

# Altmetrics and Traditional Metrics: What Do Scholars Use to Judge Quality?

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# Trust and authority in scholarly communication project:

- Funding by the Alfred P. Sloan Foundation
- Research led by CIBER Research Ltd. in the UK and the Center for Information and Communication Studies (CICS) at University of Tennessee
- September 2012-November 2013
- Led by David Nicholas of CIBER and Carol Tenopir, Suzie Allard and Ken Levine of UT
- Collaborators include Taylor & Francis, SAGE, PLoS, Biomedcentral, Wiley, and Elsevier



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# Aims of project:



- Study how academics assign authority and trustworthiness to sources they read, cite, and publish in
- Examine behaviors and attitudes of academics in changing digital times

# TRUST:

## Quality, Reliability, Trustworthiness

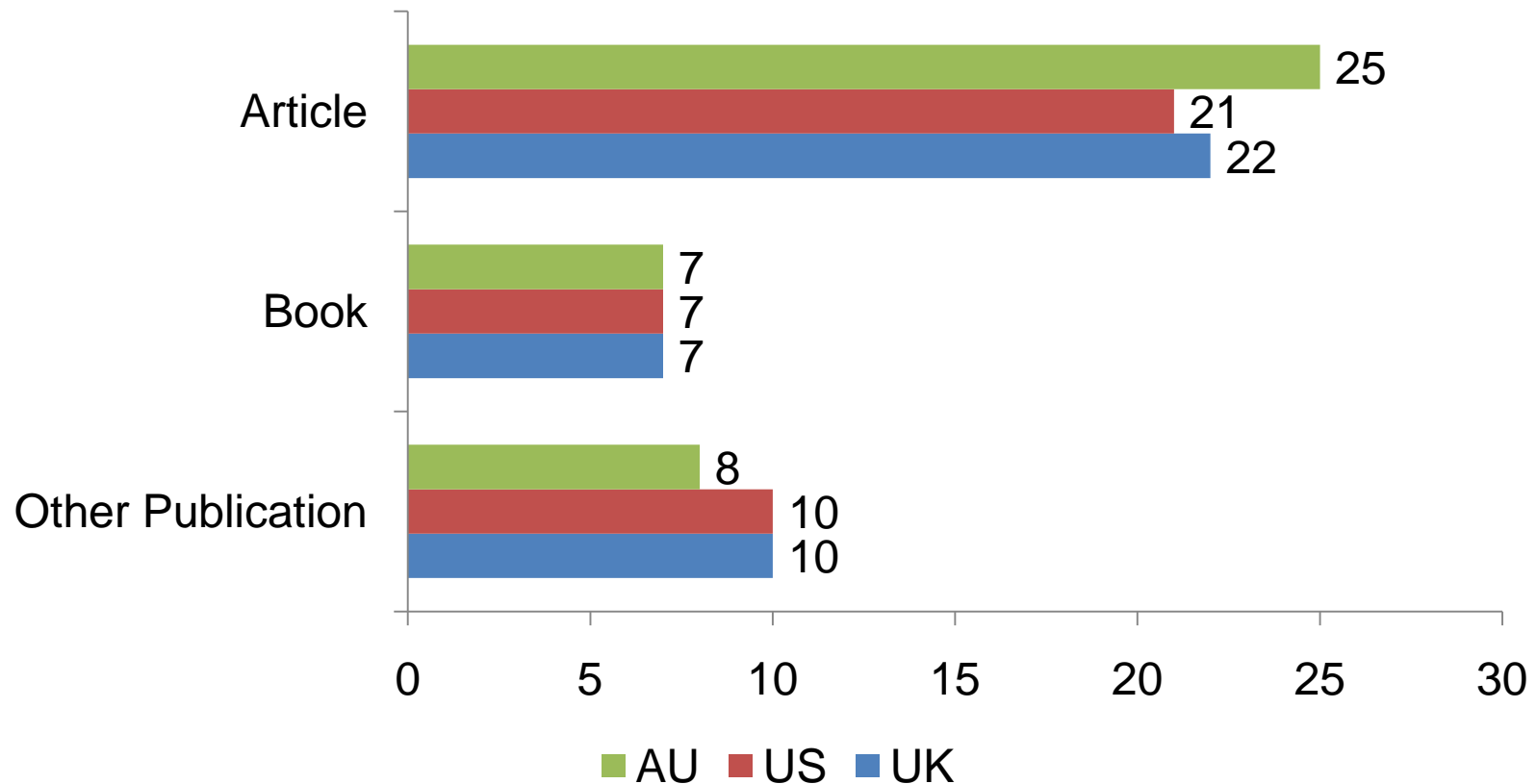
All in all then, perceived quality/reliability/trustworthiness is the prime criterion scholars use in the **discovery process** (finding information), in the **information management process** (separating dispensable from indispensable relevant material), in the **citation process** (formally using information) and in the **dissemination process** (where and how researchers choose to have their work published).

