

Tim Wu, *Machine Speech*, 161 U. PA. L. REV. 1495 (2013)

I. THE PROBLEM

Humans have long created machines capable of responding to external conditions in a manner that resembles a decision. The thermostat, a device that controls the temperature of a room, might be said to decide when to turn on or off a heater. Automatic transmission might similarly be said to decide when to switch gears.

Over the last century, such machine decisionmaking has become much more sophisticated, as has the expression of its results. In the past, computers communicated the results of their processes to humans with simple lights, dials, or sounds. Today, machines express outputs in forms easily understood by humans: words on a screen, pictures, or speech. This is analogous to the difference between an oven that beeps when it reaches a desired temperature, and a GPS device that verbally instructs its user how to get home. In communications theory terms, both are signals. ⁹ The latter, however, is more readily described as “speech” because it is translated into language and mimics human expression.

To further flesh out the problem of automated reasoning, it might help to consider the following examples of algorithms, computerized or otherwise, that function in twenty-first-century life in arguably expressive ways:

1. A computerized car alarm, when active, monitors the inputs of various shock sensors and motion detectors, and, on that basis, decides whether to sound a warning or a full alarm.
2. A computerized antilock braking system, noticing that brakes are in danger of locking, overrides a braking decision and reduces braking force on a wheel about to lock, signaling such by vibrating the brake pedal.
3. Apple’s navigation program, based on available routes and traffic data, suggests the fastest way to drive from Hyde Park to O’Hare Airport.
4. Google decides which web links and other information to display in response to queries like “NFL schedule” and “Rosh Hashanah.”¹⁰
5. Facebook, based on a user’s specified interests (say “motorcycles” and “travel”), decides which ads to display to that user.
6. Amazon chooses books to recommend to a customer based on the fact that other people bought books similar to ones the customer already purchased.
7. Apple’s automatic DJ program personalizes a playlist for users based on the songs they own.
8. In the course of a computer game, a computer-generated villain decides to fire a missile to kill the human-controlled player.

In all of these examples, a computer, following a program or algorithm, decides among several alternatives, and expresses that choice in a manner understandable to a human. As such, it creates a narrow but vexing category of expression.

II. BOUNDARIES

The main goal of this Part is to specify the conditions under which the First Amendment is triggered by algorithmic output. I do not present a new descriptive theory in this Part. Rather, the goal is to describe what generally triggers constitutional scrutiny.

It is important to clarify the meaning of “trigger.” Courts face two distinct questions when determining whether a law violates the First Amendment. The first is whether the First Amendment is even relevant—that is, whether the law should even be evaluated with respect to the standards of scrutiny imposed by the First Amendment. Scholars refer to this as a question of “coverage.” Second, courts may ask whether the law survives scrutiny. This is the question of “protection.” For the purposes of this paper, the First Amendment is triggered when the relevant speech act is “covered.”¹¹

The lines that demarcate coverage under the First Amendment often must be inferred, as they are only sometimes discussed explicitly. Consider four such lines. First, along one dimension, a “person” must claim any constitutional right, which includes those in the First Amendment. Second, only communications that qualify as “speech” gain First Amendment protections. Third, in nearly any case, an illicit censorial “motivation” on the part of the Government can trigger the First Amendment, even if the communications at issue would not otherwise be covered. Finally, sometimes courts find that a law does not actually affect speech because, perhaps by the law’s very nature, it tends to promote it. For want of a better term, this can be understood as an “abridgement” jurisprudence; some laws simply are not of a nature that abridge speech, and therefore do not activate First Amendment analysis.

Each of these lines—personhood, speech, motive, and abridgement—is relevant to the problem of computer program output. I consider each in turn. **(Note We only include excerpt on personhood below)**

A. Personhood

The famous case of Blackie the Talking Cat¹² frames the personhood issue. Blackie was a cat trained by his owners to speak various English sentences (like “I love you”).¹³ Carl and Elaine Miles asked for donations from those who enjoyed Blackie’s discourse. The City of Atlanta demanded that he operate pursuant to a business license. The Mileses asserted (among other claims) that the City’s demand infringed Blackie’s rights under the First Amendment.¹⁴ Ruling against Blackie, the court dismissed the cat’s First Amendment claims and held that

[t]his Court will not hear a claim that Blackie’s right to free speech has been infringed. First, although Blackie arguably possesses a very unusual ability, he cannot be considered a “person” and is therefore not protected by the Bill of Rights. Second, even if Blackie had such a right, we see no need for appellants to assert his right *ius tertii*. Blackie can clearly speak for himself.¹⁵

It should be clear that a computer and Blackie are similar. Neither is human, and both have been trained to express themselves in a way that is informative or entertaining to humans. As such, Blackie the Talking Cat is indicative of one way that courts treat nonhumans who generate what resembles human speech: not very seriously.¹⁶ The approach taken toward intelligent animals would generally deny all rights in a case where a nonhuman is the would-be speaker.

