

Patent Law

- Slides for Module 3
- Utility

3-1

Utility

- Requirement derives from the word “useful” in 35 U.S.C. §101, and also in part from §112
- Should the invention merely be useful for some practical purpose, or should it be superior to known technologies?
- Is the demonstration that it may lead to future inventions sufficient?
- Should other factors be assessed, such as:
 - social,
 - economic, or
 - environmental factors?

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Types of Utility

- operability
- beneficial/moral utility
- immediate benefit to the public, i.e., substantial utility, with its synonyms of practical and real-world utility
- specific utility, seeking to tie the utility to the claimed subject matter
- credible utility, so that the utility is provable to a POSITA.

From 2001 Revised Utility Guidelines: For example, a claim to a polynucleotide whose use is disclosed simply as a "gene probe" or "chromosome marker" would not be considered to be *specific* in the absence of a disclosure of a specific DNA target.

3-3

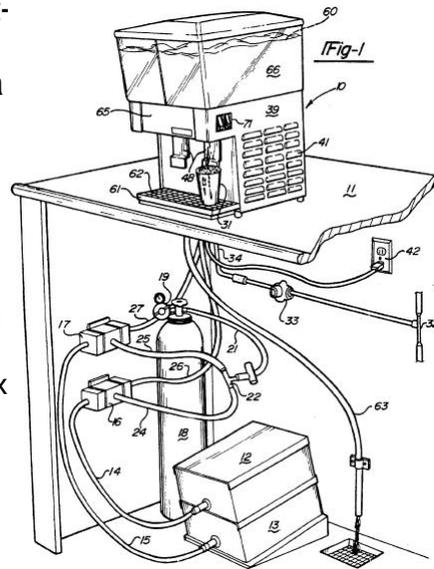
Lowell v. Lewis

- P can't recover if "usefulness" of the invention is of a mischievous or injurious tendency
 - inventions that poison, promote debauchery, or facilitate private assassination
- D asserts a sweeping doctrine, that the invention must be a better pump than a common pump, even if the new pump can be applied with advantage
- Law only requires that the invention be
 - (i) not frivolous or
 - (ii) not injurious to well being, good policy or sound morals of society
 - So, useful here is in contraindication of mischievous or immoral
- Story asserts that if the usefulness of the invention is very limited, the penalty for the inventor is no market success
 - Is this always right? What happens if we take account of the time between filing and the expiration of the patent? Can the usefulness of the invention change? If so, how does this affect patent policy?

3-4

Juicy Whip v. Orange Bang

- Juicy Whip's patent is for "post-mix" beverage dispenser that simulates the presentation of a "pre-mix" beverage dispenser
- District court, on S/J, held patent invalid
 - Purpose is to increase sales by deception
 - Improves prior art only by making the product more saleable
 - Is merely an imitation of a pre-mix dispenser



3-5

Juicy Whip v. Orange Bang

- Utility threshold is not high
 - merely need some identifiable benefit, useful result, or beneficial end
- District court applied two pre-1952 Second Circuit cases about creating artificial impressions of higher quality
 - "Spotting" unspotted tobacco leaves
 - "Seaming" seamless hosiery
- These cases do not represent the modern state of the utility doctrine
 - The fact that one product can be altered to make it look like another is in itself a specific benefit sufficient to satisfy the utility requirement
 - Product imitation is not unusual (e.g., cubic zirconium)
 - But isn't this different from deception?
 - It is not unlawful to display the simulated beverage
 - Suggests even if it were, would not make a difference; other agencies or the states are responsible for regulation
 - Utility requirement is not meant to make the courts or the PTO be arbiters of deceptive trade practices



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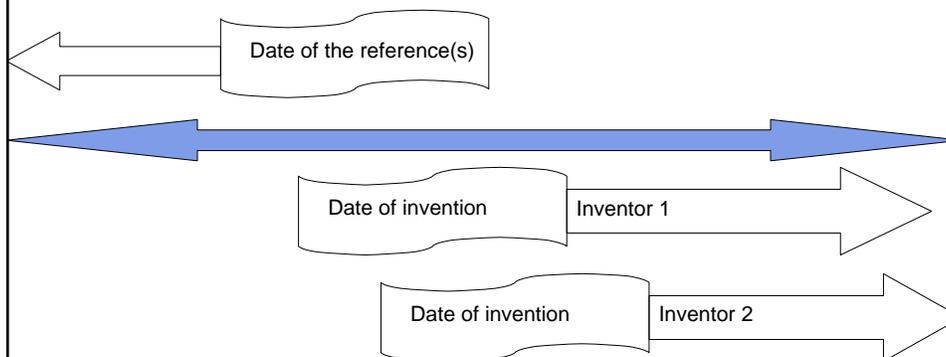
Utility in Chemistry and Biotech

