Is Genericness Still Adequately Defined? Internet Search Firms and the Economic Rationale for Trademarks

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Abstract
Landes and Posner’s highly cited economics of trademark law based on search cost reduction has influenced economists, legislators, and courts for decades. Their account, however, predates consumer use of the Internet for search and did not anticipate the rise of firms such as Google to economy-wide power in search. Consequently, trademark law intended to help consumers find a preferred brand now also protects the means they typically use. An outdated view of trademarks as a natural and equitable right—very scrutable to STS—has led to Internet search firms owning reflexive “marks for finding other marks,” a structural advantage they have exploited through new dynamic and microtargeted forms of advertising into technoscientific rentiership. This paper revises Landes and Posner’s model to fit the case of an economy containing dominant firms with significant economy-wide search cost reduction power, adding (1) differentiation of

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technological elements of the original formal model and (2) analysis of the
distribution and function of marks such as GOOGLE in consumer decision-
making. The updated theory shows that marks granted to search firms are
equivalent to generic marks in economic effect and constitute a new but
unrecognized class that are functionally “super-generic.”

**Keywords**
Internet search firm, trademark theory, super-generic trademark, gener-
icide, trademark law, technoscientific rentiership

**Introduction**
Trademarks are legally protected signs (symbols, words, and phrases) that
identify the source of specific products and services. Consequently, in
modern technoscientific society, trademarks are:

1. Fundamental to searching for and recognizing the necessities of life.
2. A significant portion of vocabulary and, thus, a structural element of
   thought.
3. A uniquely explicit and dogmatic regulation of language by
government.
4. In contrast with (3), a regulatory pillar of “free” markets.
5. More obvious in capitalist economies due to their use in marketing
   but also a feature of almost every modern economic system, espe-
cially as a necessary incentive for international trade (e.g., Hober
1979).
6. In accounting terms, “intangible assets” that have an enormous
   worth. Just the top tech names—APPLE, GOOGLE, MICRO-
SOFT, AMAZON, SAMSUNG, and FACEBOOK—have been val-
ued at roughly US$1 trillion (e.g., Swant 2020; Brand Finance
2021).

Perhaps because of (1) and (2), something may seem “just,” “inevitable,”
or even “natural” about trademark law. We certainly want to be sure that a
vaccine labeled PFIZER injected into our arms is produced by that firm and
not an imitator. And it seems fair that revenue from sale of goods labeled
PEPSI goes to the firm that pays billions to advertise that word. Indeed, in
what I will label a “flat” sense, trademark law simply protects the relation-
ship between producer and consumer by guaranteeing that a mental token can be used to find a reliable instance of a producer’s product or service. I call this basic function “flat” because it assumes that none of the products or services protected by trademarks plays a significant systemic role in search for the others. Each producer in a flat system accrues roughly the same benefit: a chance to create a product or service desired by consumers with a protected name. Producers of a can of tuna, a wristwatch, a sports car, or a chain of hotels enjoy roughly the same opportunity to build a brand from their trademarks so that, on balance, the existence of JOHN WEST does not much affect how we search for a ROLEX, a PORSCHE, or a room at a MARRIOTT.

The problem with this long-standing flat view of trademarks is that trademarked technological services now do exist that have significant systemic—even global—power in search. The existence of the GOOGLE mark does affect how most consumers search for a ROLEX watch or a PORSCHE sports car or a room at a MARRIOTT. Consequently, any infringement by Internet search firms on the limiting doctrine of genericness in trademark law is highly magnified. Thus, if consumers mistake GOOGLE for a generic term, they are at risk of paying a premium in time and money for a vast array of goods and services. If they similarly mistake JOHN WEST, by contrast, they are merely at risk of buying more expensive canned fish.

In this paper, I analyze Internet search firms’ unflattening of the trademark system from two perspectives. Firstly, from an economic viewpoint, I apply the classic economic theory of trademarks by Landes and Posner (1987) to the case of trademark protected firms with economy-wide power in search. Secondly, from a consumer decision-making viewpoint, I trace how the marks of Internet search firms have joined traditional generic terms for search to become “super-generic.” Locating the advent of super-genericness within the technoscience rentiership paradigm championed by (Birch 2020; Birch and Cochrane 2021), I then propose that Internet search firms’ creation of super-generic marks have allowed them to become rentiers of outdated trademark law whose constitutive role in “free markets” is now a pillar of technological monopoly.

