Patent Law

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Class 12 – Nonobviousness: introduction; *Graham* and *KSR*

Recap

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→ third-party activity

→ experimental use

→ pre-AIA § 102(c), (d), & (f)

Today's agenda

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→ Nonobviousness: introduction

→ *Graham*

→ *KSR*

Nonobviousness

Hotchkiss v. Greenwood

→ Invention: Clay or porcelain knob with dovetail cavity for screw

→ Prior art: Metal knob with dovetail cavity for screw

Hotchkiss v. Greenwood

→ The invention was, it seems, useful and novel

→ Why isn't that sufficient to find it patentable?

"Now it may very well be, that, by connecting the clay or porcelain knob with the metallic shank in this well known mode, **an article is produced better and cheaper than in the case of the metallic or wood knob**; but this does not result from any new mechanical device or contrivance, but from the fact, that the material of which the knob is composed happens to be better adapted to the purpose for which it is made. **The improvement consists in the superiority of the material, and which is not new, over that previously employed in making the knob.**"

Hotchkiss, Nard at 333

"Now if the foregoing view of the improvement claimed in this patent be correct, it is quite apparent that there was no error in the submission of the questions presented at the trial to the jury, for **unless more ingenuity and skill in applying the old method** of fastening the shank and the knob were required in the application of it to the clay or porcelain knob **than were possessed by an ordinary mechanic acquainted with the business**, there was an absence of **that degree of skill and ingenuity which constitute essential elements of every invention**. In other words, the improvement is the work of the skillful mechanic, not that of the inventor."

Hotchkiss, Nard at 333

Hotchkiss v. Greenwood

→ This isn't invention; this is the work of a skillful mechanic

→ So what?

Hotchkiss v. Greenwood

→ Bargain theory: Society is giving a valuable exclusivity and not getting enough in return

→ Inducement theory: Society is giving a valuable exclusivity that isn't necessary since ordinary mechanics can just make the invention

Hotchkiss v. Greenwood

→ The problem: How do we know what's enough to satisfy this invention requirement?

- Decisions under the "invention" standard became unpredictable and incoherent

(Post-AIA) 35 U.S.C. § 103 — Conditions for patentability; non-obvious subject matter

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if **the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains**. Patentability shall not be negated by the manner in which the invention was made.

Nonobviousness

→ Goal of § 103: cabin the scope of the nonobviousness requirement

- Timing: We look to the time of filing (or invention, pre-AIA)
- Person: We look to a person having ordinary skill in the art
- Scope: We look to the obviousness of the invention as a whole

Nonobviousness

→ But there is a lot of overlap here with § 102:

- § 102: no patent if an invention is not novel
- § 103: no patent if an invention is obvious

→ Why not combine them into one requirement?

Nonobviousness

→ The patent bargain can't rely solely on novelty

- Society doesn't get anything from an obvious advance — it would have been made anyway
- Too many patents can lead to problems — search costs; transaction costs to licensing; rewarding wrong individuals; &c

Nonobviousness

→ And nonobviousness solves an evidence problem

- Novelty is a demanding standard — a single reference must contain everything in a claim
- Obviousness can help fill gaps in the evidentiary record

Nonobviousness

→ Counterarguments?

Nonobviousness

→ Counterarguments?

- Incremental innovation: Innovation often proceeds in small increments, each important
- Hindsight bias: It can be hard to tell after the fact whether something was obvious or not

Graham

Graham

→ Invention: clamp for vibrating shank plows

- "combination of old mechanical elements"
- Fifth Circuit: combination produces "old result in a cheaper and otherwise more advantageous way"
- Eighth Circuit: no new result

Graham

→ Big question: What did § 103 do with the old "invention" standard?

- Congress clearly intended some sort of change

Graham

→ Possible standard #1

- "some means of weeding out those inventions which would not be disclosed or devised but for the inducement of a patent"

Graham

→ Possible standard #2

- "more ingenuity and skill … than were possessed by an ordinary mechanic"; "skillful mechanic, not … inventor"

Graham

→ Possible standard #3

- "flash of creative genius"

Graham

→ The basic *Graham* test

- 1. Scope and content of the prior art are examined.
- 2. Differences between prior art and claims are ascertained.
- 3. Level of ordinary skill in the art is resolved.
- 4. Obviousness is determined.
- 5. Also, secondary considerations might be considered. (More on this later.)

Graham

→ Note: The Court suggests this is likely a constitutional test!

- Patents on obvious inventions don't promote the progress of science and useful arts. (Why?)
- But: *Eldred v. Ashcroft* in copyright law suggests that it's up to Congress to decide what promotes progress

Graham

→ Here: The invention was obvious because the change over the prior art was a change someone of ordinary skill in the art would readily make

"**If free-flexing, as petitioners now argue, is the crucial difference above the prior art, then it appears evident that the desired result would be obtainable by not boxing the shank within the confines of the hinge.** The only other effective place available in the arrangement was to attach it below the hinge plate and run it through a stirrup or bracket that would not disturb its flexing qualities. **Certainly a person having ordinary skill in the prior art, given the fact that the flex in the shank could be utilized more effectively if allowed to run the entire length of the shank, would immediately see that the thing to do was what Graham did, i.e., invert the shank and the hinge plate.**" *Graham,* Nard at 342

United States v. Adams

→ Contrast *Adams*, decided on the same day:

- Like *Graham*, the invention is a small change compared with prior art
- But it was a much less obvious change