# Studies of reading patterns provide context for trust:

- Surveys by Tenopir & King 1977-2013
- Article and book reading of academics reveal patterns, outcome, and value
- Changes over time in reading patterns, are there also changes in trust?



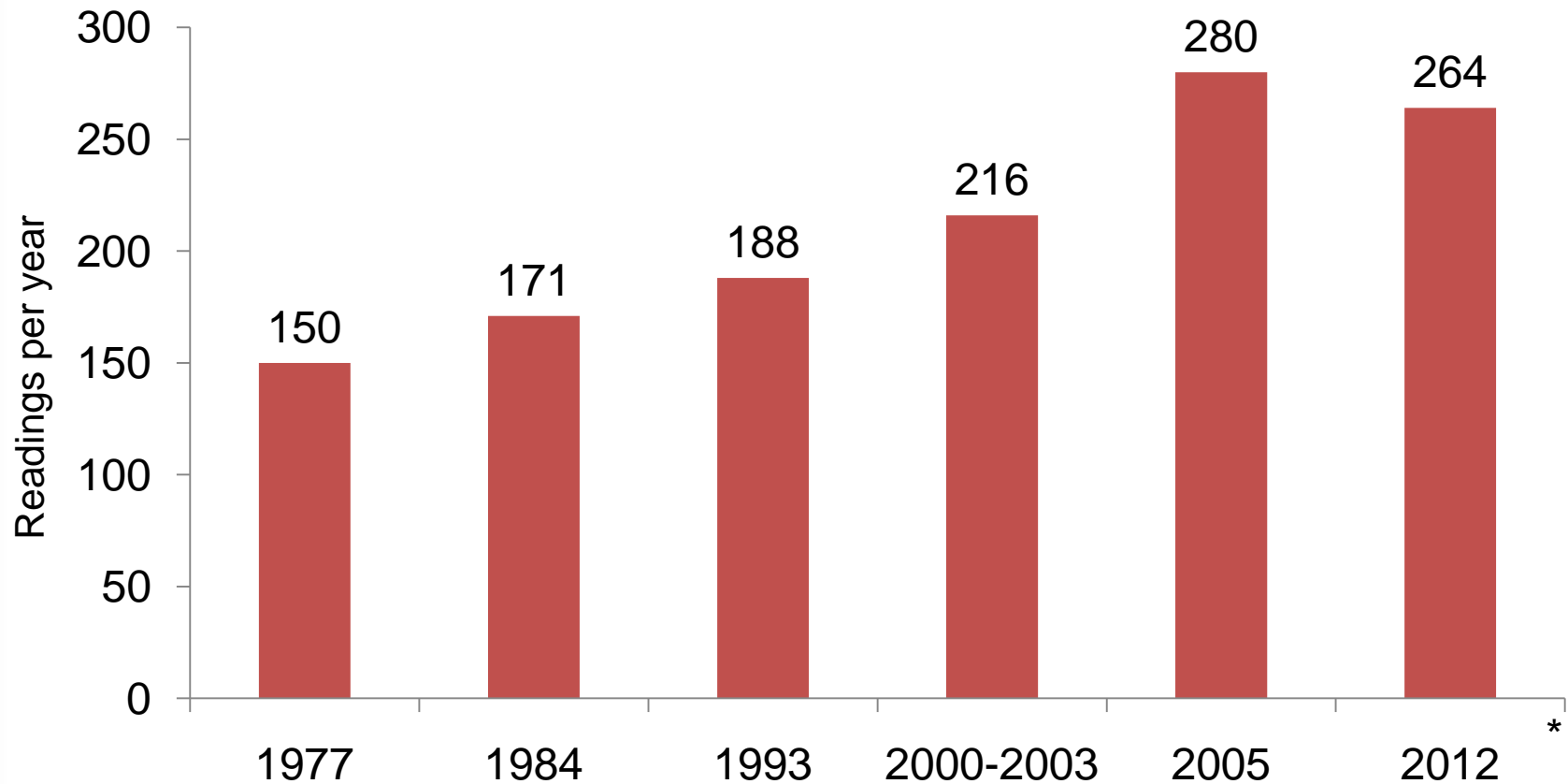
# Average readings by academic staff in Australia, U.S. and U.K.



