Collective Intelligence

by Charles Thiede and the Zapnito Team

zapnito

Contents

The Origins of the Internet

Things are not as they should be online. Among the ads, fake news, political temper tantrums and biases pulling us in every direction, the entire web landscape feels polluted. Every statement has a caveat, every statistic is funded by a shady thinktank, every fact is treated as a debate. It's difficult to know which way is up, let alone who to trust.

There used to be a time when the internet was about the pursuit of knowledge. **Dating back to its humble beginnings** as a byproduct of the work carried out by Defense Advanced Research Projects Agency (DARPA), the primary function of an interconnected online space was to spread knowledge faster and wider, creating collective intelligence. Before then, visionary thinkers such as Nikola Tesla and Vennevar Bush had theorized on the concept of a wireless, globally connected storage system; however, it was not until the late 1960s when ARPANET first went online that multiple computers were able to connect through a single network.

But why DARPA?

With the concept of the internet floating around for so many years, what led to it being created in a research and development agency of the United States Department of Defense?

To answer that, we must look a little closer at the historical context. DARPA was founded in January 1958. Its creation was a direct response to the Soviet launch of Sputnik 1, the first artificial satellite, the previous year. Over the years that followed, the US and the Soviet Union scrambled to scale the heights of science and technology before their adversaries could get there first.

This was about more than simply having the more powerful military - this was ideological warfare, capitalism and communism going head to head to prove which of these systems was sustainable. Both sides claimed victories in this battle; following on from Sputnik 1, the USSR became the first nation to send a man into space when Yuri Gagarin left the Earth's atmosphere in 1961. The US, of course, sent Neil Armstrong and co. to the moon in 1969.

But for all the symbolic resonance of the 'Space Race', it is arguable that its most important element was the way it spurred both nation's scientists into action. Many of the scientific advancements of this time may have taken longer, or not happened at all, were it not for the fierce competition of these two warring factions. The internet is no exception.

Though the work carried out by DARPA might have laid the foundations for the internet we know today, the technology they developed was not done so with a wider purpose in mind, beyond the internal sharing of their own military data. Nevertheless, it is safe to say that ARPANET planted the seeds for something much greater and far-reaching further down the line - a hub of collective intelligence where anybody could gain access to expert knowledge. **The term 'internet' entered parlance in 1973**, after University College London and Norway's Royal Radar Establishment both joined ARPANET. Over time, as the internet grew, responsibility for maintaining and developing it became shared amongst governmental departments of countries across the globe.

So when you log into Twitter and see baseless conspiracies being used to inspire riots, athletes being subjected to racial abuse and pseudoscience being touted as fact, it can be a little hard to believe all this is taking place using the same technological structure pioneered over fifty years ago.

How times have changed. But to understand how we got from A to B, we must look at what happened in between.

The Internet Takes Off

It wasn't until the introduction of the World Wide Web in the mid-1980s that the internet began to gain traction as more than some faraway, sci-fi concept. Getting online was no longer reserved only for scientists and the wealthy - although it would still be a while before computers became a household essential and the internet really took off in the mainstream. As web traffic grew, so too did the ingenious functions that added new purpose to going online.

Shopping sites such as Amazon and Ebay added practicality to the internet, while the dawn of the search engine realized the dream of having all the knowledge of the world at our fingertips. By the late nineties, almost everybody was looking for a slice of web real estate, creating the dotcom bubble which ultimately burst in the early years of the new millennium.

Then came the dawn of social media, and with it, the changes that would irreversibly alter the face of the internet - literally.
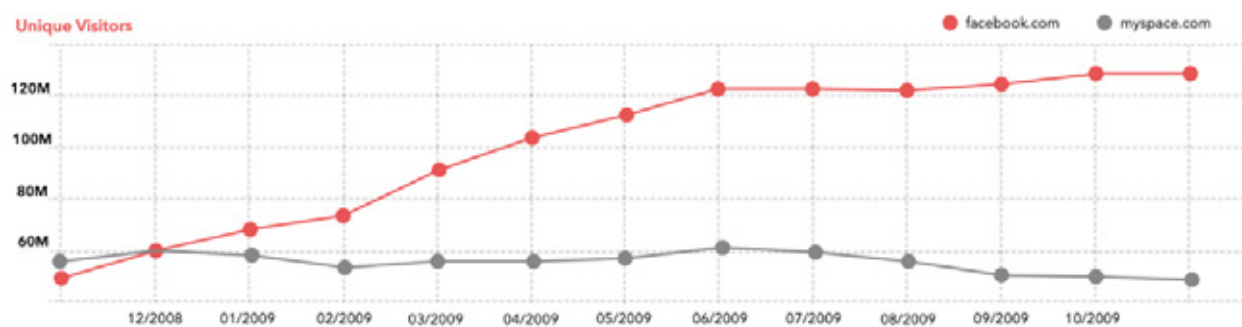
When historians look back on the early 21st century and the colossal social upheaval that took place at that time, they will probably find it hard to believe that much of it was caused by one Harvard student's quest to create a website that rated people's attractiveness on his campus. And yet, somehow, it's the truth. What nobody knew back then was that this rather invasive concept for a website would set the tone perfectly for what Facebook would later become.

