

# Editing Wikipedia as a health expert - Are the challenges simply academic?

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WP username: soupvector

Vice Chair and Co-Treasurer of the Board of Wikimedia Medicine

Associate Editor, *Journal of Clinical Investigation*

Stuart C. Ray, MD, FACP, FIDSA

Professor of Medicine, Oncology, and Health Sciences Informatics

Vice Chair of Medicine for Data Integrity and Analytics

Johns Hopkins Medical Institutions

sray@jhmi.edu



# A repeated pattern in conversation with colleagues

- No, I've never edited Wikipedia
- I have no intention to try
- Yes, it is the ~first content I see when browsing for information
- Yes, I want the public to understand science
- Yes, maybe I should edit Wikipedia

# Common view of Wikipedia Accuracy

London DA, et al. “Is Wikipedia a complete and accurate source for musculoskeletal anatomy?” *Surg Radiol Anat* 2019 Jul 1. <https://doi.org/10.1007/s00276-019-02280-1>

“Definitions of accuracy and completeness were consistent with previously published articles comparing Wikipedia to the medical literature [9]. An accurate Wikipedia entry only includes information that is factually correct in comparison to the corresponding entry in Grant’s. For example, if there were two points of origin for a given muscle listed in Wikipedia, that Wikipedia data would be considered accurate if both of those points of origin were similarly listed in Grant’s. Conversely, the Wikipedia entry would be considered inaccurate if it listed a point of origin that differed from Grant’s that was not accurate.”

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## Abstract

**Purpose** Wikipedia is a popular online encyclopedia generating over 5.4 billion visits per month, and it is also a common resource for the general public and professionals for medical information. The goal of this study is to determine the accuracy and completeness of Wikipedia as a resource for musculoskeletal anatomy.

**Methods** The origin, insertion, innervation, and function of all muscles of the upper and lower extremities as detailed on Wikipedia was compared to the available corresponding information in Grant's Atlas of Anatomy (14th edition). Entries were scored for both accuracy and completeness. Descriptive statistics were calculated and associations between and within entries for accuracy and completeness were assessed by McNemar's tests. Information on Wikipedia's references was also collected.

**Results** Overall, data on Wikipedia was 97.6% complete and 98.8% accurate when compared to Grant's Atlas of Anatomy. 78.6% of all entries were fully complete and accurate, with 15.3% of entries containing one error and 6.1% containing two errors. There were no associations between or within entries' accuracy and completeness. Only 62% of references from Wikipedia included were from academic sources.

**Conclusions** Musculoskeletal anatomy entries on Wikipedia are imperfect; they have inaccurate and missing information. Furthermore, a considerable proportion of references cited in entries are from poorly identified sources. While Wikipedia is an easily accessible resource for a large number of people and much of the anatomic information is appropriate, it cannot be considered to be an equivalent resource when compared to anatomic texts.

# Relationship to Wikimania theme

- **Good Health and Well-being (SDG3)** are fostered by accurate & accessible health/medical information.
- Availability of such information also fosters **Quality Education (SDG4)**, and there is good evidence that education fosters **Gender Equity (SDG5)**.
- **Partnerships for the Goals (SDG17)** includes in [its description](#), "Developing multi-stakeholder partnerships to share knowledge, expertise, technology, and financial support is seen as critical to overall success of the SDGs. Public-private partnerships that involve civil societies are specifically mentioned."

# My context as an academic

**Physician:** caring for people with HIV/AIDS, viral hepatitis (HCV), general infectious diseases, and general medical problems

**Scientist:** focusing mainly on how viral evolution reveals key aspects of human immunology, using computational biology as a tool (and developing such tools)

**Teacher:** mentoring graduate students and postdoctoral fellows, directing an educational (fellowship) program, teaching in all 4 years of medical school, graduate school, and mentoring junior faculty

**Administrator:** more hats

[there is a WP article about me; I really don't know who wrote it, and I'm ambivalent about it]

# More specific context

[total compensation: \$0]

*Principles and Practice of Infectious Diseases* (Churchill Livingstone)

“Hepatitis C” (6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> editions)

8<sup>th</sup> edition: 25,158 words, 12 figures, and 711 references

\$450 retail

*Fields Virology* (Lippincott)

