Experience

This collection of perspectives on the various aspects of user experience are based on insights from the Communities and WMF staff, as well as synthesis of secondary research.

Wikimedia projects have become important fixtures in the infrastructure of knowledge sharing on the internet. However, our share of media interaction and consumption is shrinking as new populations come online, new platforms arise and the internet becomes multi-modal, more interactive, and more social.[1][2] These changes challenge both our consumption and contribution models, and to date, we have struggled to adapt to the opportunities that have arisen and the changing expectations of our users.

A user's expectations of quality are shaped by the totality of their digital experiences. To match these expectations, we have to match the quality of other experiences that users are exposed to. The simplest way to do that is to re-use and refine patterns, methods, and mental models of popular platforms.

These expectations extend to the media types they engage with. Our platform does support diverse media types including video, audio, images, and animated GIFs, and allows them to be mixed in in a single document. However, the experience of uploading and consuming this media does not match the use of media on other major informational platforms. Moreover, our content is saved and presented as a single blob of mostly text, and for some forms of knowledge, such as explanatory knowledge, we do not provide a space or tools to generate, curate or engage with that form of knowledge.[3]

On the contributors' side, Wikimedia projects compete with modern platforms that provide gentler on-boarding and guidance to new users. The competing platforms provide rich, multimedia editing tools and emotionally reward their users with explicit gratitude, meaning, and status.

Additionally, user expectations are rapidly growing with regard to tailored experiences. Software is becoming more aware of individual user needs. The likes, dislikes, and personal preferences of users are vital considerations for modern software design. We distinguish between personalization, in which a system uses what it knows about the user to determine a person's experience, and customization, which empowers users to control their experience. Through customization we can provide tailored experiences, without sacrificing our values or principles.

Data adaptability and content structure are required for the creation of modern user experiences across form factors. Users should be able to engage with Wikimedia, as consumers and creators, in the diverse variety of form factors that are the contemporary internet. And the platform must provide the flexibility to build new experiences for emerging form factors.

Finally, discovery models will be key, as will having captivating content people want to discover. But that discovery process must be proactive on our part. A large and growing body of research supports a key product theory about today's media - content finds the consumer.[4][5]

Our current products severely lack user awareness and interface customization for the vast majority of our potential audience. We can remedy this by following some basic modernizing principles in our user experience and development processes:

- Embrace a "factoid" paradigm; a lot of people still want to read long-form content, but a lot of people don't.
- Go where the people already are and utilize platforms they already like.[6]

- Provide suitable content format alternatives for subjects that are not well-served by long text or require advanced levels of prior knowledge.[3]
- Purposely become a tool that empowers others to create, promote, and remix knowledge-based content in many formats.[7]
- Separate the advanced editing experience from the reading and basic editing experiences.
- Provide easier customization of information and interface to match individual needs.
- Use user-centered design to meet consumer expectation.[8]

By understanding our users needs and expectations we can modernize our products, and provide a user experience that informs and delights.

Examples

Apps Exlore feed

Page previews

Popcorn video editor

Content APIs

Areas of Impact

Wikidata [9]

Commons [10]

iOS and Android apps [11]

Wikipedia [12]

Key External Factors

Social Platform dynamics

Demographics

Technological waves [13]

Google [14]

Notes

[1] 2018 Adobe Consumer Content survey contains multiple data points that describe what people expect from digital content experiences https://www.slideshare.net/adobe/2018-adobe-consumer-content-survey

[2] Research indicates that millions of users say they use Facebook, but not the Internet. "In their minds, the Internet does not exist; only Facebook." https://qz.com/333313/milliions-of-facebook-users-have-no-idea-theyre-using-the-internet/

[3] Learning Styles: Concepts and Evidence" - Research shows that there's little evidence supporting the popular idea of catering to "learning styles", however; "differences in educational backgrounds can be a critical consideration in the optimization of instruction. [..] student's prior knowledge is bound to determine what level and type of instructional activities are optimal for that student" and "the optimal instructional method is likely to vary across disciplines. For instance, the optimal curriculum for a writing course probably includes a heavy verbal emphasis, whereas the most efficient and effective method of teaching geometry obviously requires visual–spatial materials."https://www.psychologicalscience.org/journals/pspi/PSPI_9_3.pdf

[4] I Just Google it": Folk Theories of Distributed Discovery, is fantastic and very recent (June 2018) research on how people find content on the Internet. https://academic.oup.com/joc/article/68/3/636/4972617 "

[5] Effects of the News-Finds-Me Perception in Communication: Social Media Use Implications for News Seeking and Learning About Politics: "The news-finds-me effect stems from individuals' perceptions that a) they are

well informed about current events despite not purposely following the news, because b) the important information 'finds them' anyway, through their general media use, peers, and social connections." https://onlinelibrary.wiley.com/doi/full/10.1111/jcc4.12185

[6] Jonathan Morgan's 2015 research on free online learning resources used by students https://meta.wikimedia.org/wiki/Research:Student_use_of_free_online_information_resources/Results

[7] "Sharing small pieces of the world": Increasing and broadening participation in Wikimedia Commons - recent research and interviews with people who use other image sharing platforms but aren't heavy Commons users http://www.opensym.org/wp-content/uploads/2018/07/OpenSym2018_paper_30-1.pdf

[8] The Aesthetic-Usability Effect: "Users are more likely to want to try a visually appealing site, and they're more patient with minor issues" https://www.nngroup.com/articles/aesthetic-usability-effect/

[9] Wikidata can potentially provide the common vocabulary for many organizations/sites to use for referencing their content so it is discoverable by both humans and algorithms

[10] Commons has to change (or be used differently) in significant ways, primarily because its user experience is far outdated and not at all what users of modern commercial multimedia tools want.

[11] The apps are already utilizing many modern experiences, but further integration of social media, discovery, and multimedia will be needed.

[12] Wikipedia's article consumption experience is adequate, but there is room for improvement. Additionally, an improved editing/contributing user experience is an opportunity for attracting more people to enrich existing pages and become regular contributors.

13] The future is hard to predict, but there are definite tech trends in place today that aren't going anywhere in the next 5 years. According to the 2018 Adobe Consumer Content survey, the top devices consumers expect to use most in the next 5 years include: Home Entertainment Streaming Devices (82%), Smart speakers/home assistants (64%), connected home appliances (44%), and wearable devices (42%)

[14] Google controls many of the most powerful content discovery tools on the planet.

01
Form Factor

A significant challenge in making all the world's knowledge accessible to all the world's people will be to ensure that it is optimized and future-proofed for a rapidly-evolving digital consumption environment. The term Form Factor generally refers to the various entry points, devices, channels and formats that define a digital product offering. In the context of Wikimedia, form factor will include (a) the variety of devices that Wikimedia content can show up on now and in the future; (b) the size, and flexibility of the content itself. Such explicit form factor considerations are the main focus of this paper, however, other implicit aspects of form factor must be considered as well.

Partnerships, for example, may require Wikimedia content to be adapted to, or deeply integrated into, third party products with assistance and guidance from the makers of those products; several of the explicit considerations suggest this type of partnership. Likewise, ideas such as making Wikimedia content available as a utility, or layer on top of the Internet, is another implicit example of form factor, and explored in many of the concepts described in the paper.