Social Media Timeline

Hypertext link defined	TCP/IP packet protocol	TCP adopted by Arpanet	Http protocol	Public access begins	Netscape Mozilla (1st Browser)	Facebook created, rise of social media
1965	1970s	1983	1989-91	1991	1995	2004

The sudden ability to connect with people the world over was revolutionary at the time, and represented an exciting glimpse at what the internet was capable of doing for us. **By 2009, over 350 million people were on Facebook**, with Twitter growing at a similar rate. But very few of us took into consideration what information we were giving these platforms - and what more malevolent forces might do with that information.

The problems began when Facebook began to reward weaponization of content that gained greater interaction, paving the way for a din of collective stupidity to follow. This, combined with the weaponization of disinformation in the mid-2010s, paved the way for Facebook to become a hotbed of fake news, with many people around the world using it as their primary news source. The site's inability or refusal to tackle misinformation created a breeding ground for conspiracy theories, some of which posed a threat to democracy itself.

Unique Visitors   ● facebook.com   ● myspace.com

120M
100M
80M
60M

12/2008 01/2009 02/2009 03/2009 04/2009 05/2009 06/2009 07/2009 08/2009 09/2009 10/2009

Fake News

Over three quarters of the population worry about fake news being used as a weapon, showing that we lack trust in what we see on our screens more than ever. In this environment, Facebook and other social media platforms could not be further from collective intelligence; in fact, creating a platform where **fake news can be churned out** and taken as fact by vast quantities of people is the definition of collective stupidity.

While the concept of connecting people and allowing them to communicate more easily was by no means a bad one, it's hard to imagine any of its pioneers in the early 2000s foreseeing the irreparable damage they would cause further down the line. The line between business and social would become increasingly blurred as social media rewired our brains and changed the way we interact forever.
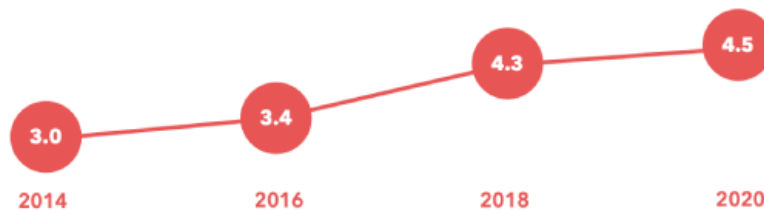
Collective Stupidity

By the end of the 2000s and heading into the early 2010s, the internet was headed down a path that was somewhat different to the one it started on. Somewhere along the way, the internet's original ethos was lost. What was once a fringe technological advancement has now become a behemoth of mixed messaging and false information. Experts are out there, waiting to share their knowledge but drowned out by the wall of meaningless noise and trolling that much of the web landscape has become, with **150,000 Facebook messages now being sent and a million dollars being spent every minute online.**

Global Internet Population Growth 2014 - 2020
(in Billions)

3.0 2014
3.4 2016
4.3 2018
4.5 2020

Collective intelligence has been sacrificed for collective stupidity. At best, the internet is overrun with noise - but at worst, it actively produces disinformation that makes it even harder to gain genuine insight. **There were over 2 million cat videos online by 2015**, with over half of the original content posted to Youtube consisting of people's pets. In 2019, streaming services accounted for a breathtaking **60% of global internet usage.**

From the inane distraction of the Great Cat Video Saturation to the **93 million selfies Google reported being taken per day** on Android devices in 2019, the internet is close to bursting at the seams with nonsense.

Amidst the saturation of meaningless content online, building meaningful networks has become all but impossible using the standard routes. Social media was designed to bring us closer together; in many ways, it has had quite the opposite effect.

93 million selfies
Google reported being taken per day.

