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DEAD ENDS AND DIRTY SECRETS: LEGAL TREATMENT OF NEGATIVE INFORMATION

JOHN T. CROSS*

This is actually a project that grew from some of my ongoing sociological research on what underlies innovation. Why do people innovate? Does the legal system really reflect how the process of innovation actually occurs? Innovation involves a lot of work and many tangents. I am going to try and focus on a very narrow aspect of it, given the limited time. Most of my presentation will cover the area of patent law; however, some of the same lessons are applicable in the realm of copyright law.

A lot of the popular literature about the progress of knowledge treats knowledge as a slope. Knowledge is a constant progression. In law, we delve into it a little bit more deeply. Rather than a slope, law views the progress of knowledge as a staircase that continually rises. In the patent law staircase the risers are quite large. Patent law does not react to progress unless you have something that is quite a significant step above the existing level. In copyright law the steps are tiny, and we allow very minor additions to qualify for protection. But in both areas of law the basic paradigm is that of a staircase. The legal system responds to this continual progress by granting rights to people who go up the next step of the staircase.

As the previous speaker pointed out, there is a kind of tension in the system, given that you can forego patent law and protect yourself to some extent through laws such as trade secret law. This choice is presented whenever a person is involved in the process of improvement or in the process of creating knowledge. This tension also affects society, as it affects whether the person keeps the knowledge for herself (the essence of trade secret) or distributes it to society at large (a core requirement of patent).

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The publication system also creates incentives to disseminate knowledge. Many of us here have university connections. In the university setting, academics are encouraged to publish whenever they have gone up the next step of that staircase. On the other hand, there really is no academic equivalent to trade secret law. An academic researcher really has no incentive to keep a new discovery secret. But if you look at the literature involving innovation, the staircase paradigm is not really accurate. Knowledge is not a staircase; it is more akin to a maze. Consider those little mazes in children's puzzle books. Before finding the one true path, a person typically takes trips down dozens of blind alleys. Each of those false paths results in a dead end. Progress in knowledge—both scientific, but also in the realm of copyright—likewise involves a number of false starts. Once we recognize this feature of the innovate process, it becomes obvious that the way the legal system treats innovation may not be the optimal solution. The current model has assumed that there will be a tension at the end of the inventive maze; a choice between disclosure of the information and the rewards that one could earn from keeping the invention a secret. For negative information, however, there may be only one choice.

Think about the patent process. You cannot patent a failed invention. Yes, there are exceptions. In the well-known case of 3M's Post-It Notes, the inventor turned what would otherwise have been a failed invention – the inventor was trying to come up with a very strong adhesive – into a success by coming up with a new application. Those cases, though, are the exception. Because of patent law's utility requirement, patent protection usually is not available for the "invention" that does not work. And if a patent is not an option, the incentive to disclose largely disappears.

A similar phenomenon occurs in academic publication. You rarely find university researchers – especially young researchers – rushing out and saying something like, "I tried this new chemical compound and it did not work, so I am going to publish an article describing my failure." That is a pretty good guarantee of denial of tenure.

Therefore, the legal system does not contain any systematic way to encourage disclosure of negative information. I am going to talk about a couple of exceptions later, but generally speaking, that is not the way the system works.

The way the legal system works is the problem. False starts can be incredibly valuable information. The fact that an experiment failed is useful knowledge. It is useful at the very least because if it were widely available it would prevent other people from pursuing that same option. If I try a chemical compound and it does not cure the common cold, other companies would very much like to know that. At the very least that knowledge would save them the trouble of replicating the experiment.

Even more significantly, knowing that an invention failed can lead to knowledge as to *why* it failed. That knowledge can be very useful. Our legal system as it is structured does not really do a very good job of making sure that sort of information gets disseminated to society.

The dirty secret idea is a variation on this theme. 'Dirty secrets' are negative information that is not widely known and that reveals something bad about me or my product. If I have a product with a danger or durability problem, there is really no incentive for me to disseminate that information. And absent that incentive, the much-heralded tension disclosure and secrecy simply does not exist. Secrecy is the only viable option. It is very easy for me to protect negative information. I can use trade secret law to protect a bad feature of my product. If my product has a hidden danger or other problem, that negative information can be protected as a trade secret. Moreover, in some situations, privacy rights may kick in and allow me some control over the dissemination of negative information.

So far I have viewed the picture solely through an intellectual property lens. As much as it pains me to say it, intellectual property is not the end of the world. There are other legal regimes that may kick in and play some role. More specifically, these other legal rules may work to encourage the dissemination of what I am calling negative information.

The first set of rules is the regulatory system. If I need to obtain regulatory approval of my product, I typically must disclose not only the good but also the bad. If I want to market a drug, Food and Drug Administration ("FDA") rules require me to disclose any side effects of which I am aware. If I want a new pesticide or herbicide approved I have to disclose any unsafe effects of that product.

