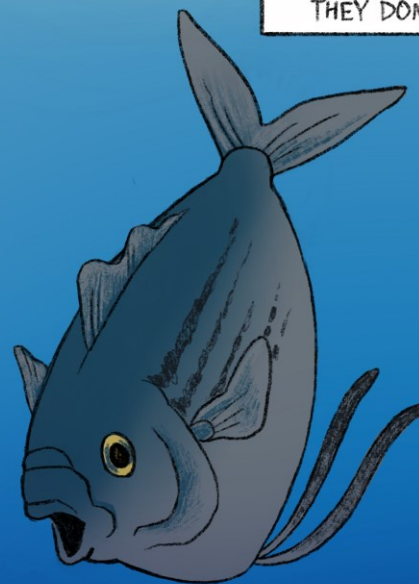
FOR EXAMPLE, A FOSSILIZED RAZOR MOON FISH WAS  
FOUND TO HAVE A PATTERN OF HORIZONTAL STRIPES...



AND THE BONES OF ANOTHER FISH IN ITS BELLY



THIS IS SURPRISING, BECAUSE  
MODERN MOON FISH HAVE SPOTS, AND  
THEY DON'T EAT OTHER FISH.



SO FROM THAT, SCIENTISTS CAN  
EXTRAPOLATE THAT UNLIKE THEIR  
LIVING RELATIVES, THE PREHISTORIC  
MOON FISH PROBABLY LIVED IN OPEN  
WATER, HUNTING OTHER FISH.



@creppyfossil

s

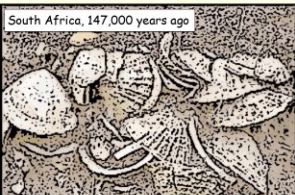
@hudrewthis



# LIMPETS IN OUR LIVES

PRODUCED BY LOUISE B. FIRTH  
IN ASSOCIATION WITH UNIVERSITY OF PLYMOUTH

South Africa, 147,000 years ago



We know that limpets were eaten by Neanderthals, early modern *Homo sapiens*, the Ancient Greeks, Romans & Vikings. They are often the dominant shellfish found in middens.

Inisbofin, West of Ireland, 1889

Seachain an teach on tabhairne no búrigh is beatha durt

What did she say?

It's a proverb meaning stay out of the pub or you'll end up poor & eating limpets

Many people survived the Great Irish Famine (1845-1849) & the Scottish Highland Clearances (1750-1860) by eating limpets. In many places, limpets are considered 'famine food'.

Limpets are delicacies in The Azores. In Hawai'i, they are called "fish of death" as so many people die collecting them from wave-exposed shores.

Lapas grelhadas (grilled limpets) €15.00

Today, limpets are tinned & marketed as "poor man's abalone" in Asia.

Well obviously food, but what else?

Medicines, bait?

Giant keyhole limpet *Megathura crenulata*

Historically, limpets were used for a variety of traditional medicinal uses. Today Keyhole Limpet Haemocyanin (KLH) is used to treat bladder cancer, atopy, asthma, & Lupus.

Limpets were used as scrapers, bowls & vessels. Today, nursing mothers use shells as nipple shields to prevent cracking - a practice that originated with the Vikings.

No fewer than 11,850,000 limpets collected for bait annually - it's "constant warfare", old chap!

Dr Johnson

Berwick, England, 1853

In Britain, limpets were traditionally collected as bait for fishing. In Scotland, an entire language & culture developed around using limpets as bait.

Don't forget Inspiration!

In Canadian Haida culture, Raven first created two women from clam shells. He then turned one into a man by throwing a limpet shell at her - creating the Haida Gwaii people.

Teotihuacán, Mexico, 900 AD

Check out my 'ayahualli' pendant! It represents the female genitalia

Limpet shells have been used as a form of currency, in jewellery, adornments, human sacrifice rituals, religious & spiritual offerings, shellcraft, artworks & paintings.

Alright, alright! Well, did you know that they KILL cats, foxes & birds, AND, they cause coastal erosion!

BOOM! See how you like that oystercatcher!

Killer limpet! They have been documented to trap & drown rats & birds by clamping down on their claws, AND foxes & cats by clamping their tongues!

A Limpet Mine is a naval mine attached to ships by diving frogmen

Somewhere in the Atlantic, 1942

DIV Limpet Mine packs an special in Woolworths: condom, anisaid ball, & bowl, all for a five! Bargain!