Devices

The future will bring new devices and screen sizes. Wikimedia content should be easy to access and easy to use on every device

In the last five years alone we've seen a remarkable rise in the number of devices people use to consume internet content. In just three years, the Apple Watch has become the best-selling wearable device in the world and a common sight. In ten years, smart appliances have become a fixture in millions of homes. Just recently, Amazon announced a new line of Echo devices boasting its Alexa technology. Most of these devices only have audio capabilities, but some include small screens as well.

Amazon's Echo is the most popular smart speaker system and has already reached 10% of US respondents in the Digital News Report. [1] Amazon's Alexa (which powers Echo) can already read Wikipedia articles by using text-to-speech technology, but its ability to hone in on specific facts within that article is limited.

In the near future, we'll see other competing devices come onto the market. In addition to text content, these devices will need audio content to play. If I ask Alexa to play Franklin D. Roosevelt's famous "Day of Infamy" speech, I'm prompted to buy it from Amazon Music (even though it's in the public domain). Other devices, without their own massive digital storefronts, will want to be able to use that kind of content from an openly licensed source. We should ensure that we are that source. We should also put focus on optimizing all Wikimedia content for a range of devices with screens. Home entertainment devices are a major new platform for consumption of media. 82% of consumers expect such devices to be their most used devices in the next 5 years.

Desktop experiences (and even mobile experiences) are becoming less relevant. Even though mobile usage is still high, 2018 saw the first global decline in mobile sales and app installs and opens are in a downward trend [2] too. Wikimedia properties will be left behind without a viable platform for atomic content that can adapt to these devices..

One exception, however, may be wearable devices. The current top wearable is the Apple Watch, but with its limited capabilities and tiny screen size there may not be much we can do there.

Takeaways and things to do:

Tactical To Do's
- Decide that it is in our best interest to influence, perhaps even control, the user experience that Echo and other device users have with Wikimedia content. It's not "our" content, but we are the stewards of the systems used to create and disseminate that

PROPORTION THAT USE FACEBOOK MESSENGER AND WHATSAPP FOR NEWS

Selected markets

Messaging Apps	Greece	Norway	United States	Australia	Finland	Argentina	Hong Kong	Malaysia
FB Messenger for news	22%	11%	7%	11%	5%	9%	8%	12%
WhatsApp use for news	4%	2%	4%	10%	10%	37%	38%	54%

content, and therefore it's our responsibility to ensure those systems are used optimally and appropriately

- Encyclopedic content by itself, while useful and what we're best known for, isn't all we have to offer. We have a wealth of imagery, video, audio, and instructional content that better fits the audio and visual strengths of new devices.

Technical To Do's

- Create tools and APIs that are purpose-built for the audio-based smart speaker/home assistant experience
- Improve our backend tech and documentation for thumbnailing uploaded images. We recently had an issue with the Amazon team regarding this (they were trying to download size-appropriate images linked to Wikipedia articles for the Echo Show, but were requesting files that were too big, too often)
- Improve our support for common multimedia formats, especially audio. We now have MP3 on Commons, but we should take initiative in making sure existing files are available in that format.
- Utilize Structured Data to make multimedia easier to find and easier to associate with content from a number of sources

Content

Wikimedia Content will have to adapt to accommodate different user needs
Currently, our flagship project, Wikipedia, specializes in long-form in-depth content. This should definitely be considered a strength, and one that serves most of our current user base well. Wikipedia's brand is currently (and probably solely) centered around accurate, informative, long form information. But having only long-form information can be a problem..

Moving forward, it'll be critical for our content to adapt to shifting habits and the expectations of new audiences we begin to reach. As form factors change, the long form and complex nature of Wikimedia content may start to undermine the value of its accuracy and extensive coverage.

According to the 2018 Adobe Content Consumer Survey (US only), [3] when content is too long, 47% of consumers stop reading, and 23% switch devices. Our content needs to adapt to different contexts that reflect how people actually use social media and messaging.
The social messaging use case is a very important one to focus on because direct communication

Devices to be Used Most in the Next Five Years

- The devices that are most expected to be used in the next 5 years are connected home entertainment streaming devices, smart speakers/home assistants, and connected home devices/appliances.
  – Females are more likely to expect to use wearable devices (46%) while males are more likely to expect to use connected car dashboards (32%).
  – Millennials are more likely to expect to use smart speakers/home assistants (70%) and wearable devices (47%). Baby boomers are more likely to expect to use digital displays (45%).

Device	%
HOME ENTERTAINMENT STREAMING DEVICES	82%
SMART SPEAKERS/HOME ASSISTANTS	64%
CONNECTED HOME DEVICES/APPLIANCES	44%
WEARABLE DEVICES	42%
DIGITAL DISPLAYS	39%
CONNECTED CAR DASHBOARDS	28%
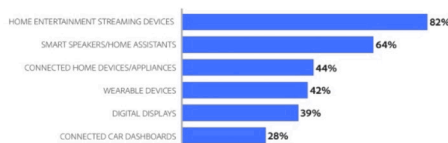
TOP DEVICES CONSUMERS EXPECT TO USE MOST IN THE NEXT 5 YEARS

tools like Whatsapp and Messenger are on the rise for news, [4] particularly in emerging markets, Asia, and South America. This phenomenon barely exists in the US, but it is a huge content consumption driver in other countries.

Wikimedia projects need to become stronger here, and that means having content and systems that naturally fit with messaging usage patterns. This could include possible future features like:

- Chatbots - Imagine a Wikipedia bot on WhatsApp, Facebook Messenger, or Telegram that actually answers questions and links to citations when you talk to it. It could even be a form of interactive instruction that guides you through a topic based on your prior knowledge, available time, etc.
- Media bots - "Hey Wikipedia, show me video of World War II." Instead of taking you to a link, the bot can put customized/curated video clips right into the chat
- Have link previews that show the fact you're interested in—automated page links with <title> tags that have the text of the specific fact you want to share; so instead of seeing "Patrick Stewart - Wikipedia" as the link preview, users can see "Patrick Stewart was knighted on June 2, 2010"

Adaptive Learning [5] can help readers customize their path through content. Imagine a world where we could ask a reader what level of knowledge they have for a Wikipedia page topic, and then automatically reconfigure the facts and citations to fit the reader. For Readers with advanced knowledge, the page can automatically can skip the basics, while readers with basic knowledge can be presented with an "explain like I'm five" version. This approach also provides an on-demand customization experience which helps us avoid privacy concerns.
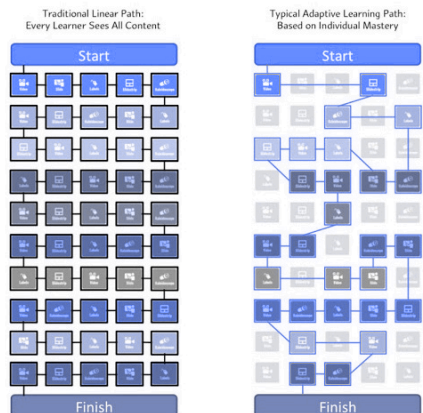
The Article vs. The Fact

All of the scenarios above are problematic for us right now, mostly because of one thing - our core, fundamental element is the article, not the fact.

As mentioned in the Discovery document, major Internet players like Google and Facebook are already grabbing our text content, chopping it up, and presenting it in factoid-sized chunks. We currently don't have influence over this process and the resulting user experiences, largely because we don't have any facility that we can point to and say, "do it this way, it's better and we've already done the work for you."