n=2117, 6 UK institutions, June 2011  
n=837, 5 US institutions, January 2013  
n=133, 2 AU institutions, 2012



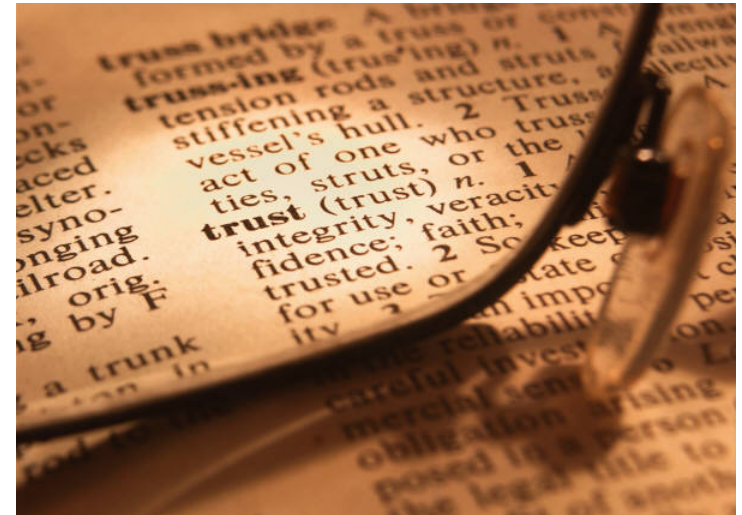
# Article Readings 1977 to Present by Scientists and Social Scientists in the US



\*2012, n=837; 2005, n=932; 2000-03,  
n=397; 1993, n=70; 1984, n=865; 1977,  
n=2350

# The reality of trust:

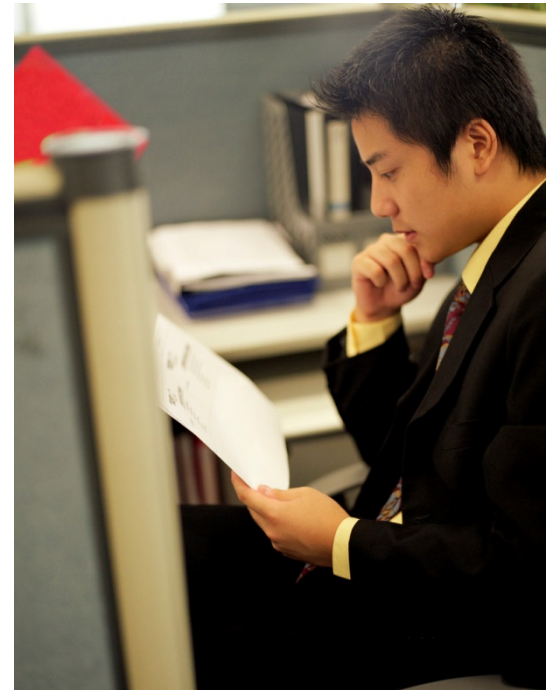
- They read many things they “trust” but would never cite (e.g. Wikipedia)
- Politics influence citing and publishing
- Cite to protect yourself and add “trustworthiness”
- Publish to help your career
- Use different criteria for reading, citing, and publishing





