

Council on Foreign Relations in New York City  
Wednesday, February 9th, from 4:00 to 5:30 pm  
58 E 68<sup>th</sup> Street

I agree w/ Adam Jaffe that there are problems in the patent system that are raising the costs of innovation in the US, and that the patent system needs fixing.

However, I think the problem is more deeply rooted than he does, and would therefore prescribe a more comprehensive program for change.

Let me start with this observation: it is true that patent issuances have skyrocketed. I'd add that, in some ways, the right to exclude has also been enhanced

- I'm thinking here of the two exemptions that once immunized research uses of patented inventions, particularly in basic university research. These are now highly circumscribed. In addition, antitrust law no longer constrains patentees from refusing to license

I also agree that all of these effects are the direct result of decisions Congress made – to de-fund the PTO and establish the Federal Circuit.

But I see it as part of a larger trend in Congress favoring strong IPRs:

- over the past decade, the duration and ambit of copyright protection has grown substantially
- trademark law has also changed, that law used to be directed at preventing consumers from being confused by competing products, the new rights prevent consumers from even learning about competing products

These trends hint that the problem of ever-stronger IPRs is deeply entrenched, and that changing the law to better facilitate innovation is going to be harder than Adam suggests.

In fact, we can tell at least four stories about why IPRs are expanding, each with different implications.

First, the standard story. (As you heard,) the court & PTO function badly, but things don't get fixed because there's a strong, well financed lobby that prefers strong patent rights.

That's actually a hopeful story because it implies that if interest group politics could be tamed, the Court and Patent Office could be brought into line.

But I think it misses the dynamics of the problem. Here's the thing about most information producers: they are also information users. It's true that strong IPRs create incentives to innovate, but it's equally true that knowledge is cumulative -- one firm's

output is another's input. Whatever a producer makes from having strong a IPR it loses by having paid more for the information it utilized.

Since every innovator is on both sides of hot-button issues, a simple public interest story can't explain what's going on. And, indeed, it's some of the big R&D firms who lobby to increase PTO funding, and for a more generous research exemption. (The movie industry is in part what defeated UCITA)

SO, while I'm sure there are information producers that want strong IPRs and have the ear of lawmakers (we'll come back to why), I doubt they're the whole story. In fact, legislators have independent reasons to like strong IPRs

Second story: accounting story: strong IPRs make the economy look bigger

Consider: A WIDGET. If it's not patented, the price will be competed down to cost (let's say that's \$10). If it is patented, the producer will have the exclusive right to sell it, and can set a higher price (let's say \$15).

Now, here's the question: Did the patenting of the widget create \$5 of new wealth? NO! The widget might have created wealth, but the patent didn't:

- instead of the consumer getting a "good deal" by paying \$10 for something on which he would willingly have spent more, the consumer was forced to spend more, and \$5 moved from his pocket to the producer's

SO: in reality, nothing much happened to the size of the economy when the widget was patented. All that happened is that consumer surplus was converted into producer surplus.

BUT: Legislators aren't indifferent to that conversion. Producer surplus is measured; consumer surplus isn't. So, when the widget is patented, GDP includes \$15; but only \$10 when it's not.

Also, we don't impute gain to consumer surplus. We don't levy tax on bargains; when the widget isn't patented, the tax base shrinks

SO: a second reason why IPRs expand is that it makes the economy look bigger (not BE bigger, LOOK bigger). It also enriches the Treasury (probably more than does the diversion of funds from the PTO)

There's a refinement on this story that's worth exploring bcz it teaches a somewhat different lesson— it's the balance of payments story

At the international level, converting surplus isn't just smoke and mirrors:

- If the widget's consumer is in Japan, and the US producer can raise the price 500 yen then the conversion of producer to consumer surplus does something real: it moves \$5 into the United States from Japan

- the patent doesn't change global social welfare, but it does actually improve our balance of payments, which is (again) a reason for legislators to like strong IPRs.

BUT NOTICE: this transfer occurs only if the widget is patented by the US patentee, in Japan. And that brings another institution into the mix of what we need to consider:

= the Office of the United States Trade Representative, which has taken on the task, through a mixture of multilateral negotiations, bilateral free trade agreements, challenges within the WTO, and threatened trade sanctions to get other countries to adopt IP laws that protect our widgets abroad.

- result: proliferation of patents, not just in the US and everywhere  
AND also: proliferation of pro-IPR rhetoric in international arenas

Which brings me to my FOURTH story, a story that refines the first, and explains the existence of a pro-IPR lobby: it's the entrenchment story. Although IPRs can certainly encourage innovation, they can also be set to protect existing innovators against entrants.

Go back to that idea of one person's output being the next person's input. What if you need several inputs to make your idea work? What if you have to pay now, when you aren't yet sure your idea will work, but won't get paid until you bring the finished product to market?

As you raise the costs of intellectual inputs, you discourage all but the most heavily financed producers—firms that start with a lot of cash, or with patents of their own which they can barter for the rights they need to use.

- new entrants have neither, making it hard for them to compete

Now, once upon a time, the patent system had ways to deal with this problem. Principles of nature, inventions with only research uses remained in the public domain, where all could use them for free. In addition, there was that research exemption, which allowed for some unauthorized and unpaid use.

- the result: at the upstream end of research (where it was really risky), there was no need to pay; patents came into the picture only in the end-market (product markets)

BUT: that's a thing of the past. The '80s saw not only an increase in the NUMBER and BREADTH of patents, but also in the KINDS of discoveries that are patentable:

As my former boss, Chief Justice Burger, [Diamond v. Chakrabarty (447 US 303 1980)], said: patent protection is available for “anything under the sun that is made by man.”