There are several ways we might achieve this "atomizing" of articles:

- Automatically break up the entire article into elemental parts (sentences/passages perhaps)
- Take the top 5 most important elements/ sections from each article and atomize that (although it's unclear at the moment how we would identify those top 5 elements).
- Have the community decide which elements should be atomized for each article (essentially a new editor function/workflow)

Traditional Linear Path: Every Learner Sees All Content

Typical Adaptive Learning Path: Based on Individual Mastery

© 2017 McGraw-Hill Education.

Of these three options, the first is probably the most flexible, most likely to scale, and the most likely to fit every possible need we may have in the future.

The Reasonator [6] project has made an attempt at "prettifying" Wikidata facts into human-readable form with mixed results. With better technology and techniques, we may find a better automated fact-generated system in the near future.

as we would on other platforms. This could include integrating structured data into search to ensure semantic matches, improve accuracy, and enable highly focused searches (see structured data search on Commons as an early example).

Takeaways and things to do:

Tactical To Do's
- Embrace a "factoid" paradigm; a lot of people still want to read long-form content, but a lot of people don't.
- Encourage and enable quick answers to discrete questions. ensure those systems are used optimally and appropriately
- Explore how we can optimally serve content in short-form environments like social messaging

Technical To Do's
- Architect a methodology for breaking up, storing, and serving our text content into individual, atomic elements that can be paired with citations
- Explore content adaptation architecture so that pages can change their form based on context and/or reader needs
- Build our own social media/messaging APIs and improve our integration with others
- Explore automated video/audio file creation (combining multiple clips or images into one and sending it off to the user's touchpoint)
- Utilize Structured Data to help put it all together. This could potentially be Wikidata (or a new feature on Wikidata), or an entirely new tool altogether since some fact formats just don't easily fit into Wikidata right now.
- Improve our on-wiki search capabilities to enable "factoid" searches on our sites just

Notes

[1] Reuters (2018) "Digital News Report" http://www.digitalnewsreport.org/

[2] Connelly (2017), The Drum "Future of mobile apps looking bleak"https://www.thedrum.com/news/2017/02/27/future-mobile-apps-looking-bleak

[3] 64% of respondents in Adobe's Content Consumer survey said that smart speakers/home assistants are devices they expect to use most in the next 5 years. https://www.slideshare.net/adobe/2018-adobe-consumer-content-survey

[4] Kalogeropoulos, Reuters Digital News Report (2018) "The Rise of Messaging Apps for News" http://www.digitalnewsreport.org/survey/2018/the-rise-of-messaging-apps-for-news/

[5]Adaptive Content Learning provides a possible framework for the future

[6] Manske's Reasonator https://meta.wikimedia.org/wiki/Reasonator

02

Rich Content

The **Open Knowledge Movement** [1] encompasses much more than Wikipedia articles. Reading long-form text is not currently the only, or optimal, way people choose to gain knowledge. In fact, a recent study [2] shows that only 20% of Wikipedia consumers are in-depth readers, no matter what language you consider. And while Wikipedia is mainly associated with long-form, informative, encyclopedic text content, several Wikimedia projects [3] already offer much more than that. Commons, [4] while flawed, is an established source for freely licensed multimedia files. WikiVoyage, [5] though largely unknown, is full of rich and useful crowdsourced travel content. Wikisource [6] has a small but dedicated community of transcribers, translators, and archivists who combine imagery and text into useful digital reproductions of old publications.

Our existing projects already offer rich opportunities to expand beyond encyclopedic content and give our users useful and fulfilling experiences, so it won't be a stretch for us to continue to explore all types of media and formats to accomplish our goals.

Roadmap for the future?

The National Geographic Society is one of the most well-known and successful global non-profits. They began with a magazine, which stood as their only media platform from 1888 until 1964 when they aired their first television content on CBS.

Today, in partnership with 21st Century Fox, the Society still operates the magazine that got them started, but they have also branched into other forms of media including TV channels, films, a website that features extra content, worldwide events, and other media operations. After decades of exclusively being a magazine brand, today "NatGeo" is truly a successful omni-channel presence. We should seriously consider using this approach as well.

An Omni-channel approach

Disruption. It is perhaps the one word that best describes what happened to the print industry in the past 20 years. Technology didn't kill print, but it certainly gave it a mortal wound. Disruption wrecks companies, and the best defense against it is diversification.

What would National Geographic be today if they had not ventured into other media? What if they'd remained strictly a magazine company? In the early 1990s the company's flagship publication (National Geographic Magazine) boasted 15 million subscribers. That number was estimated to be closer to 3.5 million in 2015. [7] Although it is possible that National Geographic would still be around if they'd stuck with magazines, they wouldn't have been able to do so without a massive restructuring, and there's no question that their current setup increases their outreach to millions more people than they could ever hope to reach with just a print magazine.

How does all this apply to us?

It is doubtful that we'll see another online encyclopedia rise to compete with Wikipedia, but that's mainly because the encyclopedia business isn't exactly a growth industry these days. Sooner or later, something will disrupt our model. It might be that our donations dry up, or larger companies grab all our data and start their own thing (think Wikitravel but in reverse), or Artificial intelligence algorithms perfect the automatic creation of articles based on news. Something's going to happen, and it's in our best interest to diversify so we have defenses against the inevitable and the unforeseeable.

Three types of knowledge

Before we focus on the content formats we should consider for the future, let's talk about "types" of knowledge. Our vision statement mentions "a world in which every single human being can freely share in the sum of all knowledge", but what does that really mean? There are least 3 types for us to target:

Factual

This is already a strength of Wikipedia and its straightforward, neutral, "citations needed" format. However, the same things that are Wikipedia's strengths are also its weaknesses. They make it hard to find new editors who want to work in the intimidating and often conflict-laden processes of the Wikipedia world. Few people feel like factual experts, and even fewer feel like vigorously defending their claims.

Instructional

This is a weakness for Wikimedia projects. Wikipedia is very good at describing things but very bad at telling you how things work. You can see how bad we are at this with a simple experiment. Search for "rocket" on Google and the Wikipedia article for rocket shows up very early in the search results. Now try "how do

rockets work" and see what happens (hint: you're gonna have to go to the dreaded page 2 of search results). This isn't just an artifact of poor SEO—the rocket page really does not do a good job of simply explaining how rockets work.

Experiential

This is an important area where we again are lacking useful content. People want to know what it's like to be X or do Y or visit Z. Knowledge of someone's else's experience is just as valuable as discrete facts, and a key element of getting humans to understand each other. Similar to the shortcomings of explaining how things work, Wikimedia projects are not very good at conveying experiential knowledge.

Now, let's talk about the content formats we can use to convey knowledge - Video, Audio, Images, Text, and Interactive.

Video : The Elephant In the Room

"What are we going to do with video?" is a question often asked not only within the Foundation, but within our community as well. Video has become the most preferred learning method for the majority of Millenials and GenZ. In the next 3-5 years it will be crucial for us to expand the Foundation's video capabilities. [8]

Factual Video

"Explainer" videos are a popular genre. We should give users the ability to create their own videos explaining certain topics or giving highlights of their favorite Wikipedia articles.

Instructional Video

Even the most talented writer in the world couldn't write an article to teach you sign language. But it would only take a decent teacher to make a useful sign language course with video. That, in a nutshell, is the advantageous power of video when it comes to instruction.