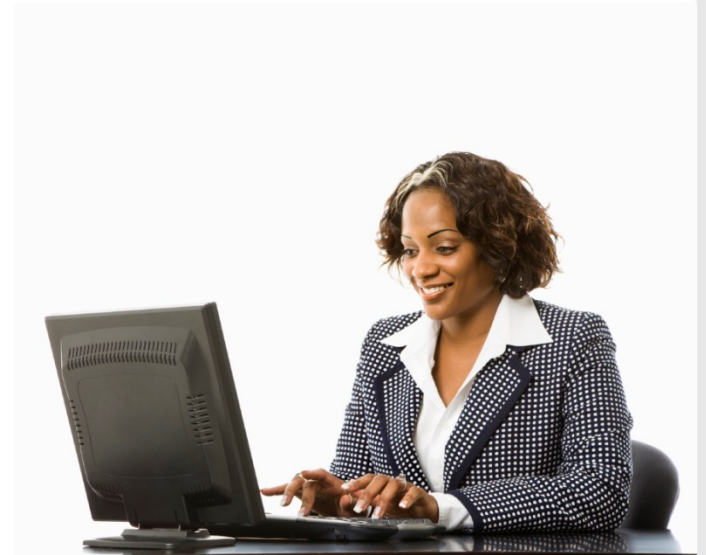
# How trustworthiness is determined for *reading*

- Read abstract and methodology
- Look at source's references
- Colleague recommendations
- Familiarity with author or journal
- Peer-review linked to quality
- Impact factor a factor...



# How trustworthiness is determined for *citing*

1. The author is known and trusted
2. The journal or conference is known and trusted
3. Seminal work in the field.
4. Supports methodology
5. The research group/institution is known and trusted



# How trustworthiness is determined when deciding where to *publish*



- Traditional metrics (e.g., impact factor) still important
- Influenced by tenure and university
- Audience of a journal
- Likelihood of getting published

# Trust and Impact Factor

- More important for deciding where to publish than what to read or cite
- Recognize that low-quality articles could be published in high IF journals
- High IF journals may lack innovative and fresh papers
- On the whole, younger academics trust impact factor more than older faculty



# Comments on Impact Factor

“My tenure committee cares [about impact factor] but no one else does.”



“It’s an imperfect method but it’s the only one we have.”



“It’s good because you want people to pay attention to your work BUT high impact factors do not always have the right audience for those who would use your work.”





# Trust and Altmetrics

- Most participants were unfamiliar with concept.
- Others were skeptical of what the various altmetrics actually meant.
- Participants do like metrics that can be quickly understood.
- Authors like being able to see the number of people who have viewed or downloaded their article.
- Although they didn't use the term, some alternative metrics were mentioned...



# What is Trust in online environment?



I think it is “connectiveness” through name of friend who sent the link. You need to connect to a source to have trust. If information is isolated, just floating out there, I don’t trust it, but if it is connected to others then I trust it.

# Have digital communications changed how trust is determined?



“There is no one way to share or spread information, but do I want to trust all these new things?”

“We are better researchers in the digital era because we can look at research in more modalities.”

“I’ve broadened what I consider a reliable source. It is easier to verify a source and I am less tentative.”

“Can no longer just say “only peer reviewed”. I’m unlearning what I used to do. I have to re-assess reliability when everything already digital. I used to be comfortable with print.”

# Open Access

- A lot of confusion
- PLoS One considered trustworthy
- Common thoughts:
  - Too expensive
  - Lower quality
  - Quick publication time
  - No review system
  - Suspicious of journal's motives