Firstly, however, as the rationale and reach of trademark law is unfamiliar to many in Science and Technology Studies (STS), I extend this introduction to argue that, as the legally stabilized interface between consumers and big tech, trademark law is very worthy of closer attention.
Trademark Law’s Growing Relevance to STS

From a key sociological perspective, trademarks are the most important type of intellectual property. They intervene in the basic relation of signs and things from which social reality arises. This significance has been well explored, for example, by Veblen ([1899] 1996), Barthes ([1957] 1972), Baudrillard ([1970] 1998), Eco ([1975] 1987), and Lazzarato (2014). In STS, patents are more often studied than trademarks, but they are not nearly as naturalized or pervasive. Information technology patents in the 1990s, for example, were certainly a great cause of societal transformation, but their impact was contingent on commercialization. How would the Internet have evolved had it been the mood of courts in 1995 to rule the online world incompatible with the trademark system? It could have happened. The Internet was, after all, armed with its own domain name system, linking protocols, and search capabilities. Moreover, it had progressed with only little trademark system integration to that point. Hamilton (1995) offers the clearest contemporary evidence, but to provide just one anecdote of the confusion and contingency of the times, Josh Quittner, writing for Wired in 1994, was able to register and become the legal owner of mcdonalds.com as a journalistic prank (Quittner 1994). While the net effect of the patent and copyright systems is debatable, without trademark control, the commercial Internet would certainly be a shadow of its current self.

The fact that the rise of the commercial Internet has not reinvigorated interest in trademark theory is surprising. It has not always been so stagnant as it is today. Schechter, at the height of a period with many parallels in “commercial depravity,” wrote in the Harvard Law Review:

These vigorous judicial expressions of impatience with the old theories of trademark protection are indicative of a desire to keep abreast of and to serve the needs of modern business. They reflect a consciousness of the need for breadth and liberality in coping with the progressive ingenuity of commercial depravity. (Schechter 1927, 813)

Despite a variegated history back to ancient times, trademark systems as social and economic organizing structures have been little studied in STS outside works devoted to the practice of law and innovation (e.g., Silbey 2014) or mentioned largely only in passing (e.g., Rikap 2020, 4). When intellectual property rights are enumerated, trademarks are sometimes listed for inclusivity but are just as often omitted. The fourth edition of The Science and Technology Studies Handbook (Felt et al. 2017) contains
seventeen mentions of “patent” or “patents,” eleven of “copyright,” but zero of “trademark” or “trademarks.”

The lack of attention to trademark theory in STS, however, is not surprising given the broader situation. In the current technological context, even intellectual property practitioners are uncertain about trademarks. As Mossoff (2018, 1) puts it, “judges and scholars today are confused about trademark rights and the doctrines that define and limit their use in the marketplace.” Theoretical treatment of trademarks seems to fall awkwardly at the margins of both law and economics. The former cares mainly about codification and precedent, the latter about rationale and outcome. The one forum in which trademarks are visible—perhaps predictably—is the use of trademark data for computational metrification and landscaping of innovation, most squarely in forecasting and management studies (e.g., Yoonjae and Barnett 2011; Lim et al. 2017; Castaldi 2019; Grid 2019; Shackell and De Vine 2021). Articles like Mossoff’s that problematize or contextualize trademarks are rare in the past decade and usually confined not just to law journals but also to the margins of specialist intellectual property law journals. The result is that the US Trademark Modernization Act of 2020 (H.R. 6196; S.3449) provides tightening and streamlining but does not touch the core elements of the 1946 Lanham Act (15 USC § 1064) with any nonadministrative acknowledgment of technological change.

STS should be interested in the vacuum in scholarship about how big tech’s use of the trademark system impacts society, for this space offers a direct opportunity to influence the course of its evolution. Trademarks are routinely challenged and cancelled on grounds such as confusion, dilution, and genericness. Where technology infringes on substantive rights such as freedom of expression, common law offers a remedy. A major development in society’s relation to technology, therefore, is as close as a court ruling that a major technology firm’s trademark must be cancelled. STS can contribute to the economic, social, and legal discourse and that informs this process.

The Economic Rationale for Trademarks

Trademark law regulates words and other signs to simplify and shorten consumers’ search for information about products and services: that is, to lower their search cost. This widespread and still prevailing economic justification for trademark law was worked out in cogent neoclassical detail by Landes and Posner (1987) well before the advent of the commercial Internet, which effectively arrived in 1995. Nonetheless, when presenting their theory again in the new millennium, they revised it very little (Landes
and Posner 2003, 166-209). For them, an undifferentiated notion of search cost reduction, indiscriminately applicable to all classes of consumer goods and services, persisted as the rationale for trademarks in the Internet era. To underscore their conviction, on both occasions, they illustrated their view with the same narrative of search cost from the consumer’s viewpoint:

Suppose, then, that a consumer has a favorable experience with brand X and wants to buy it again. Or suppose he wants to buy brand X because it has been recommended by a reliable source or because he has had a favorable experience with another brand produced by the same producer. Rather than reading the fine print on the package to determine whether the description matches his understanding of brand X, or investigating the attributes of all the different versions of the product (of which X is one brand) to determine which one is brand X, the consumer will find it much less costly to search by identifying the relevant trademark and purchasing the corresponding brand. (Landes and Posner 2003, 167)

Conversely, on the supply side, they reasserted that:

The value of a trademark to the firm that uses it to designate its brand is the saving in consumers’ search costs made possible by the information that the trademark conveys or embodies about the quality of the firm’s brand. (Landes and Posner 2003, 168)

There have been several attempts since the turn of the millennium to refine, reframe, or deconstruct the concept of search cost. Beebe (2003, 2004), for example, argued for a semiotic perspective in which informational and persuasive elements of marks should be distinguished. Barnes (2006, 65) suggested that the “mixed public goods nature of trademarks” should be asserted. McKenna (2012), in a more free market vein, argued that the idea of protection against trademark confusion is too general and should be narrowed to factors that affect actual consumer decisions. Rierson (2017), seeking simplification, has urged a collapsing together of what are known as the genericism and functionality doctrines.