YouTube, solely through the power of its user community, has become a prime hub for learning how to do things. Although much of YouTube's content consists of non-informational vlogs and commentary, there is a large body of knowledge-based instructional content, from life skills like cooking to professional skills. It is even used by surgery trainees. [9]

The Wikimedia Foundation has the unique opportunity to learn from the YouTube model and improve it with openly licensed instructional video content that is translated, vetted, and highly curated by our communities for joyful consumption by all.

Experiential Video

Imagine free, openly licensed video content that provides detailed and compelling stories of the experiences of a wide variety of people, cultures, events, and walks of life. Think "Wikipedia originals"

Documentaries are a time-tested form of information sharing that can raise awareness and enter the social consciousness. It makes natural sense for Wikimedia to explore this medium, but not in the typical way. Other organizations already do documentary content; the BBC, Discovery Channel, and even National Geographic and Smithsonian. But all of these organizations focus on telling stories from a limited number of perspectives. Our strength is the Wiki way - allowing multiple perspectives and contributors.

Fortunately, we don't have to guess or theorize about what this might look like. There's a perfect real-world example in the form of Winter on Fire, [10] an Oscar nominated, Emmy nominated, feature length, Netflix original documentary that chronicles the deadly anti-government protests in Kiev, Ukraine that took place in 2013.

Winter on Fire had 28 credited cinematographers, using video footage captured by ordinary people who were on the ground during the conflict. In many ways it was a crowd-sourced film. [10]

From the director of the film:

"We got footage from people's phones, from GoPro cameras, from TV crews, from wherever we could. Without these volunteer cinematographers and the variety of technology available, it would have been impossible to document the movement."

The parallels to the Wikimedia processes and movement are clear.

Tactical & Technical Takeaways

Tactical To Do's
- Embrace video as a cornerstone of our media strategy going forward
- Invest in architecture, policies, and community members that support online editing tools for video
- But also support static, immutable content that is created by collecting disparate pieces of Wiki content and combining it into a finished "work" that is greater than the sum of its parts (ala Winter on Fire) [10]
- Answer an important question: Do we have to limit ourselves to the Internet as our only distribution method?

Technical To Do's
- Figure out how and where we're going to serve and store all this video
- Explore and invest in collaborative online video editing solutions like Popcorn.js
- Devise tools that enable admins to vet and moderate video content

Audio - the forgotten format

When most people think of audio content they think of music, but there's so much more to hear. Audiobooks, podcasts and storytelling shows are more popular than ever. Meanwhile, text-to-speech technology, in the form of personal assistants like Siri and home smart speakers like Amazon's Echo, are creating a renaissance for audio content.

In their US only 2018 Consumer Sales Survey [11], the Association of Audio Publishers found the following:
- audiobook sales in 2017 totaled more than $2.5 billion, up 22.7% over 2016, and with a corresponding 21.5% increase in units
- this continues the six-year audiobook trend of double-digit growth year over year.
- 54% of audiobook listeners are under the age of 45 (in other words, it's not just for the olds)
- 24% of listeners said they have listened on a smart speaker and 5% said they listen most often on a smart speaker
- the top three activities while listening to audiobooks are: driving (65%), relaxing before going to sleep (52%), and doing housework/chores (45%)
- 52% of people said borrowing from a library/library website was important or very important for discovering new audiobooks. 43% of listeners said they downloaded an audiobook from a library

If audiobooks are a growing form of media as a "port" of a type of long-form text content (books), perhaps we can adopt that model as well, but for Wiki articles. And perhaps we can

serve as the library source for audiobooks in areas that simply don't have a lot of libraries.

Factual Audio

Factoids in audio form, and beyond
What does the fox say? We can answer that question with recordings of fox sounds that are openly licensed and freely available as part of a Wiki database of animal sounds.

"Alexa, in what year was Nelson Mandela released from prison?" Audio facts like that are already being provided by products using our platforms, however, we can enhance that work with "links" to audio files. For example, with structured data we can link topics to available media on that topic, so when someone asks about Mandela getting out of prison we can programatically suggest the user listen to the public domain speech Mandela gave after he was released.

Instructional Audio
Audio can teach you more than just French:
Imagine a young person in India learning to speak the indigenous language of their region, or an art student in Canada listening o a public domain podcast that is produced by a group of women in Quebec and focuses on traditions of Inuit art.

And, yes, we could also have language courses so you can learn French.

Experiential Audio
Listen to someone tell their story
Oral histories have been a hot topic within the foundation for some time, and they are just the kind of experiential knowledge that we've largely neglected. However, oral tellings don't just expose us to mythology and history of esoteric cultures in far off lands. They can be used to give us deep connections to topics most of us only scratch the surface of.

Imagine a CC0 collection of audio recordings from Holocaust survivors recounting their personal stories.

Tactical & Technical Takeaways

Tactical To Do's
- Don't forget audio! It is a flexible and easy to use file format
- Invest in obtaining/acquiring rich histories in audio format
- Explore what it would take to become a repository of all the sounds in the world (machine, animal, and other)

Technical To Do's
- Consider ways to use data to link topics/facts to available audio related to that fact
- The audio playback experience for our files on the web is terrible now. Commit to fixing it.
- File formats. We have MP3 support now (patent expired). What else might we need to do to provide good streaming audio quality?

Images: a long way to go
Commons falls far short of expectations for a modern image sharing platform. There. Now that we have that out of the way, let's talk about the kind of image content tools we should have going forward.

Factual Imagery
Photos are a type of fact that ordinary people feel comfortable adding. What exactly does the Bambino cat breed look like? It's a simple question with a simple answer (just show me a picture of one), but you won't find it on Wikipedia [12] or Commons because we don't have an image for it.

Commons has numerous and varied knowledge gaps, and doesn't get close to being a great tool for even illustrating Wikipedia articles, let alone being a source for visual reference for all knowledge.

A large part of this problem is that Commons itself provides a poor experience as a destination. Its UI and design are outdated, it lacks features people have come to expect on platforms like Flickr and Instagram, it has almost no social component, and its processes are even more obscure than Wikipedia's.

Put simply - we can't get great, comprehensive image coverage because people don't want to use the site.

So the first step is to change that. We've enlisted the help of gurus like George Oates to give us outsider perspective on what's wrong with Commons, [13] but changing Commons is an expensive and time consuming task (as anyone on the SDC project can tell you). The more prudent approach seems to be to forget the idea of Commons as a destination for the masses and instead use it as a piece of infrastructure maintained by people who like that sort of thing. Imagine a world where we do image campaigns like Wiki Loves X every week instead of every quarter. Imagine a massive social media campaign like #WikiLovesWednesday, where every Wednesday we ask the whole world to donate photos of that week's topics.

But we can't do that now because directing millions of people to Commons would make them hate us and ask why we made them go to that terrible, terrible place and they're never coming back.

We propose a New Commons, which would include the creation of a purpose-built, user-

friendly new presentation layer on top of Commons. This is still just in the concept phase, but has gotten some support so far.

Instructional Imagery

Images are often much more efficient at explanation than text (and usually don't need translation). Let's say you're trying to learn how ordinary door locks work.

Which experience do you find more elucidating? This text from the Wikipedia entry….

"The pin tumbler lock uses a set of pins to prevent the lock from opening unless the correct key is inserted. The key has a series of grooves on either side of the key's blade that limit the type of lock the key can slide into. As the key slides into the lock, the horizontal grooves on the blade align with the wards in the keyway allowing or denying entry to the cylinder. A series of pointed teeth and notches on the blade, called bittings, then allow pins to move up and down until they are in line with the shear line of the inner and outer cylinder, allowing the cylinder or cam to rotate freely and the lock to open."