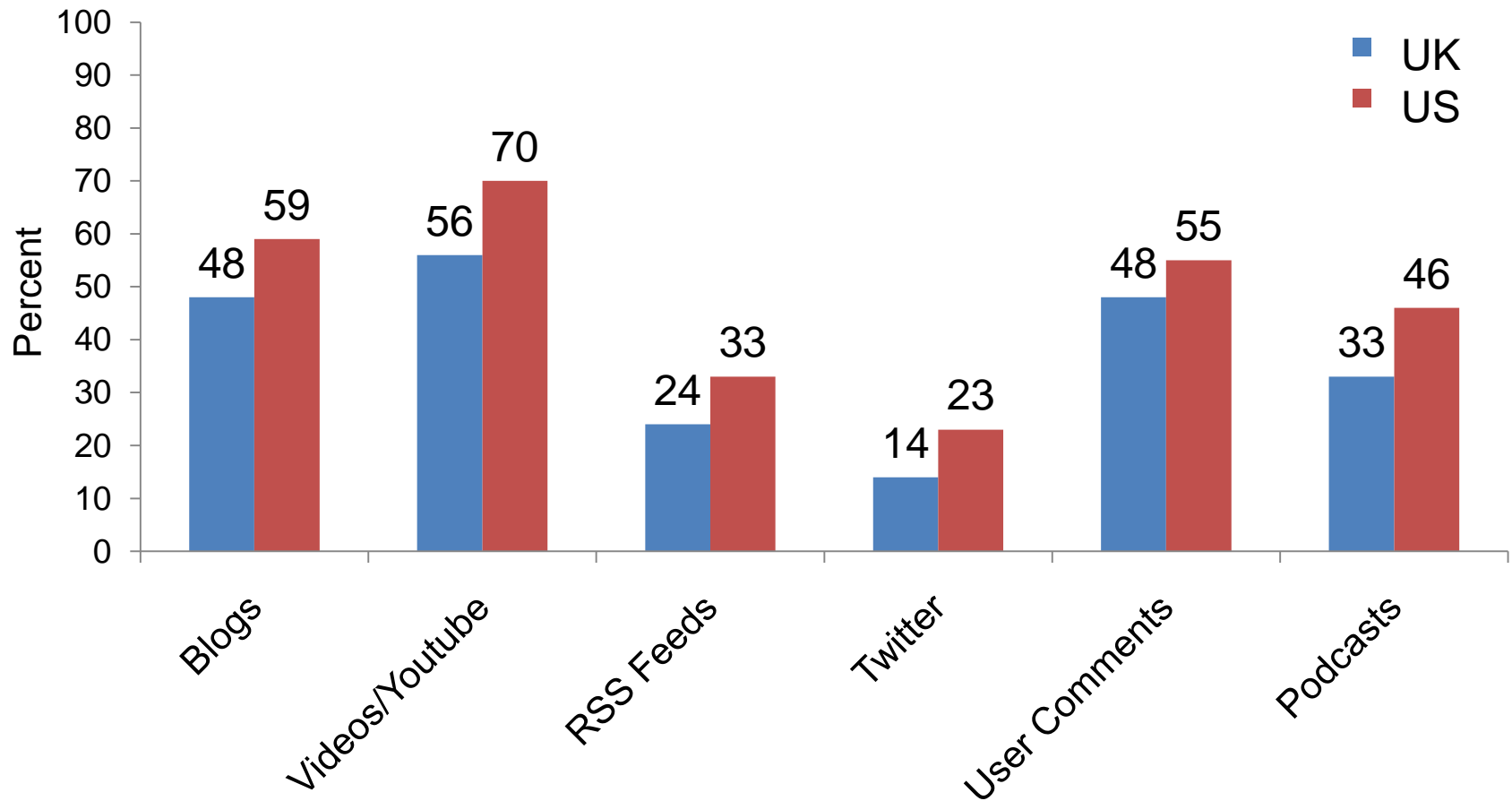


# Use of Social Media



