

Why FISH:FISHES :: INFORMATION:INFORMATIONS

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Tim Wu, [Properties of Information and the Legal Implications of Same](#) (Columbia Law and Economics Working Paper No. 482, 2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2446577.

Tim Wu's new essay, *Properties of Information and the Legal Implications of Same*, offers both a survey of recent legal and economic scholarship on information and a provocative reconceptualization of it. Wu posits that information is commonly described as an unusual resource because its very nature means that it possesses the twin properties of being non-excludable and non-rival. Taking these properties as givens, information can be readily pegged as a public good, and a strong case can be made out for government intervention to foster the production and/or dissemination of the information (whether in the form of IP rights, subsidies, or something else). However, Professor Wu's reading of the literature, combined with his sprinkling of original comments on the intrinsic nature of information, suggests that the story is not quite this simple. (Although the review sweeps broadly, discussing securities regulation, contract theory, consumer protection, communications, and free speech, the bulk of it addresses intellectual property.) Professor Wu argues that information is not by its very nature non-excludable or non-rival. Rather, the subject matter of the information, the context in which the information exists, and the structure of the industry that employs the information all matter. They all affect the extent to which information is a public good. As a consequence, Professor Wu counsels against a single policy prescription for problems concerning the underproduction or under-dissemination of information and in favor of context-specific, dynamic laws governing information.

Professor Wu argues that non-excludability *per se* is not what makes information prone to free-riding problems (and thus the problem of underproduction without government intervention). Positing that information "consists of patterns, which must subsist in some form, whether ink on paper, stored magnetic charges, or whatever else" and that information is only valuable if a human mind perceives it, he takes it to be self-evident that people can in fact be readily excluded from information. "If you don't have a ticket, you won't see the movie, and we are all excluded from the text of a book locked in a vault for which the key is lost, or from the particular information contained in an engraving written in a lost language, like hieroglyphs before the discovery of the Rosetta stone." Instead, Professor Wu suggests that information raises a free-riding concern because, among other things, it can often be copied at a relatively low cost. Presuming that copying costs vary, this shift in the conceptual framework for understanding what enables free-riding is significant because the argument in favor of government intervention shifts from being inherent in the essential nature of information to contingent on the particularities of the context in which information exists.

In a parallel argument, Professor Wu suggests that whether information is non-rival (and thus whether under-dissemination is a normative problem) may not be an intrinsic property of information, but may instead depend upon the type of information at issue or the structure of the industry in which the information is useful. Landes and Posner famously argued that characters like Mickey Mouse may be subject to "overgrazing" or congestion externalities; Kitch similarly argued that patents can be socially beneficial because they reduce the number of follow-on inventors who can use newly discovered technological information without the authorization of a coordinating entity. In sum, the fact that information is non-rival should not be taken as an intrinsic property of information as a resource. Rather, it is a variable with different values in different contexts.

In a short passage from his conclusion, Professor Wu nicely sums up the arguments discussed above and pivots to his take-home lesson:

It is ... curious that, given the myriad properties of information, nonexcludability and non-rivalry have received so

much attention. One may be suspicious that the attention may be prompted by its neatness of fit into the pre-existing concept of a public good more than the underlying realities of what information is. In any event, it is worth suggesting that lawyers' or economists' understanding of information's properties might be broader, and begin to draw less on just anecdotal examples, but some study of the science of information. Indeed, it may turn out that information's other properties, less studied, will be equally important for public policy.

In gross, Professor Wu taps into an important theme in the zeitgeist of contemporary intellectual property scholarship: information policy should not be constructed based on the presumption that there are universal truths about the intrinsic qualities of "information" (whatever it is), but rather on context-specific interventions to address particular problems.

I believe that legal scholarship would greatly benefit from greater precision when it discusses information. When we talk about information, we often talk in generalities that stand in the way of the more nuanced conversations that I think Professor Wu would like us to have. Does copyright prevent others from copying "information," or is "information" what lies beyond the reach of copyright law because of the idea/expression and fact/expression dichotomies? Patent law is routinely described as an intellectual property regime that prevents others from copying "information" and "ideas," yet "information" and "ideas" are also routinely described as the very resources that patent disclosures publicize and make freely available to all.¹ Until we can pin down precisely what we mean when we say information we cannot begin to identify "information's other properties" that are "less studied" yet that may well "be equally important for public policy" according to Professor Wu's thesis. For example, Professor Wu himself distinguishes "knowledge" and "wisdom" from "information" at one point, without offering guidance as to how to draw the distinction.

I do have what I see as a friendly amendment to Professor Wu's suggestion of a route forward. He suggests that we might draw on "some study of the science of information" to move beyond our myopic focus on non-excludability and non-rivalry. However, there is no single science of information. Scholars who study information are a diverse lot. Information theorists who follow Shannon, computer scientists, semanticists, semioticians, bioinformaticists, philosophers of technology, and cognitive scientists, among others, all point to different things when they pick out information in the world.² Each discipline defines information in the manner that is useful to its own goals, and the disciplines rarely talk to one another. This balkanization complicates the mining of these disciplines for insights that are useful for economic and legal theorists: we will need to sort through the many taxonomies of information that have been proposed to find the ones which, given our goals, provide us with useful tools for identifying and understanding the information that concerns us.

In the English language, there is today no distinct word for the plural of "information." Yet, I believe that "informations" would be a useful word to coin in order to highlight the true nature of the resource at issue and to facilitate the discussion that Prof. Wu would like to initiate. The point of the plural is not to make "information" operate like other count nouns; I'm perfectly happy with the notion that I buy information from you when I buy ten tips on ten distinct stocks. Rather, the model here is "fish." The plural of "fish" is "fish" when all of the fish are the same species: "There are fish in the goldfish bowl." However, the plural of "fish" is "fishes" when the speaker refers collectively to multiple species: "There are three fishes in that tank," to the extent that the tank contains tuna, snapper, and flounder. To have intelligent discussions about information policy, we do more than realize that information exists in many different contexts; we must do more than seek context-sensitive policies to address the free flow of a unitary phenomenon called information. We must instead recognize that there are many different informations, each of which is studied by its own group of scholars and each of which may merit its own information policy, sometimes regardless of context.

1. Kevin Emerson Collins, *The Knowledge/Embodiment Dichotomy*, 47 *Davis L. Rev.* 1279, 1307–14 (2014).
2. For a wide-angle view on information, see James Gleick, *The Information: A History, a Theory, a Flood* (2011).

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