Or this GIF explaining How a lock and key work?
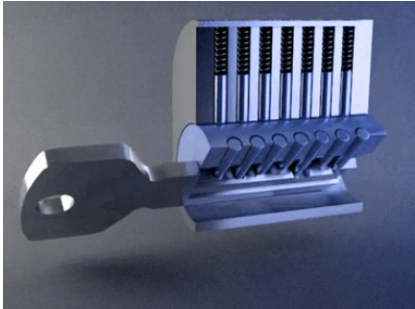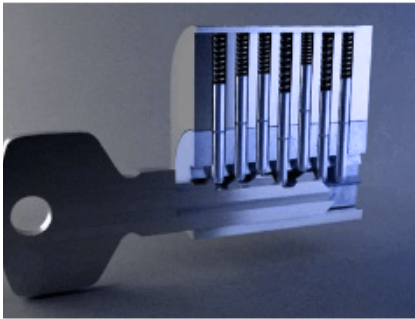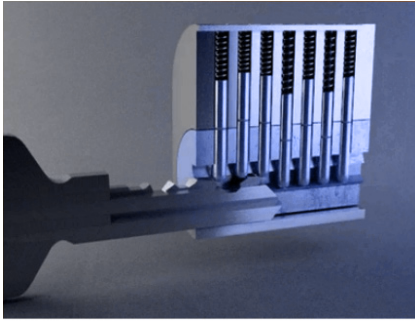
Experiential Imagery

Everyone can be a photojournalist. Social photo sharing is a common activity now, with people sharing their personal experiences of travel, dining, and events both mundane and fantastical. The good news is that the Wiki way - where everyone and anyone is invited to contribute - nicely meshes with broader internet usage patterns, and other hugely popular platforms have already trained the masses to always have their smartphone camera at the ready.

Additionally, we can take a page out of the National Geographic book and encourage people to capture ordinary life in extraordinary places. We've seen some good photo essays come out of Wiki Loves Africa, but they're wasted on Commons, which simply doesn't have the reach or format to really showcase this content.

With the right tools and design and a motivated community, we can do what many photojournalistic outlets do, but at a scale they can't achieve.

Tactical & Technical Takeaways

Tactical To Do's
- Invest in at least one (possibly more!) welcoming, useful, and usable place for people to share/donate their images
- Animated GIFs have made a strong comeback. They are also fantastic for informational and instructional content. Support and explore the idea of static images having less prominence in the future.
- Encourage experiential storytelling through imagery

Technical To Do's
- Make frictionless mobile image contribution a priority

Text : Fix it

Wikipedia isn't perfect, but it works. Its success is undeniable, and it will stand in history as a world-changing project. If you're the kind of person who loves deep dives into complex topics, and you don't mind spending time with text that can be challenging, Wikipedia's current format totally works for you. There are certainly parts of its formula that work and should be left alone.

But there are other Wikimedia projects that are heavily text-based and far more accessible than Wikipedia. They are in drastic need of some attention and fixes.

Factual Text

Facts matter, but we don't have all of them yet. Wikisource is a fantastic...well...source, for all sorts of information that just wouldn't work on Wikipedia. Want to read a biology text for kids that was published in 1875? It's there! Want to read the One Thousand and One Nights story in the original Arabic? It's there!

There are countless rich and engaging pieces of public domain or freely licensed text content out there. Some of them are digitized already, but many are not. A lot of stuff is locked away in archived books sitting in vaults (Charlotte's Culture Outline touches on this). There's a large opportunity for us to facilitate the process of freeing this text and bringing it to the people.

Sometimes, however, the content we want won't be under a license we like. Recent out-of-print content can still be under copyright, but perhaps there's room for us to fund the process of purchasing the rights for valuable content and then releasing it to the public domain or CC0 license.

Instructional Text

Video is king, but text is still like…a duke or something. Video is still the most engaging and powerful medium if you want to tell someone how to do something, but video is not always easy to create, much harder to edit, and not as portable as well-written text instructions.

As we've discussed earlier, Wikipedia is terrible at instructions. But Wikisource and Wikivoyage are pretty good at it! You can find an entire book on how to teach yourself Chinese on Wikisource, and Wikivoyage has a wealth of content like how to buy a kimono in Japan.[14]

Experiential Text

Good writers can make text descriptions come alive. This is another area where Wikisource and Wikivoyage can shine if we let them. Wikipedia's neutral point of view rule makes the content fair and less prone to bias (although not impervious to it), but that rule also makes the content bland and no fun to write.

Investing in our other projects with less stringent content rules will help attract new readers looking for something less dry, and contributors who can really write and want to use that skill for a good cause.

Tactical & Technical Takeaways

Tactical To Do's
- Spend money on Wikisource
- Spend money on Wikivoyage
- Spend money on acquiring rights to books, articles, and other text content we want (then make it free)

Tactical To Do's
- Much of Wikisource is held together with string, gum, and hope. Volunteer developers have kept it working with many disparate hacks over the years. We'll have to either commit to fixing it or, perhaps even better, create a new platform that is purpose-built for this use case.

Interactive

This is a complex topic, best described in slide deck form. See Future of Commons Deck, Path #3. [15]

Priorities

This is our recommendation for how to prioritize investment in the rich media types described in this paper:

- Video support. Brion Vibber has put together an excellent to-do list for improving video on our project. [16] There are many legal and engineering problems involved here, and they will take time to sort out, which is why we need to start on this list ASAP OR decide we're going to build a separate, purpose-built, video platform from ground up.
- We desperately need to improve our image situation. Commons does not match modern user expectations for what an image sharing site should be, and we're really missing lots of photo opportunities where simple, common sense changes could make massive differences in scale (more images and more diverse audiences uploading) and ubiquity (more people reusing and discovering the content).
- Define a clear strategy for audio. This is the "open sky" area where there aren't many competitors and we could potentially do groundbreaking things very quickly.
- Develop and set in motion plans to nurture Wikivoyage and Wikisource.

Notes

[1] https://en.wikipedia.org/wiki/Open_knowledge

[2] "Research:Characterizing Wikipedia Reader Behaviour/Human development index and Wikipedia use cases" https://meta.wikimedia.org/wiki/Research:Characterizing_Wikipedia_Reader_Behaviour/Human_development_index_and_Wikipedia_use_cases

[3] https://meta.wikimedia.org/wiki/Our_projects

[4] https://commons.wikimedia.org/wiki/Main_Page

[5] https://www.wikivoyage.org

[6] https://en.wikisource.org/wiki/Main_Page

[7] Thielman (2015) The Guardian "How Fox at National Geographic" https://www.theguardian.com/media/2015/nov/14/how-fox-ate-national-geographic

[8] Pearson (2018) "Beyond Millennials: The Next Generation of Learners" https://www.pearson.com/content/dam/one-dot-com/one-dot-com/global/Files/news/news-annoucements/2018/The-Next-Generation-of-Learners_final.pdf

[9] Al-Khatib "Surgical Education on YouTube" https://pdfs.semanticscholar.org/fbc3/96b2d3f4fcd3a3844e2e02866992204c6032.pdf

[10] Winter on Fire utilized footage from dozens of sources, including cell phones used by protestors during the conflict https://www.youtube.com/watch?v=RibAQHeDia8

[11] 2018 Consumer Sales Survey, US only
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in Japan" https://en.wikivoyage.org/wiki/
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ZQhrgOnWbaCOGek/edit?pli=1#slide=id.
g32e28c599f_0_87

[16] Vibber "To-do list for improving
video on our project" https://docs.google.
com/document/d/1MDE2j69b0FQwWK-
kWPdblQSqB3dT056DEhJu54G0HJw/
edit?usp=sharing

03
Contributors

In order to reach our 2030 knowledge equity goal [1] it will be necessary to diversify the pool of people contributing to the projects, to expand the modalities of engagement and to open the door to new types of content that can be contributed. That is, it must be possible for the next wave of contributors to provide raw text, speech, images, video and other multimedia formats; to contribute new data in a structured way; and to perform discrete editing tasks to improve existing content. This next wave of editors must also be empowered with the tools necessary to storify (assemble and add context to) the raw content uploaded by others. The next wave of contributors must be able to create short form content (e.g. parts of articles) as well as rich articles. We're going to need to make our contributing experiences both cheaper and easier, as well as richer and more complex.

