100% Natural Ingredients

How much of this essay was artificially generated and does anyone care?

May 2025

By Dwayne Phillips

This essay is from Dr. Dwayne Phillips, PhD. Dr. Phillips is available for hire to research, analyze, and report on topics from AI to writing to budget to management.

d.phillips@computer.org. This and other research reports are available at https://dwaynephillips.net/MediumEssays/index.html

Summary

Microsoft CEO Satya Nadella admitted that 20% to 30% of all software in Microsoft's holdings was artificially generated. Employees are using AI to generate their work products often without permission or knowledge of their bosses. Some consumers care if the intellectual property they consume is created naturally or artificially. Many, however, do not. Standard labels of natural and artificial do not exist. Consumers will demand such in the near future.

Artificially Generated Intellectual Property

Intellectual property: noun: Any product of someone's intellect that has commercial value: a piece of literature, a painting, an invention, a trademark, a trade secret, etc. (https://www.onelook.com/?w=intellectual+property&loc=home_ac_)

Intellectual property (IP) is the stuff that makes the world go round. The content of the news media is all IP. Movies are all IP. Museums preserve IP from the past for present and future generations. Software has eaten the world over ten years ago. That software, written by actual and natural humans, is IP.

This week, Microsoft CEO Satya Nadella admitted that 20% to 30% of all software in Microsoft's holdings was artificially generated IP (Zeff, 2025). That is a big percentage of the stuff that has eaten the world. Microsoft's engine is only 70% to 80% natural ingredients. The rest is artificially added or synthetic ingredients.

A recent study reported that over half of intellectual workers use artificial intelligence (AI) to produce their IP (Thompson). Most of these workers don't tell their bosses that they are using AI. Artificial ingredients are seeping into the IP and without the permission or knowledge of those who are supposed to be managing the IP.

It is clear that much of the new IP today contains artificial ingredients.

The Value of Natural Ingredients

Defining Natural Ingredients: Go back to 1900, i.e., before recordings of music, plays, and most of the IP present today. The IP of that day was the written word. Writers wrote with pen and paper. Writers wrote, edited, revised, and shipped to publishers handwritten IP. The typewriter (Wikimedia, Typewriter) was not in use by even the rich and famous writers of the age. IP was 100% natural in 1900.

The typewritten manuscript became standard in the 1930s. The writing, editing, revising, etc. was done on that writing machine. Writers of today scoff at the suggestion that writing with a machine introduced artificial ingredients into the IP. The IP of the 1930s was still all natural.

The computer as writing machine entered the IP world in the 1970s. The early UNIX machines had roff et al. as text recording and formatting tools. Still, the words with misspellings and grammar mistakes came from the natural human writer. The editing, revising, and transmission to the publisher, however, became much easier. This was still all-natural IP.

Another generation later (the 1990s), the Internet arrived. By that time, the personally owned computer was common. The IP was still natural or at least 98.6% or some other arbitrarily large percentage.

Another generation or two later (the 2020s) and the artificial ingredients are in almost all IP.

There are systems that attempt to detect artificial ingredients in IP in use today. Text analysis as a science has existed for hundreds of years. Analyzers could opine if the person who wrote this novel or play also wrote that novel or play. The results were opinions as it is possible that the same person could write in vastly different styles on vastly different subjects.

One of the great faults of today's detectors of artificial ingredients is that they tend to label well-written and grammatically correct writing as artificial. Folks just don't write good like they used to, so anything correct must be artificial. I find that to be folly.

The value of natural versus artificial ingredients: Natural ingredients in IP is more valuable that artificial ingredients. That is a statement of value from some people, mostly those capable of naturally generating IP. Consumers of IP, however, probably differ in their value statements.

Consumers consume. If artificial ingredients in IP are less expensive and just as good as natural ingredients, the consumers consume them. Consumers also produce IP in the cubicle of the office space. If tools produce artificial ingredients that are incorporated into IP quickly enough so that persons can take a little longer lunch break, great.