When a corporation has expressed itself in a manner that resembles human speech, the Court has granted the protections of the First Amendment, implicitly conceding the corporation’s equal standing with humans. And any lingering doubts about whether corporations other than “the press” have full First Amendment protection were erased in *Citizens United v. FEC*.²⁴

If correct, the speech quality analysis suggests that computers are highly unlikely to have their own speech rights, at least at this stage. Admittedly, computers already make choices through algorithms, and at times, the expression of those choices mimics human expression. But machines today remain like Blackie the cat,²⁹ property of their masters and owners. They remain, to the law

at least, dumb beasts.

1. The Rights of Creators and Users

If the Supreme Court will not entertain a computer's right to free speech, it is more likely to decide that algorithmic output is the speech of a computer program's creator. The program can be understood as a megaphone for the speaker, or his "speech product." Like a book, canvas, or pamphlet, the program is the medium the author uses to communicate his ideas to the world. However, the fact that a program can serve as a vessel for an author's ideas does not always render the creator a speaker. Sometimes, the technology is merely a tool for facilitating the speech of others.

The boundary between speech product and communication tool divides computer programs. Some programs, like contemporary video games, clearly function as vessels for their creators' ideas.³² Like books or films, they are constructed to communicate their creators' ideas to an intended audience. But the algorithmic output of other kinds of programs use information as purely functional and, like the typewriter, are too far removed from the information. The creator of this class of programs does not hold First Amendment Rights with respect to its output. The program's users may bear such rights, however, if the program facilitates their speech.

III. THE FIRST AMENDMENT'S DE FACTO FUNCTIONALITY DOCTRINE

The question now is this: how should or will courts decide whether algorithmic output is protected by the First Amendment?

Here is my thesis: Functionality will usually be the line that divides speech and communications in this area, in the absence of suspicious censorial motives.¹⁰⁵ Doctrinally, this takes courts into an area of the First Amendment that is among the least well understood. But a careful look at the cases suggests that courts already maintain an informal exclusion based on functional considerations.

A. Functionality Generally

Functionality as a legal concept is employed mainly in copyright, patent, and trademark law, each of which has distinctive doctrinal versions.¹⁰⁶ Sometimes described as the "nonfunctionality requirement," this doctrine denies the benefits of the law to some otherwise qualifying expressive work, based on the argument that the work is primarily designed or intended to perform some task unrelated to the goals of the law in question. As such, it acts to prevent a party from using the law to achieve objectives completely unrelated to the goals of that law. It is a limit on opportunism.

B. The First Amendment's Functionality Doctrine

There are two different ways in which the functionality doctrine operates. First is the carrier/conduits category. Here, the actor's relationship to the information in question is too mechanical to make it a speaker.¹¹⁷ The claimant does handle or transform information, but its relationship is characterized by a lack of identification with the information it handles, along with

a lack of specific knowledge and usually a lack of legal responsibility. Sometimes courts call the actions “conduct” instead of speech. In any event, this is where we find telephone companies, courier services, law schools hosting job interviews, and manufacturers of typewriters and television sets. All of these firms handle or transform speech, but none is a speaker (not even a loudspeaker). As I will suggest, many software products will fall into this category as well.

In a second category are communicative tools. In this category, the information conveyed, in context, is functional: it performs some task other than the communication of ideas. Navigational charts are the definitive example, but the rationale is closely related to the academically well-studied topic of “speech acts” or “situation-altering utterances.”

IV. EASY AND HARD CASES: SEARCH ENGINES AND CONCIERGES

B. Hard Cases

1. Search Engines

Search engines are programs that use an algorithm to guess, within some enormous body of text, items that represent the best match for the user’s search.

Given the functional nature of search engines (as the word “engine” suggests), it might seem easy to conclude that search results do not trigger the First Amendment. In a 2008 paper, Oren Bracha and Frank Pasquale reached that conclusion with relative ease.¹⁴² However, several matters make the claim worth further discussion.

First, Google has repeatedly claimed in court that its selection of search results is protected speech and has won such claims in federal district court.¹⁴³ Second, by the mid-2000s, online search was a dominant method for finding information. Search engines like Google and Microsoft’s Bing function like a switchboard for the Internet—a means of connecting users, websites, and advertisements in one place. Indeed, so powerful are search engines as an information gateway that it is typical for governments to focus regulations on them as a means of trying to regulate speech.¹⁴⁴ Many countries, including the United States, censor search results to some extent for various reasons, ranging from political control of citizens to copyright protection.¹⁴⁵

The most prominent case discussing a search engine’s First Amendment rights is *Search King v. Google*.¹⁴⁶ Search King, a search optimization firm, promised to elevate its clients’ results in a Google search.¹⁴⁷ Google caught wind of the scheme and actively demoted Search King’s clients.¹⁴⁸ Unhappy with the demotions, Search King sued Google in Oklahoma for tortious interference with contract.¹⁴⁹ Google raised the First Amendment among its defenses.¹⁵⁰ The district court held that Google’s rankings of webpages are protected speech, and on that basis refused to grant Search King a preliminary injunction.¹⁵¹