Wikipedia is currently a reading and editing tool, but in the next three to five years these experiences must be treated separately and optimized for their purpose. In this near term future Wikipedia will become a reading and recruiting entry point (driven by search traffic, and reinforced by citations across the internet) while another more purpose-built experience will be created to optimize the contributors' experience. This new experience must focus on better supporting the myriad of tasks related to uploading, labeling, editing and monitoring contributions.

Finally, we're going to need to make sure that the moderation experiences around the new contribution modalities and types are going to work for existing and new contributors (eg. satisfying "Risker's checklist") [2] ensuring that content creators are happy with the new content, and it meets reader needs for quality and trust

Modalities of Content

To diversify the pool of contributors and perspectives we must diversify the modalities of content we accept. This means that we must "open the aperture" and start managing contributions that are both richer and more complex than existing models, but also cheaper and easier.

With diverse modalities comes the new responsibilities and possibilities for collating and storifying these contributions, thus creating new types of editing tasks, even as other types of content creation (see augmentation et al) reduce traditional editing tasks.

Speech

Speech represents a frontier for developing new and more inclusive modes of access. There is a clear need for tools that support voice consumption and navigation of Wiki content, or, at the very least, augment existing content with audio. New methods like speech-to-text are vital for many use cases and audiences, particularly older users: the typical user of voice assistant applications is a 52 year old woman. [4] Also, input for local languages are not always supported by the small screens and keyboards of contemporary technologies. [5] Finally, oral histories and culturally influential evolving slang lexicons (such as the "swardspeak" of Filipino gay men) represent a frontier on the frontier. These types of aural and oral knowledge introduce new cultural and potentially political complications to our efforts.

Video

Our own research has shown there is demand and need for rich content on Wikipedia. Our commitment to open media formats has held us back for years and we may need to find a way to find a compromise between the open source values of the community and the modern expectations of web users.

Youtube is a surging platform for procedural learning. Research shows using TAM (Technology Acceptance Framework) [3] framework, the user acceptance of this behaviour is sufficiently high enough to call it a leading place for learning. [6] Therefore, Wikimedia should seek partnership opportunities with Youtube or Youtube like service to serve as a potential compliment to open source limited video distribution on Wikipedia projects.

We use Wikipedia as reading and editing tool, but because reading and editing have divergent intentions, processes and target audiences, in the next 3 to 5 years these two tasks need to be more cleanly separated.

The contribution experience

We will need to design editing (and moderation) tools for the rich media experiences described in the rich content experience section. It seems likely that a new type of contributor as well as tools will be necessary to produce the type of content necessary for an omnichannel experience.

Potential framework

Driven by search traffic and reinforced by robust citations across the Internet, Wikipedia will become an entry point for reading and for recruiting contributors. The necessarily diverse processes employed by these groups will require separate, purpose-built experiences that are supported by machine learning facilitating tasks and allowing user customization.

Not just desktop or mobile options but modes of contribution that are customized to their context. These modes need to provide a mental map of the contribution process to make the knowledge creation process transparent and navigable to all users, new and experienced.
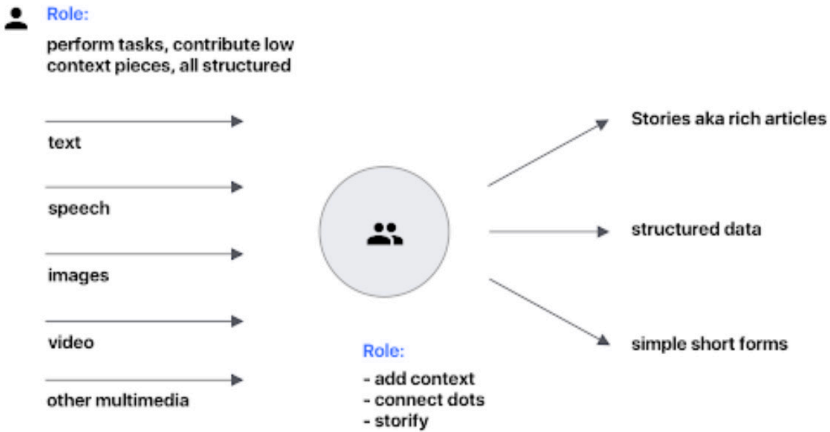
Bret Victor, [7] noted design strategist, observes that current digital software is a medium where you do not manipulate your environment to match your needs. We imagine two possible modes: the Workstation as the experience for veteran editors and the Launchpad for new ones. The Workstation is similar to an integrated development environment (IDE) that doubles down on the community's use of add-ons and specialized tools. The Launchpad is a software environment for newcomers to get help and see what impact they are making.

Both would be built on top of a foundation of structured data (see also the Ubiquity paper) and an associated API, to integrate rich media seamlessly.

The Workstation

The Workstation focuses on productivity, discovery based on customization, and detailed records of interactions with others (interpersonally and in relation to content from a managerial perspective). It should facilitate the creation of pipeline (If… Then… That…) workflows that make use of machine learning to streamline repetitive tasks, build out simple workflows, and aid in discovery (to highlight issues such as potential bias and suggest citations). A necessary part of increasing the number and diversity of contributors is increasing the tasks and contexts where people can contribute. Therefore the Workstation is about task management, from automatic identification of abusive contributions, vandalism and spam, to guiding the complex process of project development.

The Launchpad

The Launchpad focuses on the immediate presentation of a new editor's impacts, and facilitates discovery centering the editor amid records of their (as opposed to global or community) interaction, attribution and causation. While the Workstation's interface is tailored for co-designed workflows, The Launchpad focuses on workflows that are assigned. Authors should always be able to contribute to discussions, review other edits quickly and easily so they feel connected to the community and the project all the time.

We will need to provide tools that connect other knowledge-gathering activities outside Wikipedia (such as reading, browsing, researching, discussing, taking photographs,

recording sounds, downloading sensor data, etc) and make them available to the process of content creation. For example a "publish to Wikipedia" button on browsers that carries a fact and citation information straight to the article.

The contribution reward

Social networks have succeeded because they variably distribute a deeply evolutionarily compelling reward: approval [8]. Our ecosystem does not give consistent reward for participation in the knowledge creation process nor is there any signposting for how to progress in skill and responsibility.

The community has created some mechanisms to do this but it is not particularly accessible and the look and feel is not in keeping with modern reward systems on other social platforms. We need to retain community ownership but clearly support a first-class model of editing progression and provide mechanisms and rewards that make editing and rewarding a sticky experience.