Although by no means unanimous, a frequent criticism has been that trademark protection is asymmetrically beneficial to large firms and hence anticompetitive. Dominant firms are seen as able to leverage trademarks into “super-brands” that monopolize consumer attention and awareness. Nike Inc., for example, are renowned for spending vast sums each year to promote their “swoosh” logo, something most competing shoe
manufacturers are unable to match. By this view, the extraordinary profits a firm like Nike, Inc. has enjoyed are due to sociologically engineered demand, which represents a distortion of consumer perception and search behavior (e.g., Salzman, Matathia, and O’Reilly 2003). Brand-based inequalities notwithstanding, it seems fair to say that no commentator has succeeded in convincing regulators that the search cost reduction basis of trademark law should be revised to differentiate marks on any criteria other than genericness, dilution, or confusion, which are well covered as special cases with clear economic costs by Landes and Posner (1987, 291-309).

Recently, however, and on a scale unprecedented even by super-brand owners such as Nike Inc., antitrust concerns have been rising on the economic, cultural, and political effects of highly capitalized firms based on search technologies with marks such as GOOGLE, AMAZON, and FACEBOOK. Measures of Internet market share vary greatly, but the website Statista claims that GOOGLE (which I will use throughout the paper as the primary example of an Internet search service mark) has around 87 percent of the global search market while second placed BING has around 6.7 percent. BAIDU, the dominant search engine mark in China, by contrast, has less than one percent (Statista 2021).

Big tech firms outside general search are less obviously, but nonetheless fundamentally, search based. Facebook, for example, provides social search. Amazon provides aggregated product search. These firms’ foundation in search is obscured, however, because it is an open question whether they are monopolists in distinct markets or oligopolists in one led by Google, from whom much of their traffic flows. Moreover, there are considerable complexities in cross-ownership and commercial arrangements. There is little doubt, however, that GOOGLE is the dominant mark in search, a fact clear in Table 1, which also shows that many of the most popular websites are search services of various types or websites that are commonly entered from search engine result pages (e.g., Wikipedia).

The current situation did not arise unnoticed. The conflict of intellectual property and innovation was a developing theme in the 1980s (e.g., from the same year as Landes and Posner’s original paper, Samuelson 1987). However, when Internet search firms began their run-off for dominance in the late 1990s, the granting of trademarks to economy-wide online services offering search cost reduction (what can be called a “reflexive” use when we remember the rationale for the trademark system) was rarely, if ever, questioned. In fact, the Internet’s domain name system was even seen to presage a decline in trademark importance, for Internet firms’ chosen marks are embedded in the URLs necessary to locate and use them and
international borders matter little (e.g., Maher 1997). The domain name system seemed to provide de facto mark protection in parallel to that attainable de jure. Indeed, “cybersquatting” emerged as a notable pastime on exactly this expectation but eventually prompted the US Anticybersquatting Consumer Protection Act of 1999, a watershed expansion of the 1946 Lanham Act. It asserted the rights of traditional mark holders on the Internet but said nothing about search itself being transformed.

The regulatory uncertainty of the 1990s and even 2000s is understandable. However, after twenty-five years of the commercial Internet, two facts are now crystal clear yet startling when juxtaposed:

1. The rationale for trademark protection is to reduce search cost between producers and consumers.
2. Internet search firms, enjoying trademark protection, are now the dominant means consumers use to reduce search cost.

### Table 1. The Most Visited Websites in the United States as at November 25, 2020.

| Global Ranking | Site Name       | URL             |
|----------------|-----------------|-----------------|
| 1              | Google Search   | google.com      |
| 2              | YouTube         | youtube.com     |
| 6              | Facebook        | facebook.com    |
| 11             | Amazon          | amazon.com      |
| 12             | Yahoo!          | yahoo.com       |
| 13             | Wikipedia       | wikipedia.org   |
| 14             | Zoom            | zoom.us         |
| 17             | Windows Live    | live.com        |
| 18             | Reddit          | reddit.com      |
| 20             | Netflix         | netflix.com     |
| 21             | Microsoft       | microsoft.com   |
| 23             | Microsoft Office| office.com      |
| 25             | Instagram       | instagram.com   |
| 28             | Microsoft Online| microsoftonline.com |
| 35             | Twitch          | twitch.tv       |
| 38             | Bing            | bing.com        |
| 39             | Apple Inc.      | apple.com       |
| 40             | eBay            | ebay.com        |
| 43             | Stack Overflow  | stackoverflow.com|
| 45             | Adobe           | adobe.com       |
| 48             | Twitter         | twitter.com     |

*Source: Alexa (2020).*
In the next section, I explore Landes and Posner’s economic theory of trademarks to show that an unequal benefit and deadweight economic loss arises when trademark protection is granted to technology firms that are themselves providers of economy-wide search cost lowering services.