- Chemistry and biotech raise certain issues in various areas of patent law that may not be of concern in other areas of technology
- The analysis of some patent law issues for chemistry and biotech are more difficult or require consideration of additional factors
- Specific to the utility requirement, chemists and biotech practitioners often generate new compounds without preexisting knowledge of their precise use

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Dates of Invention and Prior Art References

- Notions of date of invention are introduced by Brenner v. Manson
- More on both concepts later – but the general framework is shown below



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Preliminary Analysis

- Why isn't Ringold's and Rosenkranz's patent, which issued before Manson's was filed, or invention in Mexico, prior art?
- 102(a)
 - Knowledge or use must be in the U.S.
 - Patent or printed publication must be before invention thereof
 - Invention claimed before 12/56. But this was filing date of Mexican patent, so no publication before then.
- 102(b)
 - Patent or publication more than one year prior to date of application?
 - Date of Manson's application is 1/60. So "critical date" is 1/59.
 - But U.S. patent was late 1959. Publication only upon patent grant then. (Apparently, no Mexican pub/patent pre 1/59.)
 - Apparently, no public use or sale either.

3-9

Bonito Boats v. Thunder Craft – foreshadowing 102(a)

102(a) – if the prior art reference occurred prior to the date of invention of what is claimed, then the claim is not novel if that reference anticipates the claim (has all the limitations/elements of the claim).

N.B. – it can be a very detailed and technical inquiry to determine what the date of the reference is and what the date of the invention is. Note that almost every other country is "first-to-file" regime and uses date of filing, not invention.

	public knowledge or	"Public" is an implied requirement, knowledge must be used in a way that is publicly available to a person having ordinary skill in the art (PHOSITA)
	used by others	One use is sufficient. Generally, use must be of a "public" nature.
	patented or	A grant of exclusive rights, evaluated for what is claimed, accessible to public & not secret
	printed publication	Public accessibility – the document was made available to the extent persons interested and ordinarily skilled in the art, exercising due diligence, could locate it. The test for what is a "patent or printed publication" is the same under 102(a) & (b).

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Bonito Boats v. Thunder Craft – foreshadowing 102(b)

102(b) – if the applicant does not file within one year of the date of the prior art reference or activity, then the patentee is barred from applying for the patent.

	in public use or	No purposeful hiding of use. Experimental use exception.
	on sale	Commercial offer for sale and invention is ready for patenting
	patented or	same as 102(a).
	printed publication	same as 102(a).

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Brenner v. Manson

- Upon receiving Manson’s application, the PTO rejects it for lack of utility
 - Claim is to a process that produces a composition of matter, specifically a steroid
- Manson requests an “interference” to prove he invented before Ringold/Rosenkranz
- PTO says no and the Board affirms
- CCPA disagrees
 - the claimable process is itself useful even if there is no use for the resulting output of the process

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Brenner v. Manson

- Manson's arguments for utility
 - The claimed process makes a known compound, i.e., the process produces the result intended and such result is not detrimental to the public interest
 - Should this standard by itself be sufficient to meet the utility requirement?
 - The resulting compound is generally useful for scientific investigation and research
 - The resulting compound is useful as a possible object of future scientific inquiry
 - The resulting known compound should be deemed useful because it is a "homologue" (similar in a specific, chemically defined way) to a compound that has shown some effectiveness in treating tumors in mice

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Brenner v. Manson

- Homologue argument
 - Problem is **unpredictability** in the steroid field countering the typical ability to predict the behavior of homologues
- General use for research / intended result arguments
 - Too broad a meaning for "useful" to take Story's language to mean that an invention is useful if it is not positively harmful
 - Worries about the notice function and scope of the claims inform the analysis
 - since the patent needs to put people on notice of claimed subject
 - need specific benefit (describable) in currently available form
 - without this, insufficient justification to permit patentee to engross what may prove to be a broad field
- "But a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion."
 - "A patent system must be related to the world of commerce rather than to the realm of philosophy."
 - But note: Invention need not be in a commercially ready form for patenting.