Behavioral Modification Empires

Computer scientist and philosopher Jaron Lanier attributes this misstep in the development of the internet to the emergence of two totally incompatible schools of thought surrounding it in the nineties: the desire to make the online world free and accessible to all, and the almost god-like worship of the period's trailblazing tech entrepreneurs. If everything on the web was to be free at the point of use, how then would the likes of Steve Jobs and Bill Gates be able to be hailed for their entrepreneurial spirit?

The most obvious answer at the time was the advertising model: charging businesses to advertise on pages such as Google and thereby avoiding having to charge users. But problems began to emerge when advertisers simply became too good at their jobs and social media became, in Lanier's words, 'behavioral modification empires'. The purpose of organizations such as Google and Facebook ceased to be building connections and began to be geared towards adapting your own habits and thought patterns in the name of turning a profit. Netflix's 2020 documentary The Social Dilemma **brought more widespread attention to what is known as 'surveillance capitalism'** - in other words, using the data we share online to bombard us with targeted advertising and adapt our habits of consumption.

Then there is the rewarding of more popular content and how this has dramatically altered our approach to interacting online. Lanier compares social media today to Pavlov's famous dog experiment, with social media rewarding certain behavior with likes and engagement which are known to produce dopamine in the brain. This means that much of the web landscape actively encourages outlandish and sensational content, as it is likely to receive wider engagement. Expertise and common sense fall by the wayside as a result, unable to match the entertainment value of conspiracy theories and the like.

Jaron Lanier
Computer scientist
and philosopher

Collective Intelligence Today

Of course, collective intelligence still has its strongholds dotted across the web. Platforms such as Github and ResearchGate were designed with the sharing of knowledge in mind and still serve this purpose. Then there is Wikipedia, perhaps the most famous and widely-used of the internet's collective intelligence resources. By allowing anybody to edit pages and contribute knowledge of their own, **Wikipedia is proof in action of the power of shared knowledge - though this openness can also be exploited by people adding false or unverified information.**

Even so, these sites are few and far between and often too focused in one field to be of use to those working in other sectors. Where are the brightest minds of other niche industries supposed to go in order to share their ideas and connect with like-minded individuals?

In truth, many examples of collective intelligence online today are not only low in profit - they are actively non-profit. The commodification of online space has made the voluntary pooling information something of a rarity, meaning people must often take it upon themselves to use the web for its collaborative purpose. **Sarah Greaves,** a scientist who has worked in STEM publishing for over 20 years, highlights **the importance of doing 'what the community would want us to do'** and using the internet to come together for the greater good during difficult times. She and others in the publishing sector came together in 2020 to form a joint initiative which aimed to speed up the process of peer review for COVID-19 related studies, endorsed by the Open Access Scholarly Publishers Association (OASPA). This initiative called upon volunteers whose expertise might be relevant to the pandemic to help review new research at a much faster rate.

The scientific community at large serves as a prime example of collective intelligence done right - in fact, it is an inherent feature in its success. Scientific journals rely on peer review in order to gain legitimacy, making it vital that scientists are able to access content in need of assessment. Making scientific content easily accessible allows knowledge to be disseminated amongst the general public at a faster rate, something which has become essential over the past year. **Penelope Lewis**, another STEM publisher, points out that the importance of this accessibility, explaining, "It's really come to the forefront in the general public… with all of the really intense scrutiny around COVID-19 research."

Penelope also highlights the importance in keeping collective intelligence separate from social media, she adds, "If you're publishing on a trusted server and you know who the community is who's evaluating it… that's important, especially compared to just making some claim on Facebook." This highlights the unsuitability of social media for sharing expert knowledge, something which the scientific community has managed to avoid from the get-go.

Other industries could learn a great deal from the way the scientific community operates. If more industries began to approach their work in the same way as scientists with regard to knowledge sharing and two-way communication between experts and their audiences, harnessing collective intelligence in those industries could become a great deal easier. All science hinges on sharing knowledge and reviewing the work of others, ensuring the validity, significance and originality of research. Scientific journals and vital information are disseminated to the public with ease and can usually be accessed online via STEM publishing. **The use of proper channels to verify scientific research and the way in which it is shared to a wider audience makes the scientific community a perfect example of collective intelligence - one that other industries would be wise to take notes from.**

Why Forums Alone Don't Work

Once the home of all important discussion online before social media took over, forums are another widely used source of collective intelligence. From general discussion forums like Reddit to more focused conversations on sites like Mumsnet and the colossal array of football forums, these sites can be ideal for people looking to find more specialized topics of conversation away from the din of social media.