“Hepatitis C virus” (6<sup>th</sup> edition, 2013)

19,975 words, 16 figures, 710 references

\$455 retail

On WP: I avoid editing HCV articles

# My context as a Wikipedian

In 2014 I created “soupvector” as a username, but I had been editing anonymously for about 10 years prior to that [no blocks/bans/etc]

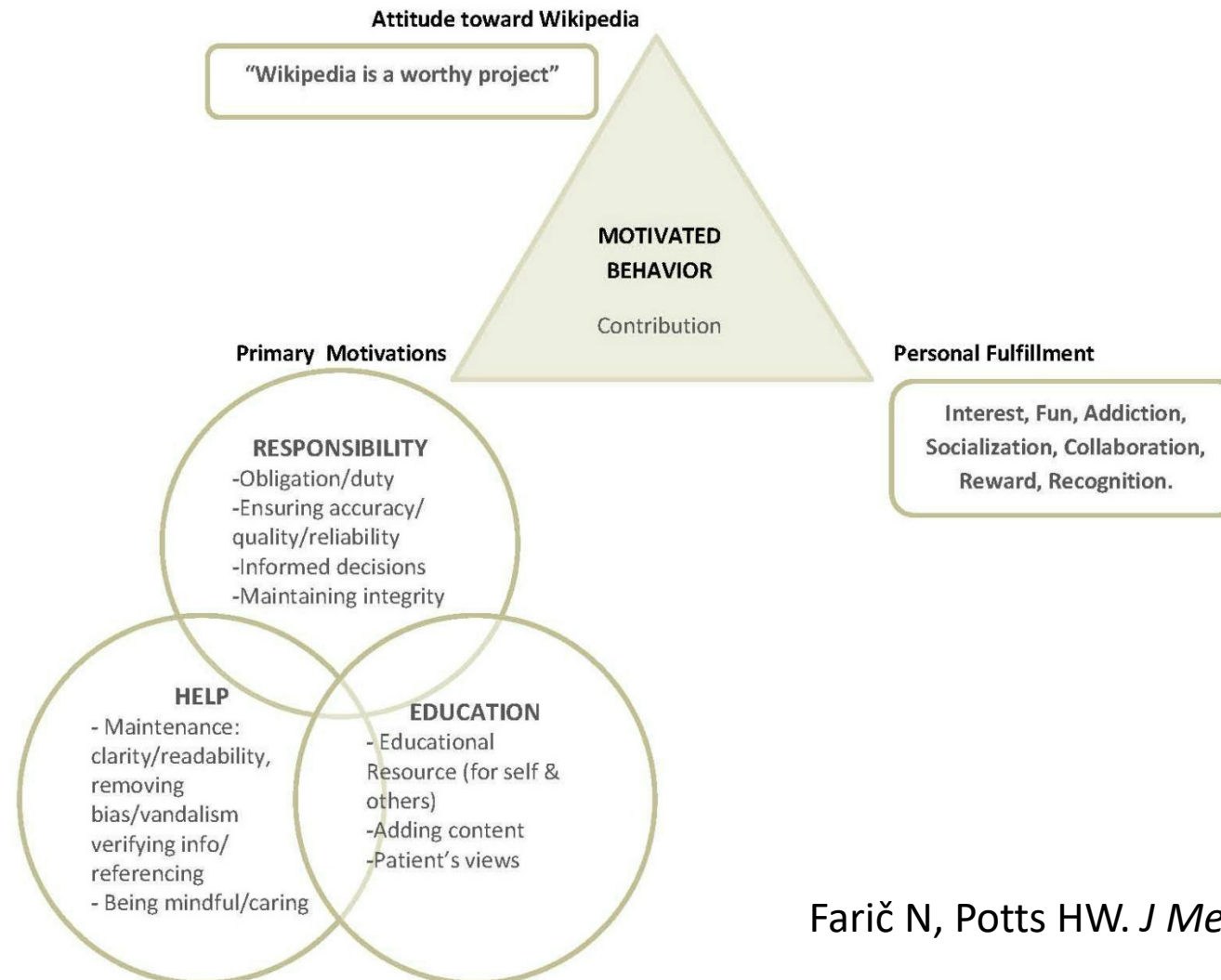
A few experienced Wikipedians know my otherwise-anonymous username and my wish to keep it that way (one is James Heilman)

I remain ambivalent about connecting my editing with my name [is it about the editor, or about the content?]



