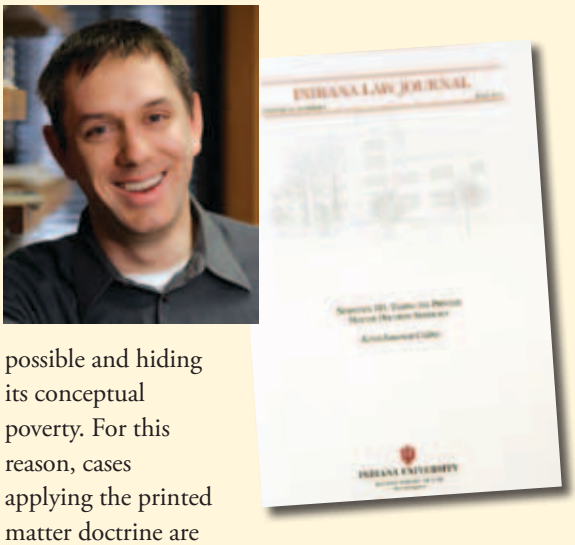
Semiotics 101: Taking the Printed Matter Doctrine Seriously

THE PRINTED MATTER DOCTRINE is a branch of the section 101 doctrine of patent eligibility that prevents the patenting of technical texts and diagrams. Roughly stated, it dictates that "information recorded in [a] substrate or medium" is not eligible for patent protection—regardless of how nonobvious and useful it is—if the advance over the prior art resides in the "content of the information."

For example, the printed matter doctrine prevents an inventor from claiming a diagram or text explaining how to perform a technological procedure. A technical diagram is an artifact of human ingenuity that satisfies the major statutory requirements for patent protection. Among its attributes, it can be both useful—it helps a technologist to perform the procedure more quickly, reliably, and precisely—and nonobvious—a person having ordinary skill in the art may not have been motivated to make the diagram before the inventor's discovery. However, the printed matter doctrine prevents a patent claiming this type of diagram from issuing.

As a doctrinal matter, the contemporary formulation of the printed matter doctrine is highly problematic. The Court of Appeals for the Federal Circuit has repeatedly stated that "[a] 'printed matter rejection' … stands on questionable legal and logical footing." The printed matter doctrine borders on incoherency in many of its applications, and it lacks any recognized grounding in the Patent Act. Furthermore, it plays a marginal role, at best, in the common explanations of how the patent regime works (likely in large part because nobody can explain how the printed matter doctrine actually does work). For example, it receives only passing mention in most patent law casebooks used to teach the next generation of patent lawyers.

Yet, despite its numerous infirmities, courts have not abandoned the printed matter doctrine. The reason is likely that the core applications of the doctrine place limits on the reach of the patent regime that are widely viewed as both intuitively correct and normatively desirable. Instead of abandoning the doctrine, courts have marginalized it. They have retained the substantive effects of the printed matter doctrine, but avoided analyzing it whenever possible. The implicit consensus best practice with respect to the printed matter doctrine appears to be not to eliminate the doctrine outright, but simply to tidy up appearances by sweeping the doctrine under the rug whenever possible and hiding its conceptual poverty. For this reason, cases applying the printed matter doctrine are often labeled as unpublished or nonprecedential to avoid scrutiny.



BREAKING FROM THE IMPLICIT CONSENSUS, this article argues that courts should take the printed matter doctrine seriously. Courts should take a cue from the doctrine's staying power. They should openly acknowledge that the printed matter doctrine is foundational to the patent regime and that it does important work in restricting the set of artifacts of human ingenuity that can be patented. The difficulty with this approach, of course, is the open recognition of an unruly doctrine that "stands on questionable legal and logical footing." This article confronts and resolves this difficulty. It reveals the hidden conceptual coherence and statutory grounding of the printed matter doctrine, providing it with a sound legal and logical footing and demonstrating how to take it seriously. In turn, a firmly grounded printed matter doctrine provides a solid foundation on which to structure exclusions from patent eligibility more broadly.

The key move in this reconceptualization is to recognize that the printed matter doctrine is not really about "information" and its "content" at all. Rather, the printed matter doctrine is based on semiotic principles. Semiotic analysis is most commonly associated with expression and culture, and it may therefore seem at first glance to be more relevant to other forms of intellectual property such as trademarks and copyrights. However, this article takes the original approach of viewing

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technological inventions through a semiotic lens and demonstrates that patent scholars and practitioners, too, have much to learn from semiotics. Semiotics is the study of the sign, and a sign exists whenever something stands for something else to somebody. Texts and diagrams are archetypal examples of signs, but signs are not limited to such conventional writings.

One of the most fundamental insights of semiotic analysis is that semiotic meanings are not intrinsic in worldly things. They are not literally "content" in the sense of being contained within the molecules that comprise a printed diagram. Rather, semiotic meanings result from active processes of interpretation that occur in people's minds. Printed diagrams, wind vanes, and medical symptoms are all meaningful in a semiotic sense because they are components of signs: they are objects or events that mean something other than their intrinsic structure to interpreting minds. The semiotic meanings of scribbles on paper and spots on human skin are not predetermined by their formal or functional properties. They are meaningful to us because our interpreting minds have the capacity to understand that worldly things represent other things (worldly or not) and because we have learned social conventions that fix what they represent.

THIS ARTICLE ARGUES that the printed matter doctrine turns this descriptive observation about the mind-centric nature of semiotic meaning into an instrumental rule for limiting the reach of patent-eligible inventions. Couched in a semiotic framework, the printed matter doctrine dictates that an invention is ineligible for patent protection if the invention is a newly invented sign and the advance over the prior art resides only in the mind of an interpreter. Such a semiotic framework enables courts to both explain what they are doing when they employ the printed matter doctrine and justify why they are doing it. The semiotic framework dispels the conceptual incoherence of the printed matter doctrine by shifting the doctrine's conceptual focus from information and its content to signs and the mental representations that they entail.

This article proceeds in four principal parts. Part I reviews the contemporary printed matter doctrine, highlighting its internal conceptual incoherence, its awkward fit with other patent law doctrines, and its lack of a statutory grounding. Parts II and III make the arguments that allow the printed matter doctrine to be taken seriously. Part II offers a course in "Semiotics 101": a semiotics primer strategically targeted on the principles that prove to be relevant to the section 101 doctrine of patent eligibility. Part III illustrates the virtues of reconceptualizing the printed matter doctrine as the sign doctrine in the core printed matter cases. The semiotic framework offers a conceptually coherent explanation for the rough contours of the outcomes that the PTO and the courts are already reaching in these cases. It also points the way to a textual grounding for the printed matter doctrine in the Patent Act.

Part IV examines an unexpected consequence of taking the printed matter doctrine seriously. It turns from the core printed matter cases to technologies that function as signs but are not intuitively understood to be information recorded on a substrate. More specifically, Part IV employs semiotic analysis to suggest that the patentability of certain types of programmed computers under section 101 may need to be reconsidered. In particular, it argues that the routine patentability of computer models under the contemporary doctrine of patent eligibility and the categorical unpatentability of old mechanical devices with new labels under the printed matter doctrine cannot be reconciled as a matter of semiotic logic. ||||

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