**Landes and Posner’s 1987 Formal Model**

The formal basis of Landes and Posner’s neoclassical model of the economic effects of trademark law is the composition of the full price ($p$) of a good to a consumer:

We define the full price ($p$) of a good $X$ to the buyer as its money price ($P$) plus the search costs ($H$) he incurs in learning about the relevant characteristics of $X$. That is,

$$p = P + H(T, \Upsilon, W)$$

$H$ depends in part on information provided by the firm to the buyer by means of its trademark $T$. The more resources the firm pours into developing and promoting its mark, the stronger the mark will be (that is, the greater $T$ will be) and the smaller $H$ will be. (Landes and Posner 2003, 174)

In the model, $T$, the strength of a firm’s trademark, and $W$, the supply of suitable words and symbols a firm has available to form trademarks, are central. $\Upsilon$, by contrast, is a catchall, encompassing: “... factors other than $T$, such as the amount of advertising, the technology available to the firm for producing information, the number of competitors... and the cost of the buyer’s time” (p. 175). Landes and Posner, while not discounting flux in these factors, state that they are not relevant to trademark economics: “We denote these other factors by $\Upsilon$, but because our interest is in trademarks we shall ignore them” (p. 175). This exclusion was not unreasonable in the pre-Internet era. A firm with a printing press is obviously at an advantage in spreading the word about its mark compared to a firm without one, but the number of printing press vendors and operators could be assumed to be large. Emergence of a new proprietary technology as powerful as the printing press controlled by a single firm seemed a low risk. Information technology, the one candidate for such a development, was, as now, seen as a source of competitive advantage but was more something to be developed in-house. It was not something that connected people, that the nonexpert consumer was perpetually equipped with, or that centered on enormously valuable trademarks beside those of a few consumer-facing hardware
suppliers such as APPLE and IBM. Nonetheless, as technological capitalism has evolved, the excluded component of $Y$ defined as “technology available to the firm for producing information” (which I separate out from $Y$ as $E$) has been the component in the model that has undergone a complex, global revolution. Evidence of this is that practically all the most valuable marks ever registered are now from this very sector. In the Internet era, therefore, Landes and Posner’s search cost function must now be expanded to:

$$H = H(T, E, Y, W)$$

This rewriting is not intended to imply that firms trading in search cost reduction did not exist before the Internet. The best pre-Internet example of the progress of $E$ is in the information gathering and print technology supporting newspapers and directories with marks such as THE YELLOW PAGES. However, the number of newspapers and directories was large, their foci diverse, and their power relatively localized or segmented. Certainly, no one firm—even national newspapers—had economy-wide power whereby a consumer using their trademarked service might know within seconds the location and price of every offering of a certain product in the entire country. At the economy level, all such firms had to vie to offer even small savings in search cost. The business model the firms employed—charging other firms for search cost reduction through advertising—endures, of course, to this day and has been ported not only to newspaper websites but to all manner of sites as pay per click advertising (which is a monetization vehicle pioneered by Internet search firms). So long as the number of search cost lowering firms is large and none has economy-wide power, Landes and Posner’s formal model is a good approximation of trademark benefit to firms.

The Internet, however, has invalidated this assumption. Internet search firms now exist with economy-wide power in search cost reduction. The technology and data sets these firms have created, unlike the printing press or indeed the Internet itself, are not available to all firms. Through proprietary technological advantage stabilized under trademark protection, a few Internet search firms have grown to the point that, through $E$, they now control $H$ (and thus $\pi$) for many firms. Signs of this dominance are everywhere. Most obvious, perhaps, is the decline in newspapers and other traditional search cost reduction firms, whose advertising base has been decimated (e.g., Angelucci and Cagé 2019). This is not simply a matter of technological disruption in one sector; rather it is an escalation in search
cost reduction power to an economy-wide level—something that was previously not technologically possible by even the most national of newspapers or business directories.

This development invalidates the received economics of trademarks. Landes and Posner’s pre-Internet model holds in cases where no firm has an economy-wide capability in $E$ to affect the $H$ of many other firms. It holds when this capability is either zero (e.g., the PEPSI mark in no way protects a saleable service for reducing the search cost of other firms) or, relative to the economy, small (e.g., FOX NEWS may be a mark related to a search cost reducing advertising service but is only one such service among many that are roughly equivalent or segmented in reach). A breakdown of this assumption has obviously come to pass due to the rise—under trademark protection—of Internet search firms. Consequently, we now inhabit a special, untheorized economy in which a few firms with economy-wide power in $E$ enjoy monopolistic returns through a reflexive use of the trademark system itself.