# Motivational model for WPMED editors

from “Motivations for contributing to health-related articles on Wikipedia: an interview study”



Farič N, Potts HW. *J Med Internet Res* 2014;16(12):e260

# Gross generalizations about writing/editing from an academic perspective

	<b>Writing a primary scientific report</b>	<b>Writing a review/chapter</b>	<b>Editing WP</b>
<b>Motivation</b>	Innovation	Summarizing knowledge	Sharing knowledge
<b>Sourcing</b>	Primary/classic	Primary/classic	Secondary/recent
<b>Language</b>	Coherent with domain	Coherent with domain	General audience
<b>Authority</b>	Coherence/evidence, peer review	Coherence/evidence, peer review, writer/career	Sources, “consensus”
<b>Task</b>	Linear, bounded	Linear, bounded	Open-ended
<b>Process tone</b>	Professionally adversarial	Professionally adversarial	Highly variable
<b>Academic ownership</b>	The author(s)	The author(s)	None
<b>Prestige</b>	Positive, ~ impact	Positive, ~ impact	Variable

# Things that drive academics/experts away

It's hard for an expert to be a noob – try to be gentle

- They come from a different context – respect for authority, civility/norms of in-person interactions, standards for sourcing that differ from WP (especially MEDRS' emphasis on secondary sourcing and recentism), and they don't know how consensus is built on WP
- Reversion of constructive but inadequately sourced material, rather than tagging
- Inadequate introspection regarding their own biases
- Dueling behaviors among WP editors (glee in winning an argument, often playing out past on-wiki rivalry – or behaviors of past newcomers - of which the new newcomer is unaware)

# Things that might help engage academic experts

Guide experts to spaces where they can write at their level of comfort

- Compare [Introduction to General Relativity](#) to [General Relativity](#)

A sense that one's credibility would be enhanced by editing WP

1. Academic leaders need a basis/metric for recognizing WP contributions as **scholarship (or service)**
  - How to balance this with ownership problems?
  - Sponsors (NIH, NSF, etc) could set expectations (?metrics)
2. Regulatory bodies in **education** (e.g. AAMC, ACGME) could incentivize
  - To engage/mentor medical trainees in editing WP

# Things that might help engage academic experts (page 2)

Safe zones for inexperienced, verified experts

- Expert Noticeboard - Mediation avoiding explicit use of authority

  - Simpler: dedicated mentoring on-wiki, perhaps WPMED

- Expert Q&A (email subscription per-article or Wikiproject)

  - Perhaps Wikipedians in Residence could facilitate

Facilitated submission of figures to Commons

- Chapter figures could then be used under CC\* license

- More complicated for primary journal articles

- Sponsors (like NIH) could give credit

  - Similar considerations for data sharing and Wikidata

# Helpful resources (there are many – just a few here)

- [https://en.wikipedia.org/wiki/Wikipedia:WikiProject\\_Medicine/Resources](https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Medicine/Resources)
- [https://en.wikipedia.org/wiki/User:JenOttawa/Introduction\\_to\\_Medical\\_Editing:\\_Cheat\\_Sheet](https://en.wikipedia.org/wiki/User:JenOttawa/Introduction_to_Medical_Editing:_Cheat_Sheet)
- [https://en.wikipedia.org/wiki/Wikipedia:WikiProject\\_Medicine/Cochrane/Wikipedian\\_in\\_training](https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Medicine/Cochrane/Wikipedian_in_training)

# Perhaps the problems aren't structural, but behavioral

- WP is aligned with the motivations of academics
  - Making knowledge available to all people
  - Collaborative
- The problems that tend to drive academic experts away are issues we already recognize as Wikipedians
  - Experts' sense of authority, lack of familiarity with WP processes
  - Civility
  - Ownership
  - Misapplication of principles like WP:MEDRS (not all claims require MEDRS)
- Let's bring health experts in while they're young, and retain them!

Discussion...?