But there is a reason why forums have not reclaimed their popularity in recent times; much like social media, they are too noisy and lacking in structure to serve as real hubs of genuine expertise. There is very little by way of a hierarchy on most forums, beyond the moderators who monitor the content being posted. This means that there are effectively no means of knowing who is speaking with authority on a subject and who is simply voicing their opinion. A prime example is the notorious conspiracy theorist who goes by the name of 'Q'. Despite no evidence or credentials to back up his claims of insider knowledge, Q's posts in recent years have attracted a cult following and **given rise to the Qanon movement** - eventually culminating in the infamous riot on Capitol Hill in January 2021. Though this may be a somewhat extreme example, the point still stands that forums do not give weight to experts in a way that allows us to harness collective intelligence. The dialogue of forums is not developed upon - it is merely perpetuated, people compounding their biases by feeding off one another. This means the forum ceases to be truly open, and becomes the inverse of what it wants to be.

There is still some value to be found in forums; they create engagement, often between thousands of people, and it is possible to find genuine expertise and insight from some members. However, the nature of forum participation inherently sidelines people who do not want to regularly wade into discussion and debates. The absence of other modes of interaction, such as video panels and private rooms, means users must attempt to make their voices heard over everyone else in a system which rewards its loudest and most frequent members.

In summation, the quality of a forum hinges largely on the quality of its moderators. The responsibility falls upon them to clean up spam, disinformation and abusive comments, or else these corners of the web can become little better than social media. Even when the moderators do their job properly, it's difficult to tell who really knows what they're talking about when everybody's comments carry equal weight. **Our view of expertise is that it is something to be earned, a qualification that certifies years of study and work in a specific field.** Behind the anonymity of forums, anyone can claim to be an expert.

When everybody is an expert, nobody is.

The quality of a forum hinges largely on the quality of its moderators.

The responsibility falls upon them to clean up spam, disinformation and abusive comments, or else these corners of the web can become little better than social media.

Owned Online Communities
(Collective Intelligence)

What the web has been missing for years is spaces where the most sought-after information on a given subject is easy to find and delivered by people who hold genuine authority in that field. Zapnito CTO and co-founder Jon Beer describes the thought process behind starting the company as a direct response to the frustration caused by the noise levels of social media in 2013.

> "Websites like YouTube do serve a purpose online," explains Jon.
> "It's just that that purpose is entertainment. When you actually look back to the people who built the internet - Tim Berners-Lee, for instance - they built it for sharing expert knowledge. Essentially, it was for scientists."

This was the principle on which Zapnito was founded - to return the internet to its original function of creating collective intelligence and give brand experts a voice. By uniting global experts in a given field, be it publishing, technology or healthcare, the perspectives and knowledge of those voices can become greater than the sum of their parts.

Spotlight:
The Financial Times and the Value of Data

One great example of Zapnito customers harnessing the power of collective intelligence is **Springer Nature,** a leading academic and educational publisher. In collaboration with Zapnito, they have created over thirty online communities that serve the needs of a variety of industries across the globe, from ecology to pharmaceuticals. The content of these communities ranges from online training to more subject-focused research communities where people can connect, collaborate and engage in discussions with experts. Jon points to the communities built in collaboration with Springer Nature as a perfect example of Zapnito's potential to unite experts; by using the data from communities to study which content is being consumed by members, Zapnito are able to find common interests between users operating in different fields altogether.

SPRINGER NATURE

Another example is **Wildteam**, who built a community for peer-to-peer communication between conservationists at a time when travelling was all but impossible. Wildteam recognized the need to overhaul the traditional methods of professional development in conservation, which were slow and not particularly time-effective. By offering field-testing solutions, collaboration and classroom training via its online community, they were able to progress a community of over a thousand members around the world, meaning that progress could still be made in conservation during a year where this felt unachievable. In addition, the services offered on the Wildhub platform are innovative enough to have staying power even when the pandemic has subsided.

The potential of online communities even extends as far as policy-making and humanitarian causes. The **Organisation for Economic Co-operation and Development (OECD)** is dedicated to building policies that improve people's lives around the world. Their expert community provides a hub of knowledge and data which can be analyzed and peer-reviewed, thus leading to more informed decision making when creating policies that will genuinely benefit society at large.

The potential for sharing knowledge and building connections with communities such as these is endless. Carving out space online to share undiluted information means customers can identify industry leaders when they see them, allowing them to build long-lasting business relationships that are more than simply transactional.