**The Economic Effect of Dominant Internet Search Firms in Landes and Posner’s Model**

At this point, it might seem that we face an enormous task in deducing what effect trademark protected Internet search firms have on an economy. While novel, the economic consequences of the special case identified above are not as unfamiliar as might be expected. In fact, these consequences are worked out in detail by Landes and Posner themselves. In terms of effect on $H$, the case of dominance in $E$ is equivalent to the case of dominance in the other important term, $W$, the stock of words and symbols with which to form marks. Dominance in $W$, of course, is the case in which a firm owns a mark that is a generic term. To make this algebraic equivalence clear, consider the dependencies in the expanded model:

$$H = H(T, E, \gamma, W)$$

A generic term operating as a mark introduces an impairment to competitors’ $H$ by limiting the stock of descriptive words and symbols $W$ they can use to describe their goods. For example, if a firm were able to register and prevent anyone else from using the term “coffee” (except, perhaps, by paying a license fee), it would become more difficult for competitors to sell drinks of that nature because they would have to come up with new and unfamiliar ways to describe what they are selling to consumers. The
inefficiency this introduces is traced by Landes and Posner (2003, 191) using neoclassical microeconomic analysis to a deadweight economic loss.

Similarly, but more broadly, an Internet search firm with economy-wide power through $E$ on $H$ introduces an impairment on practically all firms and, consequently, a much larger deadweight loss. To be clear, this impairment to firms arises not from being prevented from using a trademarked term to transmit information about their goods; it arises from being prevented from transmitting information about their trademarks via a dominant Internet search firm’s trademark. Continuing the example of coffee vendors, instead of being forced to license the generic term “coffee” so that consumers can research and locate their goods, firms must de facto license GOOGLE for this purpose by paying for Google’s advertising services. For without prominence via an Internet search mark, generic terms are of limited value to firms.

Economically, a key difference is that ownership of a generic mark allows relatively intense rent seeking at a category level, while ownership of a mark for search reduction allows more diffuse rent seeking at an economy level. The breadth of effect explains to some extent how privatization of search cost reduction through the trademark system has progressed unchallenged, for the search capability provided free to consumers by firms such as Google has obscured systemic effects. Such disguise and naturalization through economy-scale diffusion would, in fact, seem a feature of technoscience rent from “reconfiguration of ownership” flagged by Birch (2020, 4).

The magnitude of rent seeking that dominant Internet search firms engage in is not difficult to discern. A firm with economy-wide power in $E$ can extract rent from millions of firms seeking to reduce $H$ by charging those firms up to the reductions in $H$ it can offer. The market capitalization of Alphabet Inc. is approaching US$2 trillion in September 2021.

**Generic Marks and Super-generic Marks**

The similarity of generic marks and marks owned by dominant Internet search firms is worth restating. Whereas ownership of a generic mark confers an advantage over other firms in $H$ via $W$, a mark granted to protect a dominant search service confers a similar advantage via $E$. While these pathways are distinct, a dichotomous theoretical separation is not warranted. For, to achieve economy-wide power, the mark of an Internet search firm must also come to permeate consumer language and thus tend toward what might be called traditional or pre-Internet genericness.
Seen from this perspective, it is unsurprising that the GOOGLE mark has been challenged as generic (Elliott v. Google, Inc. 2017). Similarly, unsurprising is that the court considered the evidence presented not to reach the current standard for genericide (the cancellation of a mark on grounds that it has become a generic term). The ubiquity of the GOOGLE mark (including its use as a verb) is suggestive of it being a generic term but is not proof that consumers do not know that the GOOGLE search service is a Google offering (the long-standing “primary significance” test enshrined in Section 14 of the US Lanham Act). In my view, justified in formal terms above, the plaintiff’s intuition that GOOGLE is a generic term (which it was unable to articulate) derives from the fact that GOOGLE enjoys a structural as well as a semantic advantage in the minds of consumers due to its involvement in search. This structural advantage is the essence of a generic term: such terms help us recognize and locate things via categorization. However, being only a new possibility on an economy-wide scale due to technological change, it is currently unrecognized by the courts and, as the Elliott v. Google, Inc. ruling attests, still conflated by litigants and courts alike with confusion of ubiquity and genericness. For this reason, then, the relation between search dominance and genericness should not be effaced by the coining of a noncognate theoretical term. Rather, I suggest that the marks of Internet search firms with economy-wide search reduction power should be classed as “super-generic,” a term that captures the underlying reflexive turn in allowing a dominant search firm to hold a mark in a system predicated to promote search cost reduction. The term super-generic also leads naturally to an evolution of regulation based in current genericness doctrine. To prove the correctness of the above extension of Landes and Posner’s theory, and to demonstrate that marks protecting search reduction services are indeed a special structural case, it is only necessary to examine their unprecedented distribution and use in consumer decision-making, which are traced in the next section.