Once we move outside the context of regulatory approval, the tort system becomes relevant. In some situations, tort law provides an incentive to disclose. For example, if I know of a defect and fail to disclose it, I may be liable to unknowing users of that product who suffer injury. I have a choice: I can fix the danger (which would be positive knowledge), or at least disclose the existence of the negative information. Otherwise, I may have to compensate others for the harm caused by that defect.

Competition itself also encourages the dissemination of negative information. Of course, I myself have no incentive to tell the world the bad things about my product. But my competitors certainly do. My competitors can to the extent that they can learn of this negative information about either me or my product - disseminate it to others. Their incentive to disseminate the information is financial rather than legal. If consumers think less of my wares, they are more likely to buy from my competitor, including the competitor who disclosed the negative information.

Finally, rules of professional conduct may result in the disclosure of negative information. Most states require a lawyer to disclose adverse authority. Doctors must disclose possible negative effects of medical treatment in their diagnosis.

These extra-intellectual property regimes do a pretty good job with dirty secrets. However, they do not do a very good job with the research that does not result in anything, but nevertheless is quite valuable. For example, while the regulatory approval process requires me to disclose the bad things about the product I want approved, I do not have to tell the FDA about all the experiments that went nowhere in the development of the product.

Tort law likewise does not require disclosure of failed experiments. I need not reveal the prototypes that proved unworkable. I only have to disclose things about what it is I distribute to society.

In the realm of competition, my competitor would love to tell the world the bad things about my product. They gain a lot from that, because it affects the consumer's immediate decision in the market. My competitors have far less to gain by saying "Oh, by the way, before he came out with this product, Cross had five models that did not work." That makes me look stupid. But it does not really help the competitor's position. In fact, that sort of information can backfire, as it makes it look like I am extra careful in insuring that only the best product are produced.

The professional check works the same way. The lawyer must disclose adverse authority with respect to any argument that the lawyer makes. Lawyers are not required to disclose adverse authority about arguments they do not make. Similarly, a doctor need not disclose the side effects of drugs she does not prescribe. The false starts, the paths they choose not to pursue, may never see the light of day, because no one other than the professional knows about them.

My personal rule is quite simple if I tear a system down, it is at least incumbent upon me to suggest something that could stand in its place. If you think about how we deal with the problem of negative information, it is apparent that we need a model to encourage holders of that information to disseminate that to the public. That model needs to provide not only an incentive to disseminate, but also a mechanism to ensure that the information is revealed.

Actually, we do not have to look all that far to find a model for the disclosure of negative information. We have one in law. We call it the system of precedent. Precedent reveals quite a bit of negative information. When a party loses a case, I can look at the published opinion. I may learn that the party lost because they proceeded down a dead end by trying a legal theory that did not work. It informs me that I should prob-

ably not replicate that experiment. I may also learn from the court's opinion *why* that path proved non-productive. The system of precedent we have in law could serve as a model for the disclosure of these type of false ends.

Now we must face the obvious problem: where is the incentive? In law I have an incentive. If I have a client, I have an external motivation to explore the various paths. The attorney must disclose the arguments to the court. Moreover, the mechanism of disclosure in the legal system is in one sense external to the attorney. The government pays for publication of legal opinions. No similar mechanism for dissemination exists in most other areas.

Perhaps the answer is a voluntary system. We could create a system where I would disclose a dead end, or research that generated no results. The mechanism is easy - I would put it on the Internet. (We have talked about the Internet all day today.) With the proper search mechanism, others interested in pursuing that same path could then obtain that knowledge.

But there still remains the question of incentive. What incentive do I have for putting the negative information on the Internet in the first place? The answer could be a sort of royalty system, under which anyone who gained access to that information had to pay me for what they learned. To illustrate, suppose I conducted experiments on the use of chemical ABC as a fuel additive, but discovered that it did nothing. I would put that information online. Others could search for chemical ABC, and would find my posting. At that point, they would be required to compensate me for the negative information.

This is obviously a primitive and problematic system. It is problematic because first, there is a serious arbitrage problem. Company A puts out the negative information about a failed research path. Company B has to pay a price to gain access to that information. Company C comes along and they want to consider the same research path. C can either pay within the system the full price the system commands, or it can go to B and buy the information from B. B's prior payment is a sunk cost, as the information is one-time knowledge. Once B knows the chemical ABC is not a very good fuel additive, B is perfectly willing to share that information for any amount they can obtain for it. Therefore, the arbitrage problem exists as long as C can find a way to discover who else has already paid for the information. You need to find a way to prevent B from simply reselling.

A second problem is the risk of lying. Suppose Company I conducted research on chemical ABC, but discovered it actually works pretty darn well. It does not work well enough for me to get a patent; and I choose not to go that route. If I am crafty, I put information into the system

that says ABC is a total flop. I not only get compensated for that false data when others find it, I in essence have a backdoor form of trade secret.

There are problems in that system; problems that we do not really encounter in the precedent model. Nevertheless that basic form of a system could form a way to insure that this information gets out. The system would, if properly implemented, work well for the dead end. It does not, however, work nearly as well for dirty secrets. But again, there are existing extra-intellectual property mechanisms to deal with that problem. That is my criticism and my proposal. I thank you very much for your time.