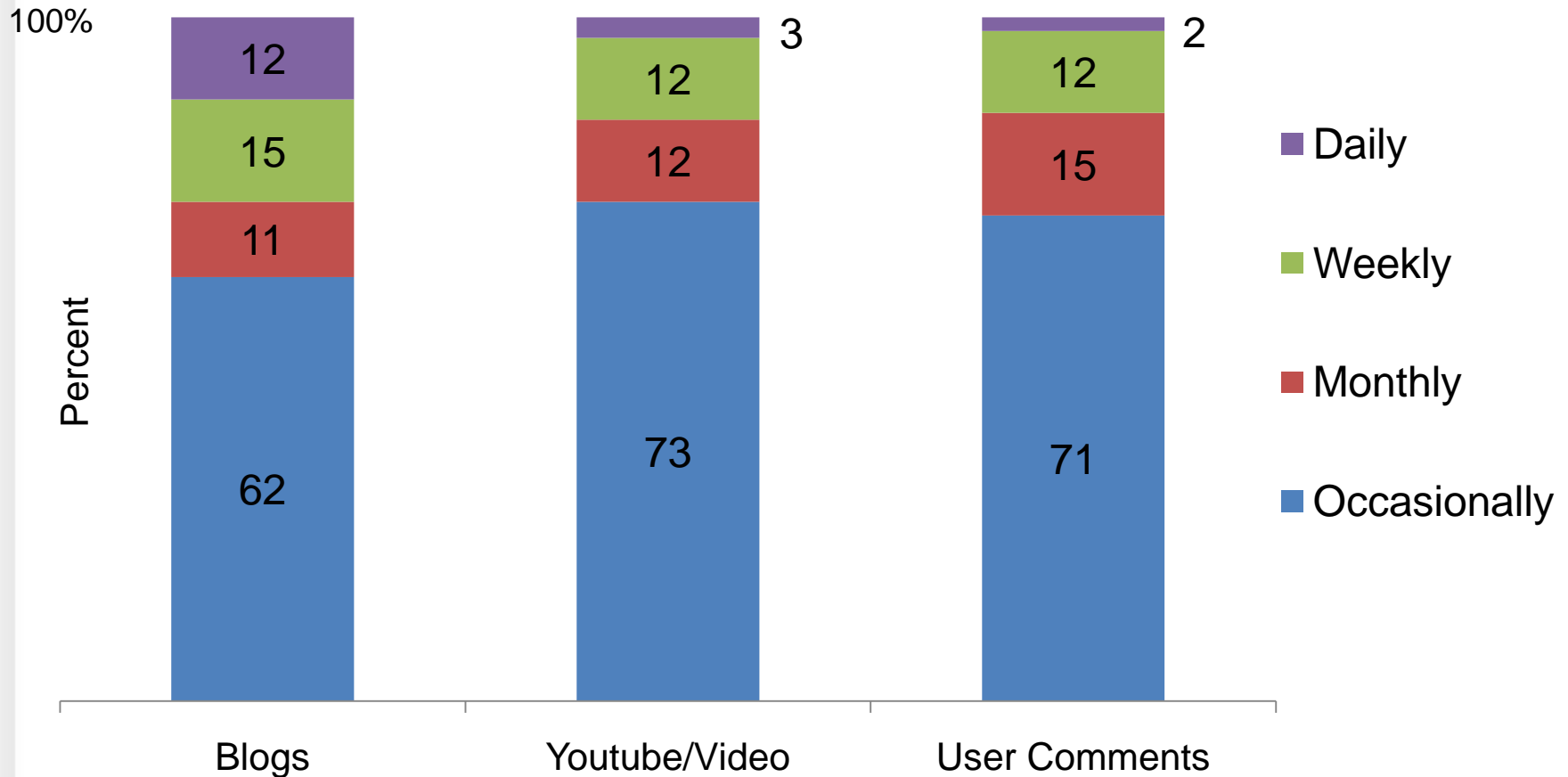
Image from: [shopforfollowers.com](http://shopforfollowers.com)