The Sequence of Generic Terms and Marks in Consumer Decision-making

Preliminary evidence that marks such as GOOGLE are ubiquitous in consumer consciousness is perhaps unnecessary. Nonetheless, the words of Google’s Chief Economist, Hal Varian, quoted in Bock (2015, 15), put the issue beyond doubt: “A billion hours ago, modern Homo sapiens emerged.
A billion minutes ago, Christianity began. A billion seconds ago, the IBM personal computer was released. A billion Google searches ago... was this morning.” As the courts uphold, ubiquity is a necessary but not sufficient indicator of mark genericness: the heart of the matter lies in a mark’s distribution relative to known generic terms and clearly distinctive marks. A way to examine generic and nongeneric marks, therefore, is to look at the structural necessity of terms in consumer decision-making beginning from (1) a general term and (2) a specific term.

For example, consider a consumer searching for a good with a generic name such as “coffee.” The outcome of the consumer’s search for coffee will be a certain mark of coffee such as STARBUCKS or TIM HORTONS, but which mark is not certain at search initiation. The consumer simply wants “coffee” and does not care about, or has not decided on, the brand. The appearance of the generic term “coffee” in such search necessarily precedes the appearance of the distinctive mark. Using arrows to indicate the progress of search from initiation to satisfaction, the necessary sequence of terms can be written as:

(1) Generic (“coffee”) $\rightarrow$ Mark (STARBUCKS or TIM HORTONS or...)

Sequence (1) contrasts with that of a consumer searching for a specific mark of coffee such as STARBUCKS. In (2), no generic term need occur to initiate the search and the outcome of a successful search will simply be coffee with the mark STARBUCKS.

(2) Mark (STARBUCKS) $\rightarrow$ Mark (STARBUCKS)

If a mark is a generic term to a consumer, (2) simply collapses into (1). For if STARBUCKS becomes a generic term for “coffee,” other marks such as TIM HORTONS will, at least for an initial period before consumers no longer recognize their product, begin to be found by consumers using STARBUCKS to initiate search. Thus, a test for the genericness of a mark is whether the mark functions to any extent as a search initiation term that leads to search satisfied by other marks. To illustrate the point, if a consumer expresses a desire for a cup of STARBUCKS and then walks into a TIM HORTONS, STARBUCKS can be said to be a generic term for coffee to that consumer. While this may sound farfetched, remember that many people in the United States who say they are going to “xerox” something will actually use another brand of copying machine or, indeed, that some people who say they are “googling” something may then use Microsoft’s Bing.
So far, it has not been specified how search occurs in (1) and (2), that is, the context. A not unreasonable assumption is that our consumer is walking the streets of a city and, as often happens, conceives a need for either (1) “coffee” or (2) STARBUCKS and continues walking and looking around until they satisfy their search at a branded coffee shop. Under these conditions, the consumer can carry out the search without recourse to any extraneous marks (since “walking” and “looking around” are very generic terms). But now consider (1) and (2) with the added assumption that each search is initiated by our pedestrian consumer using the Google search engine to research and locate the desired good (on a smartphone, for example). The core structure of (1) and (2) in this, as in any context, is unchanged. In (1), the consumer will begin by “googling coffee.” In (2), the consumer will begin by “googling STARBUCKS.” To the occurrence of marks, however, we must add in each case an occurrence of the mark GOOGLE, for it would be generally impossible to use the Google search engine without some cognizance of the mark GOOGLE just as it would be impossible to find a Starbucks without some cognizance of the mark STARBUCKS. Thus, (1) and (2) expand to:

(3) Mark (GOOGLE) $\rightarrow$ Generic (“coffee”) $\rightarrow$ Mark (STARBUCKS or TIM HORTONS . . . )

(4) Mark (GOOGLE) $\rightarrow$ Mark (STARBUCKS) $\rightarrow$ Mark (STARBUCKS)

In (3) and (4), the GOOGLE mark occurs in both searches at search initiation but does not determine which mark the consumer will eventually find. This, however, is precisely the structure of (1): search initiated using a generic term. The mark GOOGLE, in fact, can function in this structurally generic way for any search, a fact formalized in (5).