"**The Signal Corps scientists who observed the demonstrations and who conducted further tests themselves did not believe the battery was workable.** Almost a year later, in December, 1942, Dr. George Vinal, an eminent government expert with the National Bureau of Standards, **still expressed doubts.** He felt that Adams was making 'unusually large claims' for 'high watt hour output per unit weight,' and he found 'far from convincing' the graphical data submitted by the inventor showing the battery's constant voltage and capacity characteristics. He recommended, **'Until the inventor can present more convincing data about the performance of his [battery] cell, I see no reason to consider it further.'**"

Adams, Nard at 343

KSR

After *Graham*

→ A common category of obviousness cases concerns inventions that combine known elements from multiple pieces of prior art

After *Graham*

→ The hard question is how to figure out whether such a combination would have been obvious

- Federal Circuit: "teaching, suggestion, or motivation" (TSM) test
- Must be something in the prior art suggesting to combine elements

After *Graham*

→ What counts under TSM test?

- Prior-art reference that suggested the elements be combined
- Way of showing that someone skilled in the art would obviously and naturally know how to combine them (e.g., training or past behavior)
- Has to be super-clear

KSR

→ The most-cited patent case of all time, ten years after it was decided

	Teleflex Claim 4 (Engelgau)	Rejected Teleflex claim	Redding patent	Asano patent	Smith patent	'068 patent (Chevrolet)	Rixon patent
Adjustable petal assembly	✔	✔	✔	✔			✔
Fixed pivot point	✔			✔			
Electronic sensor	✔	✔			✔	✔	✔
Sensor on pivot point	✔				✔	✔	

KSR

→ District court's *Graham* analysis?

→ Federal Circuit's analysis?

KSR

→ District court's *Graham* analysis?

→ Federal Circuit's analysis?

- District court's TSM analysis wasn't specific enough – there was no specific reason to think someone would have known to combine these elements
- Typical of the Federal Circuit before *KSR*: very demanding analysis

KSR

→ Supreme Court's problem with this analysis?

KSR

→ Supreme Court's problem with this analysis?

- Too strict; ignores "common sense"
- Combination patents need extra scrutiny

KSR

→ What happens to the TSM test?

KSR

→ What happens to the TSM test?

- It provides a helpful insight, but is not a strict requirement
- Expanded motivations: "it often may be the case that market demand, rather than scientific literature, will drive design trends"
- "There then existed a marketplace that created a strong incentive to convert mechanical pedals to electronic pedals"

KSR

→ Applying the KSR test

	Teleflex Claim 4 (Engelgau)	Rejected Teleflex claim	Redding patent	Asano patent	Smith patent	'068 patent (Chevrolet)	Rixon patent
Adjustable petal assembly	✔	✔	✔	✔			✔
Fixed pivot point	✔			✔			
Electronic sensor	✔	✔			✔	✔	✔
Sensor on pivot point	✔				✔	✔	

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Electronic sensor	✔	✔			✔	✔	✔
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KSR

→ Applying the *KSR* test: How would someone of ordinary skill in the art know how to combine these elements?

KSR

→ Applying the *KSR* test: How would someone of ordinary skill in the art know how to combine these elements?

- The big answer: predictability
- It's a combination of familiar elements according to known methods that yields predictable results

KSR

→ What if there were many ways to solve the problem this pedal solved?

KSR

→ What if there were many ways to solve the problem this pedal solved?

- Federal Circuit: evidence it's nonobvious: "asking whether a pedal designer writing on a blank would have chosen both Asano and a modular sensor"
- Supreme Court: "The proper question to have asked was whether a pedal designer … would have seen a benefit to upgrading Asano with a sensor"

KSR

→ Sometimes a combination is "obvious to try." Should that be obvious?

KSR

→ Sometimes a combination is "obvious to try." Should that be obvious?

- Argument for: might not fulfill the patent bargain; predictability
- Argument against: ignores cost of experimentation

"**How long will it take the Federal Circuit to overrule this inexplicable nonsense?** The novice reader may find that question to be ignorant, since the Supreme Court is the highest court of the United States. Those well acquainted with the industry know that the Supreme Court is not the final word on patentability, and while the claims at issue in this particular case are unfortunately lost, **the Federal Circuit will work to moderate (and eventually overturn) this embarrassing display by the Supreme Court.** This will eventually be accomplished the same as it was after the Supreme Court definitively ruled software is not patentable in *Gottschalk v. Benson,* and the same as the ruling in *KSR v. Teleflex* will be overruled. … **The Federal Circuit continues to refine the *KSR* 'common sense test,' narrowing the applicability in case after case and tightening the ability for 'common sense' to be used against an application. We are almost 5 years post *KSR* and there is still a lot of work left to be done by the Federal Circuit to finally overrule the Supreme Court's *KSR* decision.**"

Gene Quinn (UNH alum!), on *Mayo v. Prometheus*

KSR

→ Reaction: Do we agree with the Court's decision?

KSR

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- In support: if the market really was moving in this direction, awarding a monopoly doesn't further the patent bargain
- Against: hindsight is a big problem in patent law – lots of things look obvious after the fact

KSR

→ How well does the *Graham/KSR* system deal with hindsight bias?

- By not cabining the things that can motivate the combination, a lot of post hoc reasoning is possible
- Mitigating the risk: The Court says the analysis must be explicit

Next time

Next time

→ More nonobviousness!