# Use of specific social media varies



UK n=2117; US  
n=579

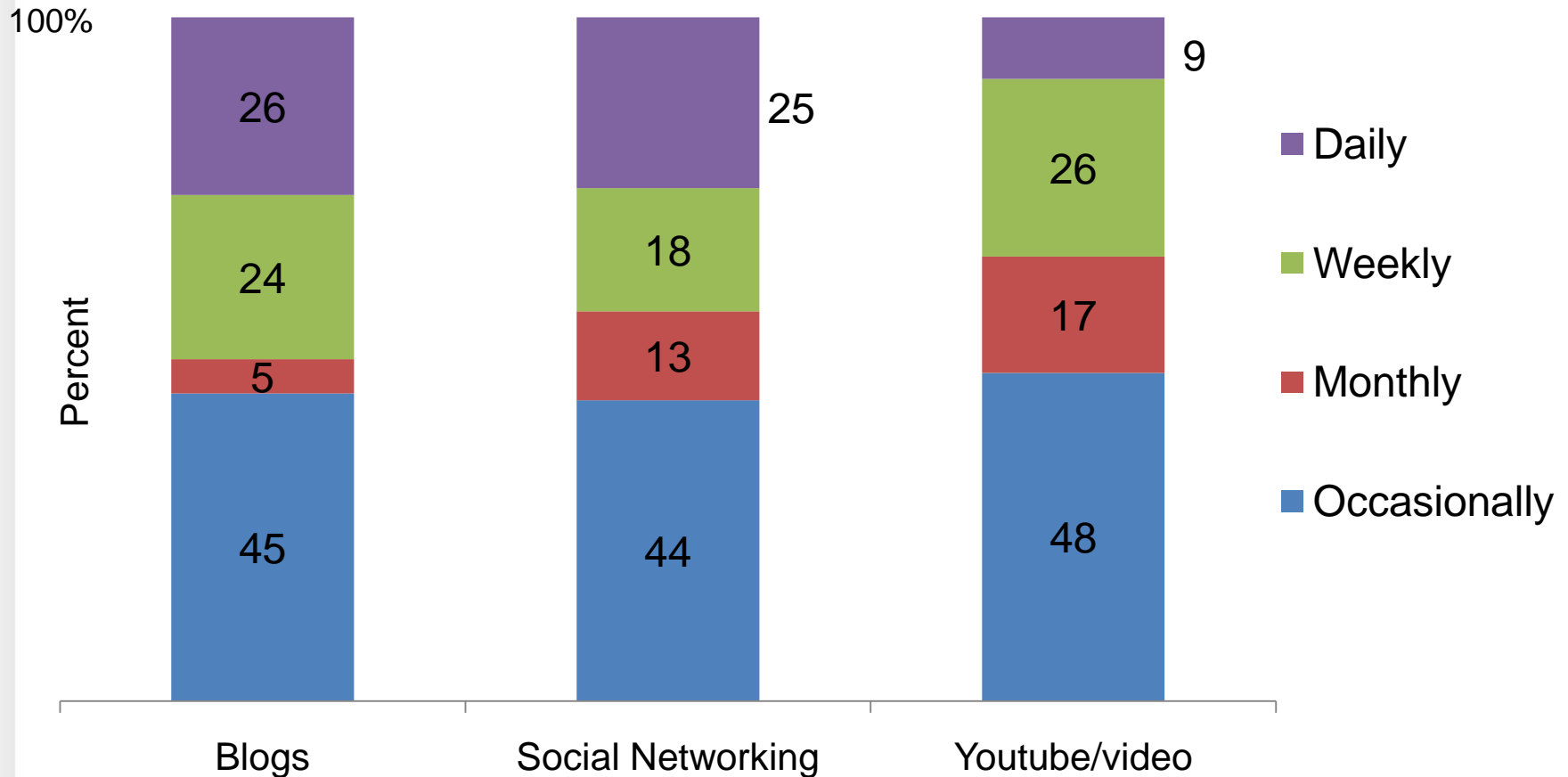
# Top 3 social media used just occasionally (U.K. 2011)



n=2117, June 9,  
2011, 6 U.K  
universities



# Top 3 social media used occasionally (U.S. 2012)



N=579

# Comments on social media

“Same issues with social media as with art. We may pretend to know what is “good art” but often we don’t really know, so how can you judge quality with no basis?”

“There are different levels of quality of tweets. I don’t cite Twitter but I may use report linked via Twitter.”

“I use Wikipedia to remind myself what I once knew.”

“Social media can make top-tiered research more accessible.”