The word 'limpet' is synonymous with tenacity. Limpets have a legendary ability to cling to rocks - a quality that is celebrated with myriad cultural and product references.

the guardian

### LIMPETS THREATEN THE COAST

When part of British scientists have recently, found that limpets are nibbling away at the soft seaweed along our shores - year by year, undermining the British coast cliffs & sea defences & warning away the coastline.

Limpets can mechanically erode soft rocks through a combination of rubbing their shells & rasping the rock with their strong teeth while grazing.

# MIGHTY PHAGES

Vs (villian) Super Bacteria



Inside somebody...

hmm, time to take over the world

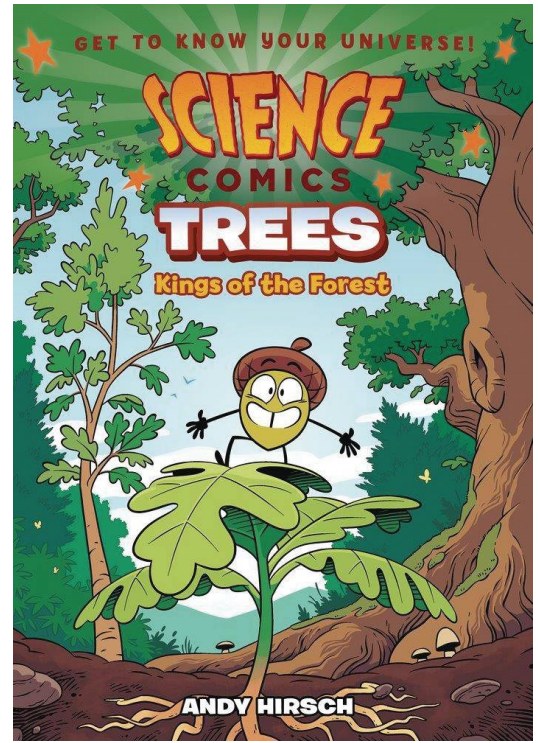
pop!

My plan is working

Wait you mean MY plan!

Oh no!

Eep! Escape





# RESEARCH COMMUNICATION WITH SOCIAL MEDIA 101

## *Think about your Audience*

- Don't assume all social media platforms are created equal in terms of audience
- Younger audiences? Snapchat, Instagram, TikTok...

*Unlock hidden beauty in your science*

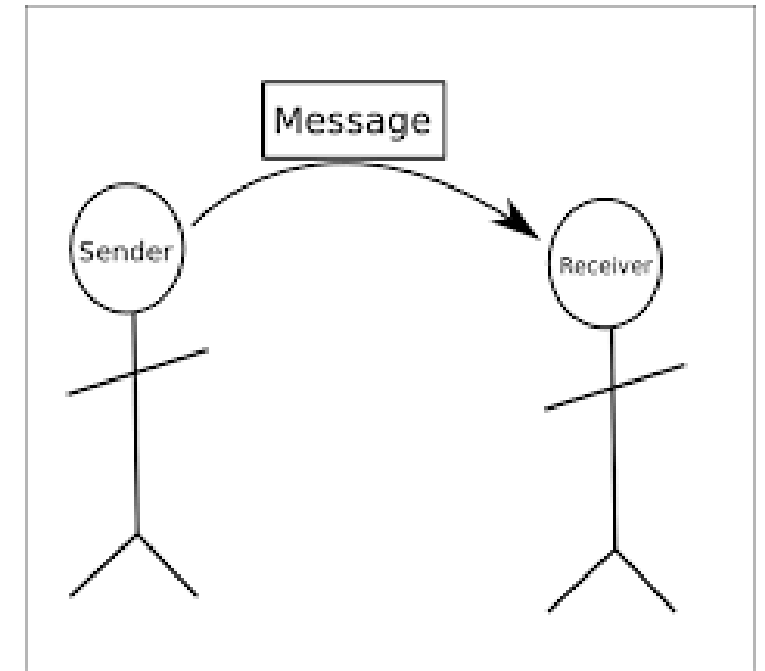
- Female audiences? Male audience?
- Journalists? X/Bluesky (largely a news source)...
- Other researchers? X, Facebook, Bluesky
- Wide audiences? Facebook, Twitter, Tumblr