And scientists can make a lot of stuff these days, to take biotech as an example: they can create a manmade version of DNA and patent the sequences of actual human genes, they can crystallize proteins and patent actual coordinates

These inventions (genes and proteins) are far “upstream;” their patents can be used to control whole swaths of research

For example, breast cancer research. You simply can’t do it without permission from Myriad Pharmaceuticals, which has patents on the genetic mutations that produce BRCA 1 and 2 breast cancer (you also can’t even diagnose breast cancer without permission from Myriad). Experience shows that Myriad doesn’t grant licenses lightly.

Without a research exemption, Myriad’s patents entrench its position in breast cancer research--you can’t compete in the research market without its permission

OR: I should say: you can’t compete in the United States. You could go abroad, find a place where upstream research gets the benefits of the traditional rules. So, once again the USTR factors into the picture: it’s busy trying to persuade the rest of the world to adopt a patent system that is equally entrenching.

- rules that shield existing firms from startups, and—along the way, protect the US from firms emerging elsewhere in the world.

-----

So, what to these stories teach us?

First, in a strong sense, the PTO and Federal Circuit aren’t making mistakes; Congress isn’t foolishly siphoning off funds from the PTO bcz it’s snookered by the loud voice of the R&D industry—for Congress, less examination may well be more.

- even invalid patents make the economy look bigger

Second, invalid patents aren’t the only ones to worry about: patents that are valid because they are at the cutting edge (gene and protein patents) can be equally worrisome: they can be used to inhibit competition in research markets

Third, the PTO and the Federal Circuit aren’t the only institutions to be concerned about. The USTR also exerts outward pressure on the system because that transfers funds to US producers from foreign consumers, and prevents domestic research from migrating offshore.

As to structuring an innovation strategy, the stories suggest the following:

One. We need to differentiate between an economy that looks stronger and one that is stronger.

Two. Lawmakers need to appreciate the downside of patenting; to understand that if patents get too strong, they inhibit research and block start-ups

Three. We need to have a debate. I was asked to talk about innovation and maintaining our nation's competitive position in world markets. But my stories illustrate that there's something of a conflict between innovation and competition. As currently set, IPRs maintain a competitive position, but may be doing so by inhibiting innovation--they prevent entry by new firms (from both US and elsewhere) from overtaking existing firms (largely in the US).

So, there is a sense in which we need to make a choice as to which goal to pursue: innovation or preserving the US's position.

But that's true in only a highly formalistic sense. There's no decision we can make: other nations aren't about to knuckle under. If they see a comparative advantage in patent laws that promote research, they will retain or adopt them.

- the European Patent Convention has a better examination system than ours.
- Japan recently enacted a broad research exemption
- Germany's just acted on the idea that enriching the public domain promotes progress: w/i the last few months, it narrowed the reach of genome patents

I also think our patent position is unseemly. That's how it's perceived in the debate over essential medicines; here, the issue is more complex and opaque, but basically identical—it looks like we are suppressing the interests of others to protect our R&D industries

Better, in my view, is to trust that our intellectual strengths—good old American ingenuity—will retain our lead.

But that does require laws attuned to the needs of modern science—we need an institutional capacity to make that happen. Could it be done by:

Congress? Unlikely. Aside from interest-group politics and its own biases, it has limited capacity to learn enough about developments in science, to legislate within the time frame required by the robust pace of technological change.

The courts? Congress' own idea was to rely on expert jurists: the Federal Circuit was established to create a specialized bench, which would use its unique knowledge to structure an effective patent system

Unfortunately, specialization hasn't worked as intended:

- because the court's main policy lever for promoting innovation is patent law, it tends to overvalue patents relative to competition, as a tool for fostering progress

- there's also a "ratchet-up" effect. Specialized courts are said to be captured by the bar, but we are seeing that the bar can also be captured by the court: once the Fed Cir. rules on an issue (for example, narrowing the scope of the research exemption), attorneys are reluctant to challenge the ruling because they don't want to lose credibility with the judges.

- the S.Ct. could step in, but for various institutional reasons, it doesn't intervene in patent law often enough to have a meaningful impact.

The PTO? Admin agencies are often the answer to technologically complex issues. Unlike courts, they can hire experts, hold hearings, craft and implement new policies.

- the problem here is, the PTO isn't like other agencies. Modern agencies are subject to the Administrative Procedure Act, which was enacted in 1946. The PTO was set up by Thomas Jefferson. As a result, it lacks many of the powers other agencies enjoy, including the authority to engage in the kind of rule-making to which courts are required to defer.

In the international arena, there's also the USTR. But the USTR sees IP as a trade issue, it treats IPRs like steel or chickens. It's never quite understood the business about knowledge being cumulative, about one person's output being the next person's input, so it doesn't even think about balancing user and producer interests.

In short, we need something new. My own preference? I'd consider re-establishing the PTO and to bring it within the APA. I'd give it economists, scientists, rulemaking authority, perhaps even power over the issues that come up only at the infringement stage

To shake it up and make the break distinctive, I'd also consider taking it out of the Commerce Department, where stories number 2-4 hold such sway.

Finally, I'd give it stronger ties to other agencies that deal with innovation issues, such as the Copyright Office and the Federal Trade Comm'n

Other ideas – leave for Q & A, but will end w/ this: must see the patent problem in the context of a nation fundamentally skeptical about science—to stay w/ biotech, it will be hard to retain our position w/o national funding for stem cell research, w/ education system that increasingly doesn't teach the next generation about evolution.