(5) Mark (GOOGLE) $\rightarrow$ Any Generic term or Mark $\rightarrow$ Any Mark

What is the meaning of this strange result? Is this a property of all marks? The idea that any other type of mark occurs in consumer search in this way is easily dismissed. Who regularly thinks of ROLEX or SUBARU before searching for “coffee”? Clearly, it would be inaccurate to say that GOOGLE has any semantic function as a generic term like “coffee”; GOOGLE has no synonymic or hypernymic relation to “coffee.” But GOOGLE does occupy the same enveloping structural role. As a very frequent representation in search initiation, the GOOGLE mark shares a regular pattern of co-occurrence with a generic term such as “coffee”—or, indeed, “toothpaste”
or “engagement ring” or “real estate.” In fact, if we assume that a significant portion of consumer search today is initiated via the GOOGLE mark, its occurrence in this structurally generic role must be many times greater than “coffee,” for it co-occurs often with not just one generic term but with all generic terms governing all distinctive marks. The GOOGLE mark, therefore, by its pattern of occurrence in consumer search cognition to a significant extent governs the entire “flat” class of generic marks, and this leads to my designation of it and its ilk as super-generic, a term arrived at above via the alternative path of reexamination of Landes and Posner’s formal economic analysis.

Another example will perhaps serve to clarify the distinction between generic and super-generic. Suppose a traditional trademark has become a generic term to some consumers—TYLENOL for acetaminophen, for example. What is the scope of the effect on those consumers? The distortionary effect is just on one category: pain relief medication. Those consumers might, for example, buy Tylenol instead of another brand because they think there is no substitute. By contrast, what is the scope of effect on consumers to whom GOOGLE is generic to the same degree? By current judicial reckoning, the effect is likewise only in one sector: “Internet search.” However, the real effect is across many categories because consumers use “Internet search” to find and research many other marks. Their search for cars, hotels, food, entertainment, and real estate are also distorted. Thus, GOOGLE creates much more economic distortion at the same level of genericness because its effect on consumer search is multiplied by its intimate involvement with it. This potential is what differentiates the marks of Internet search firms as “super-generic.”

**Locating Super-generic Trademarks in STS: Technoscience Rentiership, Regulatory Silence, and Free Markets**

This paper has taken a “bottom-up” approach. It has examined trademark law and, through attention to its rationale in human values, traced its technological supervention by Internet search firms. Integrating the resultant theory of super-genericness into larger theories in STS requires more space and community contribution than this paper can encompass. However, I would like to make three suggestions, the first of which asserts a theoretical direction.
Technoscientific Rentiership

Super-genericness has a ready affinity with the theory of technoscience rentiership recently consolidated by Birch (2020) from his own research (e.g., Birch 2017) and that of Fuller (2016), McGoey (2017) and others. In terms of the rentiership categories formulated by Birch and Cochrane (2021), dominant Internet search firms extract “reflexivity rent” from trademark law. Through their agility relative to reform, they have converted society’s trademark infrastructure into their own rentable asset: an instance also of what Pistor (2019, 116) appropriately describes as using law as “source code” from which to create capital. The technoscientific rentiership paradigm offers a bridge to seeing super-generic trademarks as a root cause of much larger phenomena, especially via creep in the private ownership of infrastructure.

The most interesting and sinister of these larger phenomena, however, are in my view not economic but epistemic. In helping their users find things, search engines algorithmically present text and images to the extent that they remake consciousness. Trademarks such as GOOGLE have become Lacanian “master signifiers” (Lacan [1955] 1993), leading always back to themselves as the crossroads to information. The broader epistemic ramifications of such ubiquity are only to be guessed (e.g., Shackell and Bruza 2019) but the excusatory view that the effects of search engines end with connecting us to information must be treated with heavy skepticism. As gateways to information, trademarks such as GOOGLE are inherently formative and ideological. They are more than mere markers of source, yet they maintain a neutral regulatory status as such because economics only goes so far in describing their externalities (e.g., Shackell 2018; Shackell and Sitbon 2018; Zhuravskaya, Petrova, and Enikolopov 2020; Creech 2020). Trademarks in technoscientific rentiership could extend into “cognitive rentiership” wherein legally fixed mental nodes like GOOGLE are crucial to user attention being delivered as the product.

Regulatory Silence

The silence of regulators about the altered technological status quo in search should fascinate STS. A perfect capture seems to have occurred in which regulators are no longer even aware of the rationale on which they regulate. A rare view of the complex institutional and administrative politics contributing to such silence is offered by Paradise (2017), but it remains extraordinary that, if Internet search firms are somehow not relevant to the
search cost rationale of the trademark system, this has not been explicitly debated. Internet search, after all, is perhaps the greatest development in consumers’ relationship to trademarks of modern times.

The omission may partially stem from the mythology that patents and innovative business models alone are the source of rent in Internet search: the easily digested “unicorn” narrative of extraordinary profits for superior technology. Indeed, Google’s PageRank algorithm (Page et al. 1999) and its AdWords system (Google Inc. 2000) are the stuff of entrepreneurial legend. But considering the stakes, the barriers to entry in Internet search are no longer great. Patents and business savvy doubtless play a role, but the amount of open research and experienced personnel available means that engineering a rival service to Google or Bing is not an unsurmountable task. Indeed, any new entrant has existing search engines to reverse engineer and benchmark against. The real barriers to entry today are the enormous data sets tech firms have accumulated, and the psychological embeddedness that flows from their trademarks’ constant juxtaposition with practically every other mark and newsworthy term.