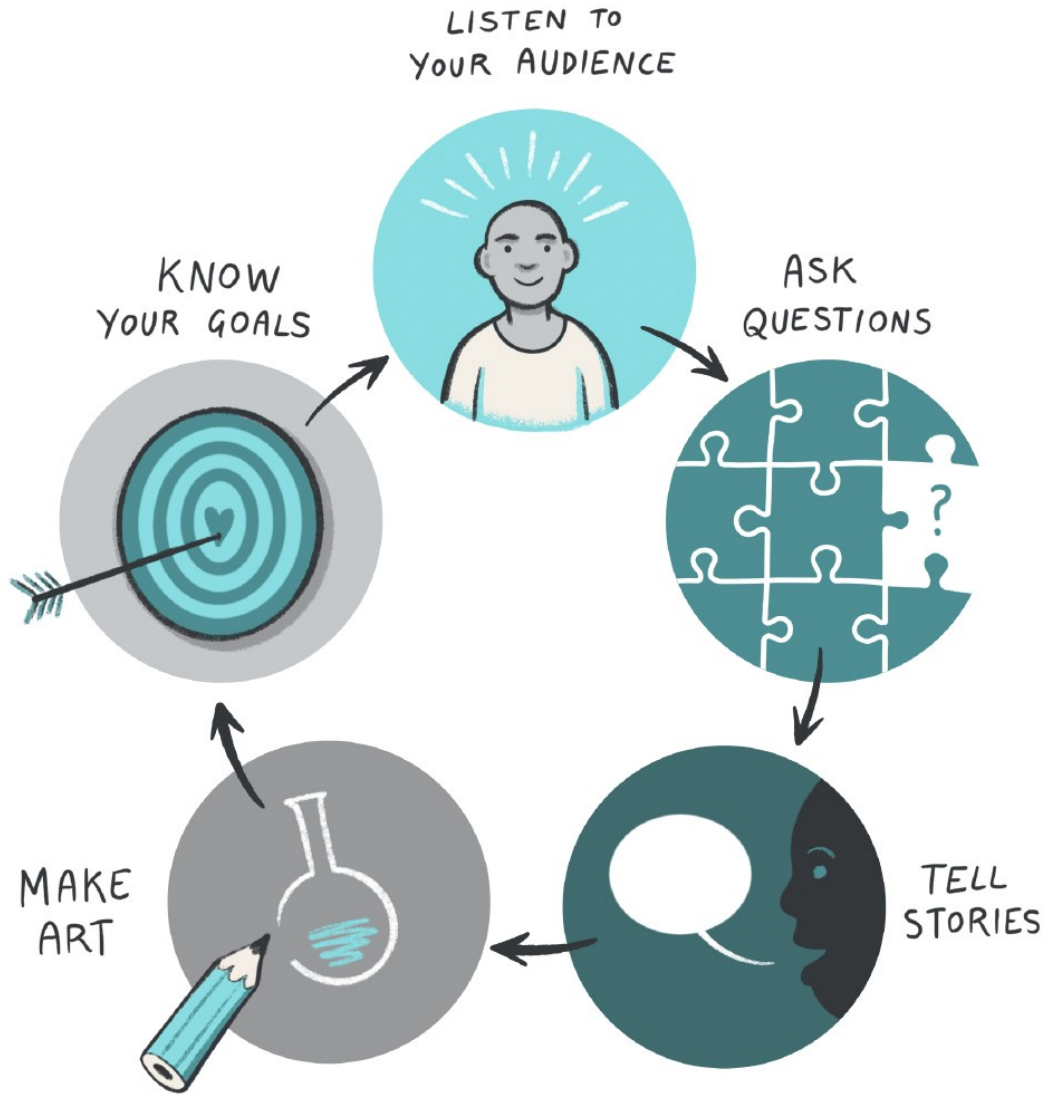
*71% of US Internet users are on Facebook. – Heidi Cohen*

# THINK ABOUT YOUR GOALS

- What do you want out of your social media experience?
  - Increased citations for your papers?
  - Increased visibility of your research?
  - Outlet for opinions?
  - Collaboration?
  - Open data and sharing?
  - Translation of science for broad audience?
  - Engagement with key audiences?
  - Media coverage?
  - Recruiting?
  - Feedback?