 Notes

[1] Knowledge equity goals https://meta.wikimedia.org/wiki/Strategy/Wikimedia_movement/2017/Direction#Knowledge_equity:_Knowledge_and_communities_that_have_been_left_out_by_structures_of_power_and_privilege

[2] user:Risker "Checklist for content creation extensions" https://en.wikipedia.org/wiki/User:Risker/Risker%27s_checklist_for_content-creation_extensions

[3] Technology Acceptance Model https://en.wikipedia.org/wiki/Technology_acceptance_model

[4] Boyd (2018) "The Past, Present, and Future of Speech Recognition Technology" https://medium.com/swlh/the-past-present-and-future-of-speech-recognition-technology-cf13c179aaf

[5] Knight, (2016) "Powerful speech technology from China's leading Internet company makes it much easier to use a smartphone." https://www.technologyreview.com/s/600766/10-breakthrough-technologies-2016-conversational-interfaces/

[6] Lee and Lehto (2013), "User acceptance of YouTube for procedural learning: An extension of the Technology Acceptance Model" https://www.sciencedirect.com/science/article/pii/S0360131512002229

[7] http://worrydream.com/MagicInk/

[8] Nethercutt (2018), "We're Primed to Be Addicted to Social Media" https://zandercutt.com/2018/09/18/were-primed-to-be-addicted-to-social-media/

04
Customization

Customized and Personalized user experiences are the new norm in consumer products, but are they appropriate for Wikipedia?

A Personalization-focused strategy would conflict with Wikipedia privacy policy, product principles [1] and Movement equity goals, [2] but Customization could contribute to greater usability for readers, communities and editors and for this reason must be considered as part of product modernization overall. In terms of the reading experience, the platform should support a set of user-modifiable customization options and a set of community-modifiable customization options (to allow for language-specific and culture-specific preferences). In terms of the editing experience, the platform should support customization based on common usage patterns and contributor activities at scale, and across whole groups of wiki projects. By making customization options part of the platform, it is possible to serve a more diverse set of needs and preferences without forking the main product. This approach will make scaling much more achievable, and the process of integrating new customization features less dependent upon the technical resources of regional communities.

Customization & Personalization are sometimes used interchangeably but are fundamentally different in terms of user experience.

Personalization is the automatic adaptation of a system to the behaviors and preferences of a user. Because Personalization requires much less explicit input from the user, it is appealing to non-expert users - their experience is automatically tailored without additional effort on their part. But a truly satisfying bespoke experience can only be delivered with a more technically sophisticated system, and requires sign-in, or another form of user identification, and the ongoing collection of user behavior data over time. This approach would be unfeasible and incompatible with the principle of intentional transparency.

Customization refers to the degree to which a user can tailor their use of a product through overt controls and settings. Customization features allow a user to optimize their experience through preferences, defaults and conditionals. But unlike Personalization, Customization requires the user to take action in order to have a more optimal experience and hence is most appropriate in products where users are highly motivated to make such adaptations. Customization tends to result in greater satisfaction among power users, and lower satisfaction among among non-power users. [4]

The Reading Experience

Customization For Individual Users

The Customized aspect of consumption experiences may not be differentiating or particularly memorable, but multiple studies [3] [4] suggest customization features are a factor in user satisfaction, enjoyment, and perception of usefulness.

In the context of Wikipedia, it is tempting to treat customization for individuals as a matter of agency (i.e. that it is self-evident that a user should have control over what they are being shown, how information is presented, and how the context they're in affects the modes of presentation). However while basic levels of customization in reading experiences have been shown to result in quick wins, [3] the considerable effort required to implement them may not result in a commensurate impact. So while the product landscape may have set an expectation of agency over aesthetics, accessibility, data control, screen-oriented view modes for comfort, short form/long form reading, implicit topical interests, control of notifications and abuse filters, such settings will not necessarily result in sustained or significantly greater satisfaction with the product.

Customization For Communities

Reading habits and aesthetic preferences are drastically different in different cultures. [6] Communities should be able to customize the reading experiences for their language wikis drastically as well. There is a small subset of contributors who work towards reading

audience, (main page designers, maintainers, template designers) but we need to give more choices and agency over how they present content to their communities.

So while Customization can be a good thing for readers and communities, in an ecosystem with limited resources, the return on investment (in terms of change in user satisfaction) must be considered against the potential hit to scalability.

The Editing Experience

Customization For Individual Editors

In spite of the fact that customizing how a system behaves is a superficial change in the medium, it has been shown to lead to greater retention and satisfaction. [4]

Customization for Communities

Similarly, community members should be able to see reflections of their needs, histories and perspectives. In our context, this would require starting with research to understand and drive products that optimize for the "lowest common denominator" solutions. This core solution would continue to develop over time but, in response to community needs and an understanding of its use, support variations and forks. This strategy is summarized in the diagram. The task before us is to identify specific efforts and opportunities for intervention for target communities to see a particular change in that community.
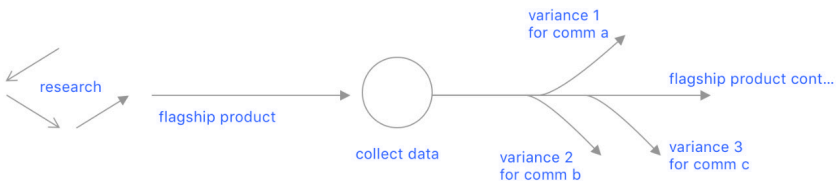
Notes

[1] Product Principles https://www.mediawiki.org/wiki/Product_Principles

[2] Equity Goals https://meta.wikimedia.org/wiki/Strategy/Wikimedia_movement/2018-20

[3] Because Personalization requires a high degree of technical sophistication it would likely only be implemented in communities with a high degree of technical acumen and the developer resources to enable and support it. Sweet and Wirth (2017) "One-to-One Personalization in the Age of Machine Learning" https://books.google.com/books/about/One_to_One_Personalization_in_the_Age_of.html?id=zyM_DwAAQBAJ&printsec=frontcover&source=kp_read_button#v=onepage&q&f=false

[4] Customization leads to perceived ease of use and perceived ease of use leads to perceived usefulness. A user's perception of control positively affects their attitudes toward the product and the creator of the product. H. Lee and E. Chang

[5] This pattern holds in "low privacy" contexts, but the opposite is true in "high privacy" contexts.   Sundar and Marathe (2010) "Personalization versus Customization: the Importance of Agency, Privacy, and Power Usage" https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-2958.2010.01377.x

[6] Liu, Lee and Lee (2013), "Exploring the Relationship between Reading Habits and Aesthetic Preferences in Different Cultural Contexts and Design Practices" http://design-cu.jp/iasdr2013/papers/2066-1b.pdf

05
Discovery

In today's world, content finds the consumer. Over the past decade, social media have had a profound impact on the way people discover content on the internet: time and attention are scarce resources and users have become increasingly accustomed to consuming information surfaced and filtered by friends and family via social feeds. In the current paradigm, information automatically flows toward readers – it simply shows up as part of whatever journey they're on. [1]

"paying active attention to the news was unimportant, because such information was "in the air" as an ambient part of daily life." [2]

In this way, social media channels have (re)defined the expectations and habits of users all over the world. Users now expect relevant information to find them as a result of their preferences, feed settings and serendipitous browsing. Facebook [3] and WhatsApp have become primary entry points for new users accessing the internet, and are, for many emerging communities, simply conflated with "the Internet". For these communities, the page-based mental model [4] of the Internet will effectively never have existed. So to meet our newest users where they are we must recognize the interdependence of form factor and discoverability in a consumption model not driven by search.