Consider the now deceased National Novel Writing Month or NaNoWriMo (The NaNoWriMo Team, 2024). That organization stated and revised its policy on artificial ingredients in IP. The eventual guideline that artificially generated IP came from simple economics. If a writer finished a 50,000-word novel in a month, the writer received a simple and printable certificate. That was it. There was no money or fame or fortune at stake—just something to pin on the bulletin board.

The value proposition is quite simple. When the stakes are low, e.g., a certificate on the bulletin board or a few more minutes allowed for lunch, few seem to care if the IP has more natural than artificial ingredients.

Pardon Me for Using Tools

The IP in this essay was generated naturally: The tools used include:

- MacBook Air (technology unimaginable in 1980)
- Internet (technology unimaginable in 1980)
- MS Word (with spellchecker, grammar checker, and Copilot)
- Google
- Google Gemini
- Wikipedia
- Capitalize My Title https://capitalizemytitle.com/
- Citation Machine https://www.citationmachine.net/
- One Look https://www.onelook.com
- Etc.

The claim to natural ingredients is subjective. Others can argue that some of the items in the bullet list make this essay artificially generated IP.

People use tools. Effective and efficient people often use more tools more effectively and efficiently than other people.

The stakes in this essay are small, i.e., no money was exchanged between the producer and consumer. The only money exchanged was between the producer and Starbucks (provider of a chair, table, and WIFI in exchange for purchasing coffee). Hence, the claim of natural ingredients will go unchallenged.

The Need for Standard Labels

Copyleft is the legal technique of granting certain freedoms over copies of copyrighted works with the requirement that the same rights be preserved in derivative works. (Wikimedia, Copyleft)

The copyright has been the standard label of naturally generated IP for centuries. Variations, such as the Copyleft, arrived in the 1970s and 1980s. Producers of IP in that era wanted others to share in the use of the IP with more freedom than the copyright, but not without some reservations.

The arrival of artificially generated IP has brought another change in standard practice. 100% natural ingredients in IP are now debatable. The producers of IP need a method of showing the percentage of natural and artificial ingredients IP without making a bullet list like in the prior section.

Meta has published its method of labeling IP per the natural-artificial divide (Bickert, 2024). That is a good starting point. Still, Meta is a for-profit company that is not trusted by some. This is not disparaging towards Meta, but a fact. Standards to be used by everyone should come from non-profit organizations that often sets standards.

Some possible sources of standards in the IP area include:

- Electronic Freedom Foundation https://www.eff.org/
- American Psychological Association https://www.apa.org/
- IEEE https://www.ieee.org/

A half-dozen or fewer standard labels would allow consumers of IP to understand the relative amount of natural and artificial ingredients in any IP that is being consumed.

References

Bickert, M. (2024, September 12). Our approach to labeling AI-generated content and Manipulated Media. Meta | Social Technology Company.

https://about.fb.com/news/2024/04/metas-approach-to-labeling-ai-generated-content-and-manipulated-media/

The NaNoWriMo Team (Ed.). (2024, September). A Note to Our Community About our Comments on AI – September 2024. Nanowrimo. https://nanowrimo.org/a-note-to-our-community-about-our-comments-on-ai-september-2024/

Thompson, P. (2025, April 28). Researchers asked almost 50,000 people how they use AI. Over half of workers said they hide it from their bosses. Business Insider.

https://www.businessinsider.com/kpmg-trust-in-ai-study-2025-how-employees-use-ai-2025-4

Wikimedia Foundation. (2025, April 15). Copyleft. Wikipedia. https://en.wikipedia.org/wiki/Copyleft

Wikimedia Foundation. (2025, April 17). Typewriter. Wikipedia. https://en.wikipedia.org/wiki/Typewriter

Zeff, M. (2025, April 30). Microsoft CEO says up to 30% of the company's code was written by Ai. TechCrunch. https://techcrunch.com/2025/04/29/microsoft-ceo-says-up-to-30-of-the-companys-code-was-written-by-ai/