# HOW TO COMMUNICATE ONLINE

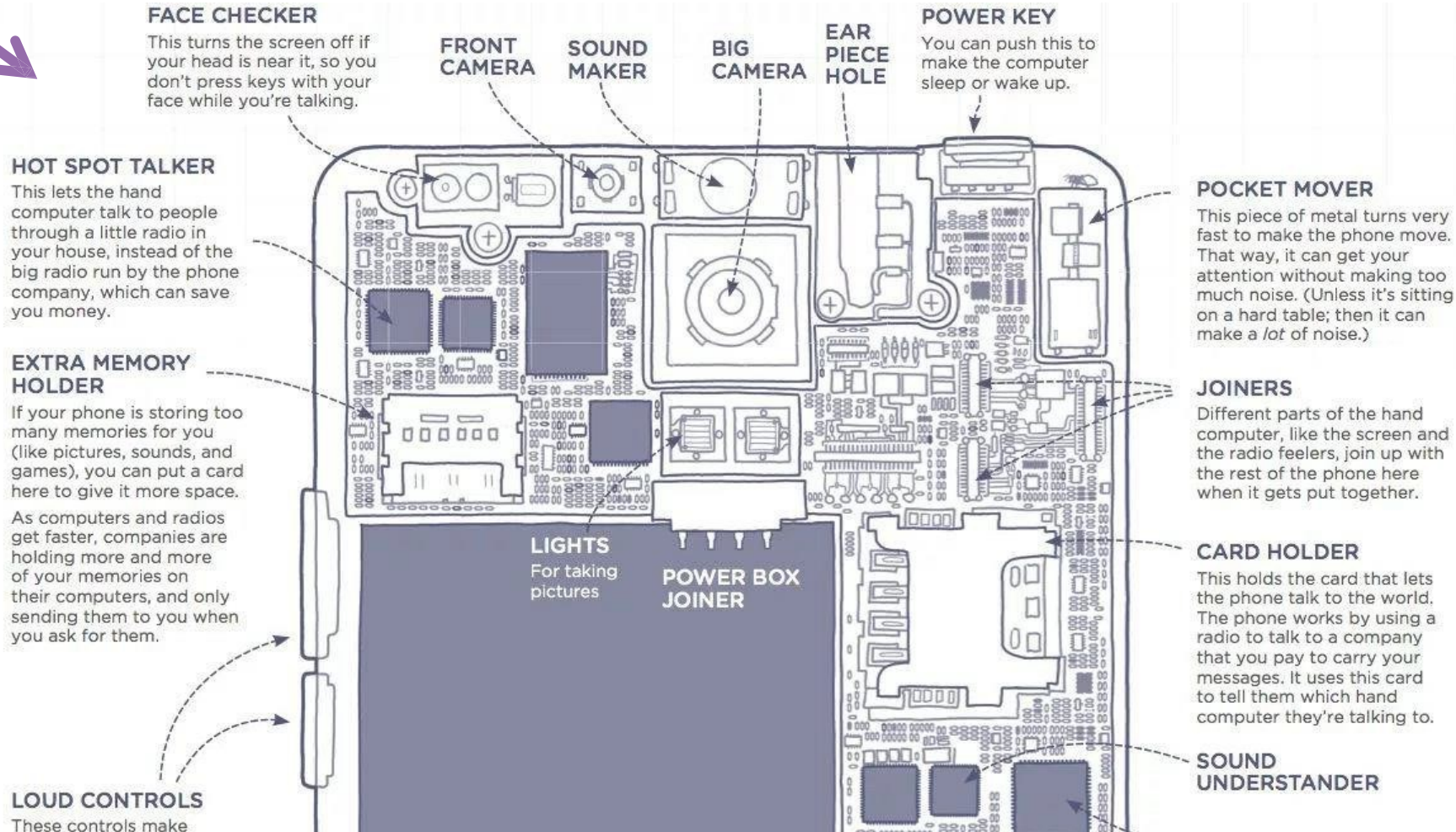


- Remember to engage!
- Ask questions to your followers (e.g., do you know X?, would you like to know more? etc...)
- Avoid posting (too much) about your personal life and focus on the science (have a professional profile)
- Avoid jargon!