Social Media Facilitates Discovery

In a global user study by SDL, [5] when asked "How do you typically discover new and interesting things online?" respondents indicated they turn first to social networks for content discovery, and then to online and customizable newsfeeds. More traditional means, like email and search engines, ranked far behind.

That same study found, on average, millennials share six pieces of content via social media a day, which has overtaken email with five shares a day as the de facto channel for sharing content.

Content discovery and sharing is driven by social media, and if Wikimedia content isn't there, we're missing an opportunity to increase our reach and be part of the global conversation.

This is particularly true in emerging markets, where social media is sometimes the entirety of a user's online experience. This is especially true in emerging markets where Facebook has reached low-income mobile users by partnering with cell networks to provide Facebook access for free (Facebook Zero inspired the ill-fated Wikipedia Zero).

Researchers evaluating how Facebook Zero shapes information and communication technology use in the developing world found that 11% of Indonesians who said they used Facebook also said they did not use the Internet. Essentially, for them, "Facebook is the Internet"

Statistics show the number of shares on social media are down for many types of content, but Wikimedia has an advantage - "evergreen" content
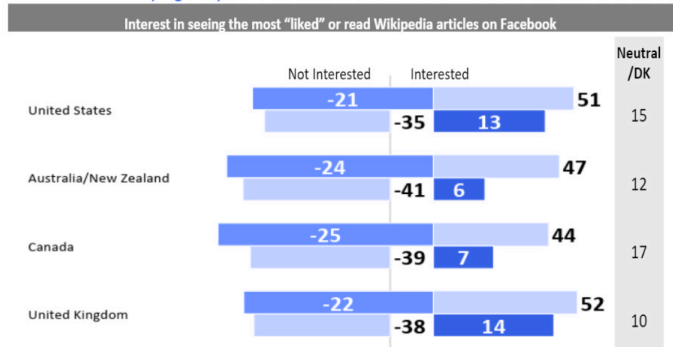
In his Content Trends 2018 report, Steve Rayson, found data showing that "evergreen" posts have resisted shifts in user behavior, tastes, and changes in Facebook algorithms. Despite Facebook share traffic being down overall, evergreen content remains.

According to Rayson, articles that qualify as evergreen have at least one of the following characteristics. They are:
- Research-based
- Reference-style
- Topics that are relevant over time
- Updated regularly

These attributes are perfect, natural matches

Readers are more interested in seeing the most "liked" or read Wikipedia articles on Facebook, with approximately half of readers in all five countries saying they would be interested.

| Interest in seeing the most "liked" or read Wikipedia articles on Facebook			Neutral /DK
	Not Interested	Interested	
United States	-21	51	15
	-35	13	
Australia/New Zealand	-24	47	12
	-41	6	
Canada	-25	44	17
	-39	7	
United Kingdom	-22	52	10
	-38	14	

for Wikimedia content and show a clear opportunity for us to gain reach with a strategy for encouraging wider sharing of our content.

"In this new world of content saturation and falling social shares, the big winners are sites that have built a strong reputation for original, authoritative content.

"The majority of content gets zero backlinks but authoritative research and reference content continues to gain links. In particular, authoritative evergreen content consistently gains shares and links over time."
- Steve Rayson, Content Trends 2018 [6]
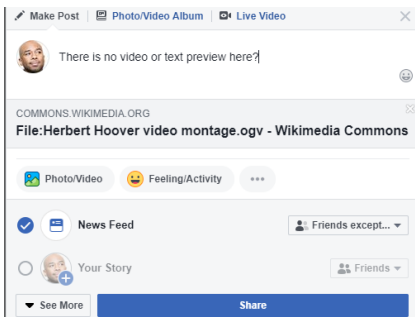
Improve discoverability of content

Feeds, top articles, and relevance
On the mobile Wikipedia apps, top stories have become a promising avenue. Jonathan Morgan's 2017 research [7] on the Top Articles feature in our apps found that on average, raters reported that they would be more interested in reading the articles in the 'top read' list than the 'trending' list. The results were consistent across groups, and (marginally) significant for India-based raters.

Additionally, recent (though perhaps skewed) research about Wikipedia readers consistently found that around half of respondents were interested in seeing most liked or read Wikipedia

articles on Facebook.

These data points indicate that we're missing an opportunity to promote popular content at key places, either on-Wiki or on social media. Not everyone is interested in Top Articles, but a lot of people are and we can enhance their experience with functionality that is optional and unobtrusive but very useful for users who want it.

Discovery of Multimedia

Discovery of multimedia content should also be a key component of our future strategy. With a focus on:
- Helping editors find useful multimedia to add to articles
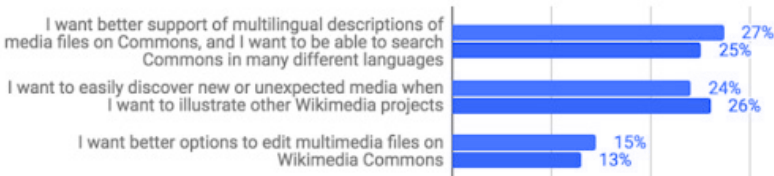- Helping readers find multimedia related to what they've read

As Ubiquitous as Internet Advertising
Advertising is an omnipresent force on the Internet today. It's not just tolerated, but expected, and as more people in developed nations become "cord cutters" and move away from traditional TV, internet advertising's omnipresence increasingly becomes a primary way that people discover new content, products, and news. However, growing trends in consumer trust and content saturation suggest that there is room for a new omnipresent force on the Internet: facts.

Major players like Facebook, Amazon, and Google have already integrated Wikimedia content into their platforms. The Wikimedia experience is slowly being integrated into the user experience of other major platforms, but without our input.

Still, the ultimate goal companies like Facebook and Google are trying to achieve is a good one. Misinformation has become a top consumer

PR30: Which features do you want for Wikimedia Commons?

I want better support of multilingual descriptions of media files on Commons, and I want to be able to search Commons in many different languages — 27% / 25%

I want to easily discover new or unexpected media when I want to illustrate other Wikimedia projects — 24% / 26%

I want better options to edit multimedia files on Wikimedia Commons — 15% / 13%

concern on the Internet. The Reuters/Oxford Digital News Report for 2018 [8] found:

"Over half of those polled (54%) say they are very or extremely concerned about what is real and 'fake' on the internet. This is highest in countries like Brazil (85%), Spain (69%), and the United States (64%) where polarised political situations combine with high social media use."

Modern Internet users aren't sure what to believe. This is becoming a defining element of the Internet usage experience in modern times. In 2018, Facebook and Youtube began using content from Wikipedia to help combat this problem. [9]

Notes

[1] Like the Burma Shave signs motorists encountered on US roadways in the 1950's and 60's, modern day internet users tend to consume whatever information shows up along whatever route they've chosen. https://en.wikipedia.org/wiki/Burma-Shave#Roadside_billboards

[2] Toff and Nielsen, (2018) "I Just Google It": Folk Theories of Distributed Discovery https://academic.oup.com/joc/article/68/3/636/4972617

[3] Daily Active Facebook Users https://www.statista.com/statistics/346167/facebook-global-dau/

[4] Definition of Mental Model [https://en.wikipedia.org/wiki/Mental_model mental model]

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