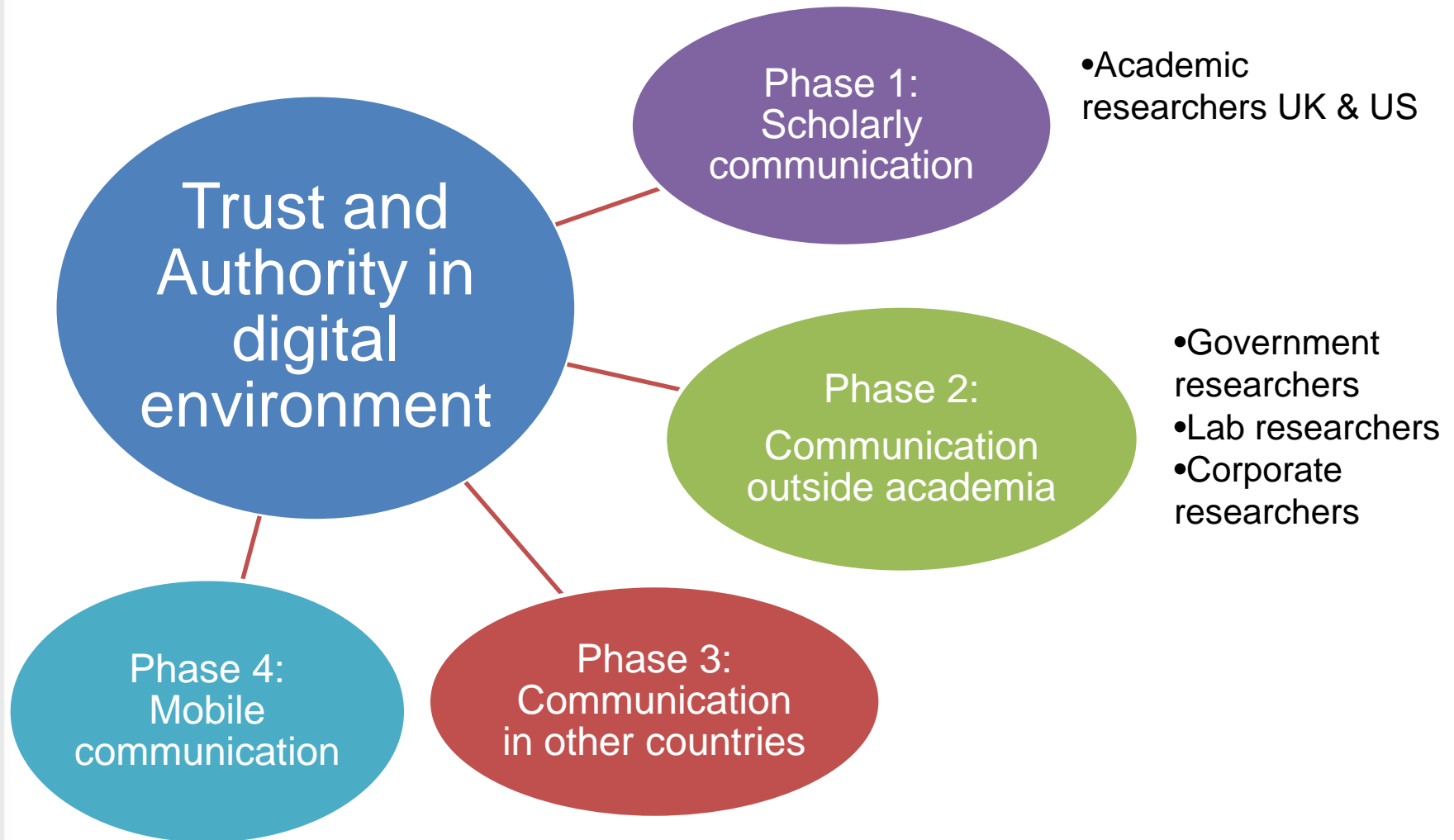
# Influence of trust on use of social media

- Most are engaged at least occasionally.
- More critical and hesitant about trusting.
- Use many of the same standards to judge quality of social media as they use for traditional sources.
- Less trusting because no standard to judge quality.
- Less likely to create because not rewarded by university or tenure committee.



# Overall findings:

- Traditional metrics (e.g., impact factor) are trusted even though flaws are acknowledged.
- Confusion about Open Access.
- Tenure and University policies influence what scholars trust.
- Impact Factor is more important for publishing than reading or citing.
- Scholars read abstract, methodology, and references to determine trustworthiness.



# Thanks!

For more information:

<http://cics.cci.utk.edu/cicsprojects/Sloan>

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