<b>Term</b>	<b>Problem</b>	<b>Alternative</b>
Order of magnitude	<ul style="list-style-type: none"> <li>- Technical</li> <li>- Won't know what it means</li> </ul>	<ul style="list-style-type: none"> <li>- good: "multiples of 10"</li> <li>- better: "10/100/1,000 times more/less"</li> </ul>
System	<ul style="list-style-type: none"> <li>- Multiple meanings (model organism, mechanism, group of things, etc.)</li> <li>- Technical</li> </ul>	<ul style="list-style-type: none"> <li>- Describe the system ("mouse")</li> <li>- "group of ___ that works together to do ___"</li> </ul>
Elucidate	<ul style="list-style-type: none"> <li>- \$100 word (i.e., bigger than necessary)</li> <li>- Attitudinal barrier</li> </ul>	<ul style="list-style-type: none"> <li>- "Discover," "find out," "figure out"</li> </ul>
Nano	<ul style="list-style-type: none"> <li>- Technical</li> <li>- Buzzword</li> <li>- People feel like they should know it but don't</li> </ul>	<ul style="list-style-type: none"> <li>- Remind of definition</li> <li>- Avoid if unnecessary</li> <li>- Use size scale comparisons</li> </ul>
Breakthrough	<ul style="list-style-type: none"> <li>- Sensationalizing</li> </ul>	<ul style="list-style-type: none"> <li>- Avoid it</li> <li>- Be specific in describing the advance</li> </ul>

# THING EXPLAINER

“It’s difficult at first, but using the simplest words to describe extraordinarily complex ideas ... yields pretty fun, sometimes illuminating, results.” **Randall Munroe**



Can you explain your subject using the 1000 most commonly used words? Give it a go...

<http://splasho.com/upgoer5/>




## THE UP-GOER FIVE TEXT EDITOR

CAN YOU EXPLAIN A HARD IDEA USING ONLY THE TEN HUNDRED MOST USED WORDS? IT'S NOT VERY EASY. TYPE IN THE BOX TO TRY IT OUT.

|

INSPIRED BY XKCD. (THE IMAGE IS FROM #386.)  
CREATED BY THEO SANDERSON. HOW DOES IT WORK?

 Follow @theosanderson



# HOW TO COMMUNICATE ONLINE

## What do you want to communicate?

A (new) piece of specific research, your research, your discovery, your published paper hot-from-the-press, introducing yourself

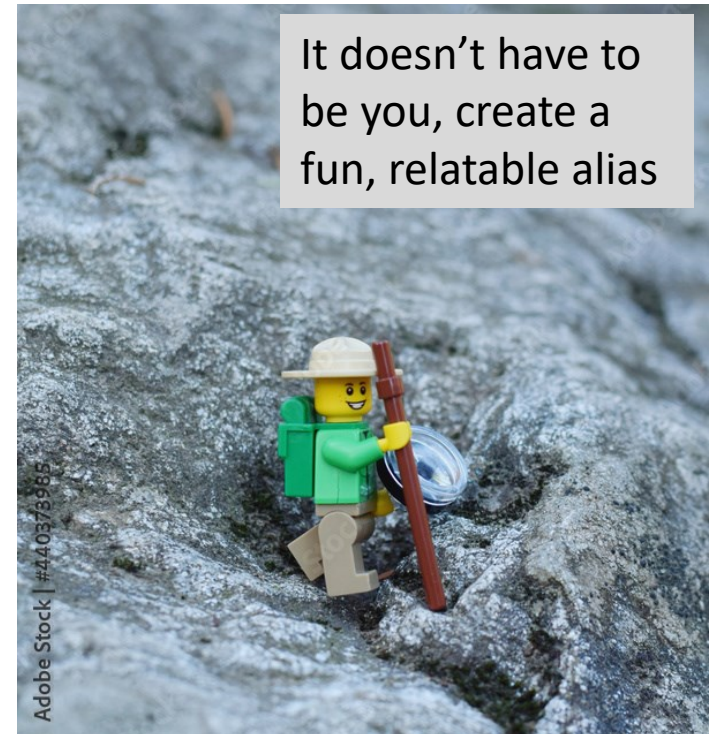
## How much time do you have to create the **content**?

Photo(s), short video, edited video, sound with your voice, without sound, doodle/illustration

## Your audience?

## #hastags?

Which platform do you like or feel comfortable posting on it? This depends on the content and your own personality (!!)





# HOW TO COMMUNICATE ONLINE

Select trendy music and good **hashtags**. If you type a hashtag it will tell you how many people have used it. Use only those that are related to your post. **The algorithm knows!!**

Tag your collaborators, funders, university and/or lab

A good **picture** speaks better than a 1000 words.

Design a short, informative and exciting caption to capture your audience. Remember no jargon!

Follow and support other science communicators and scientists, we are community, and we should support each other!