As Birch and Cochrane (2021, 2) note, a clear view of the diversity of rentiership mechanisms is complicated by big tech’s multifaceted entanglement in our everyday lives, so perhaps regulators themselves truly believe the unicorn narrative. STS has the potential to probe the regulatory stasis much more deeply in sociological and political terms, perhaps via the account of the shaping of regulatory science and expertise put forward by Demortain (2017).

**Deconstructing Free Markets**

With respect to antitrust, super-genericness offers a clear example with which to challenge the free market “economies of scale” justification of big tech oligopoly. This view asks us to accept that concentration to trillion-dollar monopoly in the most fungible of services—helping people find things—is an economic inevitability. The Polanyian counter-perspective Birch (2020, 17) enlists—that markets are always constituted by contingent rules and regulation (Polanyi 1957)—is incisive. It adjures us to view regulation of language to constitute free markets as an architectural intrusion that escapes closer scrutiny because it has become naturalized as a right. A sense of this naturalization inheres in the common confusion that trademark cancellation is regulatory interference. In fact, it is regulatory contraction in favor of freedom of expression.
Trademarks are such a fundamental pillar of free markets that their technoscientific exploitation poses an interesting deeper question for STS. Can technology firms only be monopolistic when they exploit outdated regulation naturalized as a right? Certainly, Facebook has outpaced privacy. Uber has sidestepped taxi licensing and hitchhiking ordinances. Apple and Amazon have forged unique new relations with labor. The Polanyian cycle of technoscience rentiership may begin with a technologically exploitable regulatory loophole, endure in a dialectic with reactive attempts to reregulate, and resolve to the next cycle only with abandonment of old doctrines in favor of regulatory revolution or abandonment.

Conclusion

This paper addressed a lacuna in Landes and Posner’s influential economic theory of trademark law based on search cost reduction: the special case in which a small cadre of mark holders, leveraging information technology and the far reach of the Internet, have economy-wide power in search cost reduction. It argued that exploitation of this reflexive use of trademark law has been an unnoticed factor in the rise of enormously capitalized, monopolistic firms offering Internet search, and that marks such as GOOGLE have become “super-generic” in that they are both common in everyday language about search and, more crucially, structurally entailed in search. STS can enjoin a provocative question that law and economics is not asking itself: should society continue to extend trademark protection, justified by the broad economic benefits of search cost reduction, to economy-wide services that practically every consumer now uses for just this function?

There is certainly a requirement in any society for a system to reliably map signs to commercial objects, but the devolution of that function to government is not a duty to protect a substantive, natural right to own language. It is rather a point of power where a naive policy is open to exploitation by private interests. A small number of firms now hold trademarks on functions whose pre-Internet equivalents were generic actions such as “seeking” or “looking around.” The social costs and hidden externalities created are so ubiquitous and complex that they may take generations to fully perceive and understand.

If legislators, due to regulatory capture, cannot remedy technological exploitation of outdated trademark law, the system can nonetheless heal itself through common law precedent. A genericness action has already been litigated against Google (Elliott v. Google Inc. 2017). However, the reflexive, economy-wide role of GOOGLE in search cost reduction was not
adduced. In genericness actions of the future, the super-generic nature of Internet search marks must be explained as a multiplier of traditional evidence. By this means, courts themselves can close the reflexive loophole and update the limiting doctrine of genericness for the information age. It is urgent that they do so. Current definitions of genericness were formulated—as was Landes and Posner’s economic justification for trademarks and the 1946 Lanham Act—well before the technoscientific conditions for super-generic trademarks arose.

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Notes
1. As is usual in trademark literature, trademark names are capitalized throughout the paper to distinguish them from the names of their owners. Thus, GOOGLE refers to the trademark and “Google” refers to the firm Google LLC (whose parent, Alphabet Inc. ultimately controls the mark). Although the distinction is not observed in this paper, it should also be noted that both “trade marks” and “service marks” exist. The terms “trademark” and “mark” are used to refer to both.
2. Fuller (2019, 336), exploring academic rentiership, quotes Aquinas to underscore the long-held importance of this relation: “veritas adequatio intellectus ad rem (‘truth is the alignment of the mind to the thing’).”
3. The reasons for settling on 1995 as the beginning of the commercial Internet are discussed, for example, in Agrawal (2018, 9-10). Certainly, 1995 was the year of the first major Internet IPO by Netscape Communications Corporation.
4. For example, Alphabet Inc., the parent company of Google LLC, also controls YOUTUBE and has multibillion dollar “traffic acquisition” deals with firms such as Apple Inc. (Gallagher 2018).

5. The powerful advantage this confers upon a firm may not be immediately obvious, for it leads to some relatively trivial loss of sales as described here when a consumer looking for STARBUCKS buys TIM HORTONS. If a mark persists as a generic term, other marks will no longer even be recognized as types of the category and a full-blown monopoly will develop.

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