Tech should never be any more than a tool that helps us to bring out the best in humanity. **Many of the issues we throw billions of dollars at and attempt to solve with technology could be easily achieved if we were able to better utilize our collective intelligence.** The future of technology is often said to lie in artificial intelligence. In truth, this technology could never replace the power of humanity. Nor could it accomplish the things we are capable of as aspecies when we combine our intelligence.

It really is simple: to get the internet back on track, we need to take a people-first approach. **Technology is the means, not the end**; its potential is massive, but not as great as our own.

Building an online community takes time, resources and patience. However, what you get back from it makes it all worth while. Gradually building on the foundation of your platform over time will allow your community to go from a helpful tool to a critical one. As collaboration on your community grows and your network expands, you will find yourself an increasingly critical part of your industry, which now turns to your platform for expert knowledge and peer review from fellow professionals. More organic content will appear, contributed by members instead of your staff. This means that the conversation is getting larger and no longer requires you to keep it moving along.

By creating or joining a base from which to share your expertise and engage meaning fully with your audience, you are becoming part of a movement to return the internet to its original purpose of collective intelligence. It's time for industry experts and trusted brands to come together and rise above the noise.
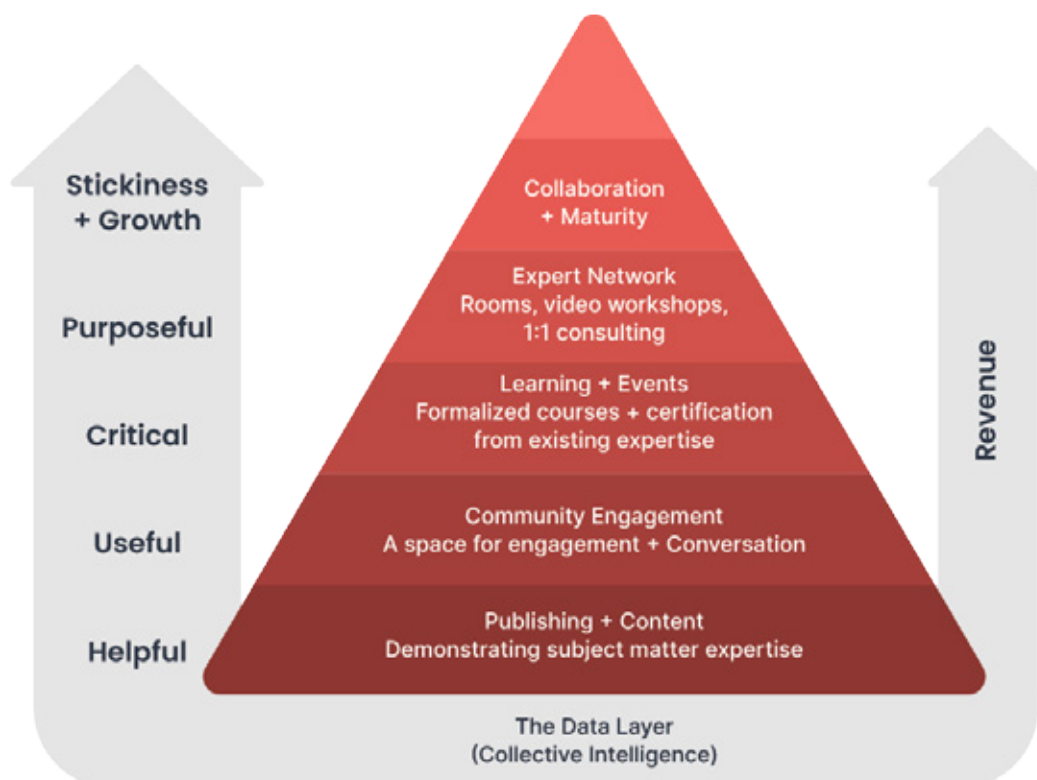
Dear Reader,

Thank you for taking the time to read our eBook on **Collective Intelligence.** We are a SaaS enterprise community and knowledge sharing platform. This is what we do, but the reason we created Zapnito in the first place was as a response to all the noise on social media. We felt that trust was being lost in these channels and trusted brands were losing connections with their clients. Collective intelligence, the original purpose of the internet, was being sidelined for cat videos and Twitter bots - and, nowadays, fake news and misinformation on top of that. So join us on the journey to rebuild collective intelligence - as partners, together.

Charles Thiede,
CEO and co-founder of Zapnito

Book a
Discovery Call

zapnito