More elaborate arguments appear in Eugene Volokh and Donald Falk’s white paper for Google, and in Stuart Benjamin’s article in this issue.¹⁵⁶ Volokh and Falk’s argument depends on the claim that Google is akin to a newspaper or other publisher.¹⁵⁷ A newspaper selects the most important stories of the day and presents them on the front page.¹⁵⁸ Google’s search engine, similarly, ranks

the world's webpages with respect to their relevance to various criteria, and hence, according to Volokh and Falk, gains the same protections.¹⁵⁹

Volokh and Falk's paper, however, misapplies the relevant law. Newspapers and other publishers, unlike mere functional carriers of information, gain protection because their work product reflects a knowing selection and arrangement of the entirety of the articles that make up the final newspaper.¹⁶⁰ The newspaper selects and endorses its articles, and it also usually commissions their authorship in the first place. The articles, in some sense, are the newspaper, and thus it makes sense to say something like, "Look what The Washington Post said about X yesterday."

In contrast, Google comes to a mass of information and indexes it. It does not endorse the sites it ranks—the millions of websites accessible through Google's search engine cannot be said to be Google's speech product. If a Google search turns up website Y about topic X, no one says, "It was interesting what Google had to say about X." Google's sorting of results and generation of an index might therefore be best characterized as "conduct" under Rumsfeld.¹⁶¹ Google helps its users find websites, but it does not sponsor or publish those websites.

Nor, as a legal matter, is Google responsible for the sites it links, as Google has repeatedly asserted to gain statutory immunities.¹⁶² As Bracha and Pasquale point out, "Dogged by complaints related to the content of listed websites, search engines . . . claim merely to be the infrastructure or platform that delivers content."¹⁶³ In short, as neither a conscious curator nor a legally responsible publisher of content, a Google search is a far cry from a newspaper.

Unlike Volokh and Falk, Stuart Benjamin relies not on a metaphor, but rather his restatement of the Spence test to conclude that search engine output counts as "speech" for the First Amendment. He writes,

The touchstone of the Court's First Amendment cases has always been that the underlying activity entails an expression of ideas, even if it is not "a narrow, succinctly articulable message." Communication thus seems to require, at a minimum, a speaker who seeks to transmit some substantive message or messages to a listener who can recognize that message. Thus, in order to communicate, one must have a message that is sendable and receivable and that one actually chooses to send.¹⁶⁴

While Benjamin's "sending a message" standard accurately describes what the Court says, it doesn't come close to describing what courts do. As applied to software, it misses, as I've repeatedly said, the importance of functionality. Taken more generally, the standard is overbroad: everything from nonpolitical vandalism through political assassination "sends a message," but not all of that can reasonably be speech. That is why, as Robert Post puts it, the test "is transparently and manifestly false."¹⁶⁵

In any event, even by Benjamin's own standard, the argument that the operation of a search engine "entails transmission of ideas" is a stretch; it demands a conception of "idea" that widens the category beyond recognition. According to Benjamin, Google hopes to convey ideas like "quality" or "usefulness,"¹⁶⁶ but then so too did the designers of my coffeemaker.¹⁶⁷ A theory that turns the design of home appliances into a form of constitutional speech is probably overbroad. The point is that there necessarily must be some line between actual speech products and mere tools in order to avoid ridiculous results, and the Spence standard ain't it.

If Google isn't a vessel for ideas, what then, is it? While useful, Google's main search, in particular, is probably best akin to a highly advanced and powerful index. Neither the newspaper

nor cable operator cases support the idea that the First Amendment protects something like an index, as opposed to content adopted or selected by the speaker as its own.¹⁶⁸ It is that step—the adoption of information, as a publisher, as opposed to merely pointing the user to it—that marks the difference.

Examining the respective purposes of the search engine creator and the newspaper editor is also illustrative. A newspaper's purpose is to communicate ideas, stories, impressions, and viewpoints to its audience. It is a definitional part of "the press" named in the First Amendment itself, with distinctive and unusual organizational goals. The search engine's primary purpose is, variously, to locate information or, more recently, provide answers, but in any event, its first objective is to serve as a tool for helping its users locate desired information within a giant collection of information. While searching "who was Walter Pater" produces Google's best guess of what the user wants, it does not produce a series of choices that represent the "direct espousal of a political or social doctrine"¹⁶⁹ on behalf of the designer. Rather, Google is just trying to find what the user wants. That is the difference, in some fundamental way, between a tool and speech—the first directly serves the user, while the second attempts to persuade him.

The fact that a search engine is functional does not mean the First Amendment has no role in search-related cases. Rather, as suggested by the discussion of Twitter and microblogging, the important First Amendment issues in search will often come from the perspective of users. Consider were a state to order all search engines to block results linking to information it deemed treasonous or a threat to national security (as the Chinese government does).¹⁷⁰ Laws based on the censorial motive would demand First Amendment scrutiny, though such scrutiny would mainly be based on the speakers' and users' rights. The reason is that the burden in such a case falls directly on the speaker and the listener, even though it is the search engine, the intermediary, that is being used as the enforcer.¹⁷¹ This may seem a superficial or technical difference, but it is not, for it changes the kind of cases that can be brought. The law in question must somehow burden a search engine's users. It is not enough that it is an annoyance to the owner of the search engine.