

Browse Smart

A Simple Tool for a More Educated Tomorrow

Introduction:

The general idea behind Browse Smart is a browser extension that works in the background as users browse the web, with the goal of minimizing misinformation among the public. An educated public will lead to educated discussions about important issues, which will lead to intelligent compromises and a more connected human race. This in turn will lead to an all-around better world. The short version of the plan is that this extension will notice what the user is reading about, and provide them with suggestions for further reading, such as conflicting viewpoints on the same topic, or original sources that the information may have come from, as well as warnings if what the user is reading may not be the most reliable information. Below is a more detailed outline of what I hope Browse Smart can accomplish and why I think it is such an important thing to implement.

The Problem:

As human kind grows more and more attached to their mobile devices and home computers, we are becoming more and more reliant on the internet as our primary source of information. However, it is remarkably easy to for anyone to put information out on the internet, and as a result, that information is often incredibly unreliable. Nonetheless, the public still has a tendency to believe whatever they read on the internet, and this can lead to very widespread misinformation about any number of topics.

Take scientific findings for example. The general population has a difficult time understanding scientific papers and are therefore often incapable of reading them and drawing their own well-informed conclusions about them. Because of this, they usually must resort to reading summaries of studies online. However, these articles are often poorly written or even misinterpret the results of the studies themselves or disregard the possibility that the study being summarized is not accurate. Even reputable sources for science-related news sometimes publish articles that are either too simplified and miss major points of the original papers or that are not simplified enough and cause readers confusion.

One example of how communicating scientific findings to the average person is difficult can be found in the fact that a scientific study can never “prove” anything. This means that the Intergovernmental Panel on Climate Change (IPCC) can run a statistical analysis on global weather data from the past 30 years, and the result might be that they are 95% confident that global climate change is the result of human activity. The problem here is that many laypeople, including both those reading simplified articles about the findings and those writing them, look at a number like 95%, and only see that the IPCC isn't *positive*. This is enough for some people to dismiss the evidence of climate change as insufficient.

Perhaps even worse is the fact that the issue doesn't end with the public simply misunderstanding scientific findings. In fact, these basic misunderstandings can become further twisted as they spread from person to person, and this misinformation can become widespread very quickly. This is true in today's internet-driven era more than ever before. A bleak illustration of the potential for harm that this can cause can be found in the anti-vaccine movement.

Regarding the effects of the paper published in 1998 by Dr. Andrew Wakefield, which drew a link between vaccines and autism, an article on Boston.com said, “Immunization rates in Britain dropped from 92 percent to 73 percent, and were as low as 50 percent in some parts of London. The effect was not nearly as dramatic in the United States, but researchers have estimated that as many as 125,000 U.S. children born in the late 1990s did not get the MMR vaccine because of the Wakefield splash” [2]. As of July, 2014, an estimated one in four parents in the United States believe that vaccines cause autism in previously healthy children [3]. As a result, not as many children are getting vaccinated, and previously well-controlled diseases, such as whooping cough and measles, are seeing renewed outbreak sizes in recent years. Furthermore, numerous celebrities, including, but not limited to Jim Carey, Alicia Silverstone, and even President Donald Trump have publicly expressed their beliefs that vaccinating children is dangerous. This is an enormous issue, because countless

people admire these public figures and look to them when they don't know what to think themselves.

Beyond this general misinformation is the fact that many people tend to get very closed-minded about what they believe to be true. This means that even in the case of issues that don't necessarily have a right or wrong side, discussions can often be heated or even personal, and of even more concern, unproductive. This is certainly a source of the circular nature of public policy surrounding said issues, as neither side is willing to concede an inch to the other.

The Solution:

I propose a browser add-on that will recognize when a user is viewing a page related to a scientific study or current event and provide links to the original source and/or other relevant pages, as well as warn the user if the page they are viewing is potentially inaccurate. Eventually, the hope is that Browse Smart would be compatible with any conceivable web browser, and in particular mobile browsers, in order to reach the widest audience possible. This is a crucial if long-term goal, because the more people using Browse Smart, the smarter it will be, and the smarter the world will be. This extension will have 3 primary functions of equal importance:

- 1) The extension will show the user a warning if they are viewing a webpage that is likely to have inaccurate information. This can be determined by comparing keywords in the viewed page to those in pages about the same topic, as well as by examining user-submitted flags on inaccurate or misleading information. At launch, Browse Smart will be aware of current, well researched reputations of various popular information sources, but it will keep these reputations up to date automatically via flags and sources. It will also take into account the extension of a source's URL, as .edu, .gov, etc. tend to be more reliable than .com.
After sending the warning, the extension will provide the user with a more reliable page relating to the same topic.
 - Importance: This feature will tell the user before they have even had a chance to read a page whether that page has potentially inaccurate or misleading information. This will quickly give the user the opportunity to pursue their research into the topic at a more reliable source.
 - Example: If a user found themselves at the page on TalkNetwork, "Proof from the CDC that Vaccines Cause Autism (Video)" [4], the extension would recognize that talknetwork.com is not a reputable source by any means, and would find a more reputable source, giving preference to pages that also say that vaccines cause autism, if reputable sources with such an opinion can be found, so as to avoid bias.
- 2) The extension will trace a given topic as far back as it can find and provide the user with a link to the "original" source.
 - Importance: This will show the user where the discussion originated, so they can judge for themselves whether one side stemmed from a basic misunderstanding of the original source.
 - Example: If a user is viewing a page related to the vaccine debate, whether that page is for or against child vaccinations, Browse Smart will give the user a link to the paper by Andrew Wakefield on The Lancet, which originally suggested a link between vaccines and autism, and which now says "RETRACTED" in big red letters across the top of the page, and again across the findings section. This would hopefully quell any doubt in the user's mind as to whether or not vaccines cause autism.
- 3) On highly-divisive issues, Browse Smart, even if the user is viewing a reliable source, will search for and provide a link to another reliable source that discusses an alternate point of view.
 - Importance: Often times an issue doesn't have an obvious right or wrong side, and in this case, it is important for one to be able to look at the issue from multiple conflicting angles so that he/she can form a personal opinion. This function is crucial for the long-term goal of Browse Smart being the catalyst that sparks more educated and civil debates about these very divisive issues among public figures and private citizens alike.
 - Example: An example of a highly divisive issue in science is whether or not GMOs are safe to use as a food source. If a user was reading an article about the dangers of GMOs, the extension would direct them to one about their possible benefits, and visa versa.

In order for Browse Smart to be as effective as possible, there are a few additional hurdles that it will have to overcome, some of which are not entirely software-based. For one, it is important to note that some of

the most reliable sources, as well as many, many *original* sources, are found on websites that require a fee or subscription to view their content. Since these sources will be an important part of Browse Smart's overall reliability, some sort of deal will have to be struck with them allowing users who were directed from Browse Smart to view at least a summary of their articles.

Metrics for Success:

If this browser extension becomes successful to the point of being installed on every device's browser, and if it actually gets utilized by everyone in the world who is seeing its suggestions and warnings, then I believe the world will be a drastically different place. Namely, the internet, which is by far the most common place for people to get their information, and which is currently not generally trustworthy, would finally be easier for every person in the world to get reliably accurate information from. There would of course still be articles that are written as jokes, or that are based on little actual evidence, or that are just straight up lies written to get clicks, but with everyone in the world using Browse Smart on their home and mobile devices, such bogus articles would suddenly be very easy for users to weed out as false information. Also, in the case of issues that do not have a clear right and wrong side, Browse Smart would provide the invaluable service of educating its users of viewpoints that don't necessarily agree with their own, and when people are informed about both sides of a given issue, it will open the world up to more educated conversations, which will lead to a less divided and more understanding world.

Browse Smart is more than just an extension that weeds out bad information. It is a way to provide all people with reliable, up to date education about important modern issues, which will be automatically be catered to what each individual is already interested in, and it is a way to open peoples' minds to other viewpoints in a way that will feel natural and unobtrusive to them. In doing so, the hope is that this simple browser extension would be capable of playing an integral part in the formation of a better, more inclusive world.

Conclusion:

Browse Smart, if used even by a relatively small number of people, would be a very useful tool for those users' pursuit of reliable information, but if this proposed solution were implemented and used on a much wider scale, it could greatly reduce the public's misunderstanding of scientific findings and current events, which would in turn reduce the occurrences of problems like resurgence of previously well-controlled diseases, and it could also spark educated and civil discussions of important and divisive issues among public figures and private citizens alike. This discussion could then lead to meaningful compromises on said issues, and eventually to new policies that benefit local and global communities alike. Furthermore, being a browser extension, this system would have a very minimal UI, and it would need hardly any active upkeep after being implemented, so it would be very inexpensive, overall.

Citations:

- [1] <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3852879/>
- [2] http://archive.boston.com/lifestyle/health/articles/2011/01/06/will_autism_fraud_report_be_a_vaccine_booster/
- [3] <http://www.medicaldaily.com/history-autism-and-vaccines-how-one-man-unraveled-worlds-faith-vaccinations-294474>
- [4] <http://www.talknetwork.com/2016-12-14-proof-from-the-cdc-that-vaccines-cause-autism-video.html>