# SOME TIPS AND TRICKS

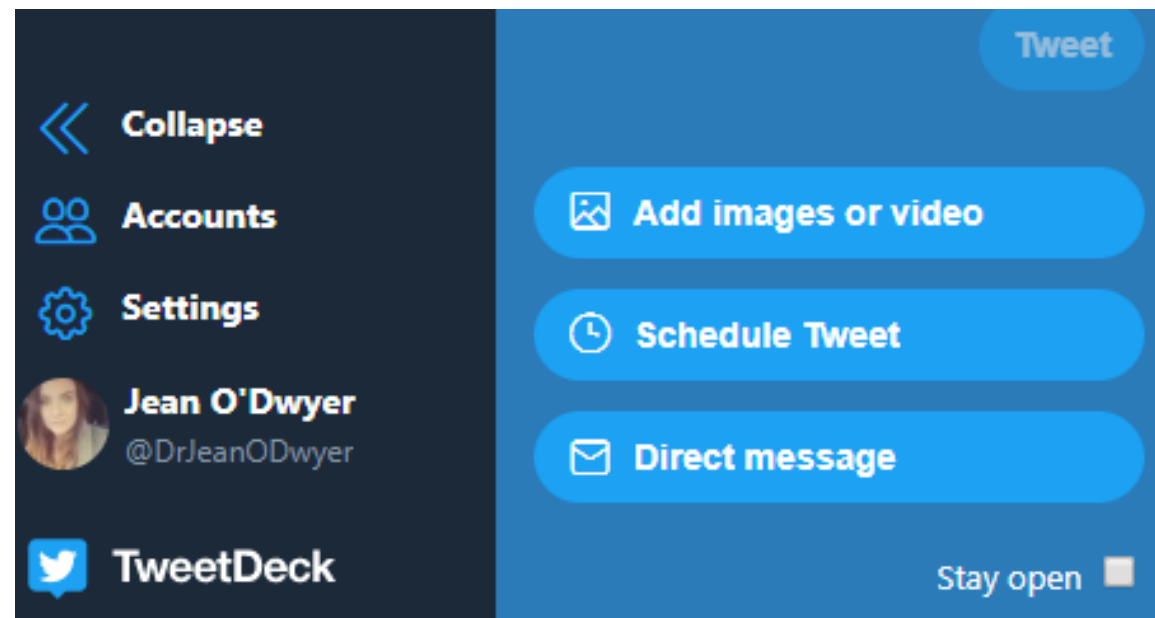
**SPACE SAVING:** Link shortners are great to reduce the character count. Turn this:

[https://www.google.com/search?q=jdkfaj&rlz=1C1CHBD\\_enIE768IE768&sxsrf=ALeKk01sI8E2o7I-VgzzWO\\_N6-88xslj3Q:1583885491499&source=lnms&tbm=isch&sa=X&ved=2ahUKEwj\\_t9egkZHoAhX3QhUIHbLBAC8Q\\_AUoAnoECAsQBA&biw=1242&bih=568](https://www.google.com/search?q=jdkfaj&rlz=1C1CHBD_enIE768IE768&sxsrf=ALeKk01sI8E2o7I-VgzzWO_N6-88xslj3Q:1583885491499&source=lnms&tbm=isch&sa=X&ved=2ahUKEwj_t9egkZHoAhX3QhUIHbLBAC8Q_AUoAnoECAsQBA&biw=1242&bih=568)

Into this: <https://bit.ly/335bMPV>



**TIME SAVING:** If you need to publish a series of tweets (over time) then you can use TweetDeck



# DOS AND DON'TS

**DO:** Ensure you have an appropriate handle (e.g. @Firstname.Lastname or @nameUCC etc.)

**DON'T:** Use the automatic handle or you'll end up as @JohnSmiths13243134834534

**DO:** Ensure you're tagging the correct page, e.g.



School of BEES, UCC  
@uccBEES

**NOT**



Bees  
@Bees

**DON'T:** Post without reading and re-reading and re-reading again. You cannot edit in some applications

**DO:** Use a photo where possible so you can tag people

**DON'T:** Mix 'personal' social media with 'professional' social media. Recipe for disaster.

**DO:** Utilise hashtags- increases visibility and organising tweets.

# FINAL THOUGHTS: BE ACCURATE AND ETHICAL

- You CAN maintain research accuracy and rigor in your blog posts and social media posts.
  - Link to original research studies
  - Remember proper attribution to pictures, statistics, quotes, etc.
  - Learn to be concise but avoid buzzwords that can be misleading (“cure” “breakthrough”)
- Be very aware of how your communication of research in social media might be interpreted by others.
- Researchers often occupy positions of power that must be acknowledged and used responsibly.
- Public trust in research remains high – let's keep it that way.



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