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Brenner v. Manson - Harlan

- Wants to reject narrow definition of “useful” and follow the CCPA
- The majority is mixing up
 - Issues of claim scope and interpretation with usefulness
- Majority’s focus on completion of search begs question of whether generating an intermediate research object is “useful”
- Focus on drafting techniques minimizing positive disclosure effects is not a problem limited to this patent or class of inventions
- Negative impact of majority’s decision on chemical research, less incentive to patent and disclose intermediate research outputs

3-15

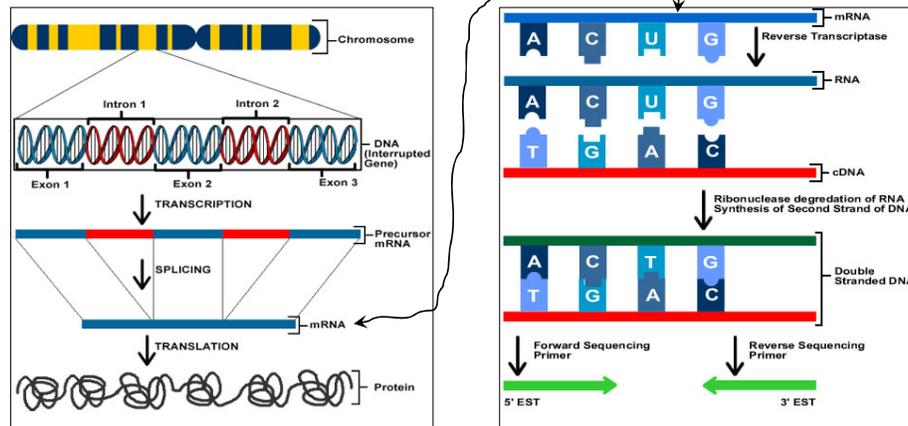
Brenner v. Manson - Implications

- Useful versus “known to be useful”
- Later discovered uses
 - Iodine, nitroglycerine
- Is usefulness effectiveness?
 - Federal Circuit - it is possible for an invention to be less effective than existing devices, yet still meet the usefulness criteria
- Research Tools: other perspectives
 - Is it a process that produces a product that is: an object “of further research” or “for further research”?
 - Or “research on” (e.g., intermediate chemical) vs. “research with” (e.g., microscope)

3-16

In re Fisher – ESTs

- “An Expressed Sequence Tag is a tiny portion of an entire gene that can be used to help identify unknown genes and to map their positions within a genome.”
- “ESTs are powerful tools in the hunt for known genes because they greatly reduce the time required to locate a gene.”
 - <http://www.ncbi.nlm.nih.gov/About/primer/est.html>



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In re Fisher

- But like *Brenner v. Manson*, the applicant could not discern any use of the claimed ESTs that did not require further research to determine a “specific benefit” to the public
 - Products of claimed invention require further research “on” vs. research “with”
 - But a bit tougher than *Manson*, since it is the gene, not the EST that is the subject of the argument

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In re Fisher

- Applicant argues court should return to *Lowell v. Lewis* and that “commercial success” shows utility
- CAFC rejects both arguments
 - “Specific benefit” must exist in “currently available form”
 - Must be “immediate benefit to the public” (emphasis added)
- Relies on MPEP
 - Manual Patent Examining Procedure
 - Not binding, but “may be given judicial notice to the extent they do not conflict with the statute”
 - Statute – Regulations – MPEP

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In re Fisher

- Question is whether underlying genes have a “known function”
 - ESTs are merely “research intermediates that may help scientist to ... conduct further experimentation on those genes” (emphasis added)
 - Microscope is different – “immediately reveals” structure
 - But: Scientists directly conduct research “with” microscopes
 - But can scientists conduct research “with” ESTs?
 - Yes, but the relevant inquiry is the gene product, not the EST itself.
 - Underlying fear here that scientists will engage in “patent races” and lock up all sorts of ESTs without finding a concrete end-use

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In re Fisher

- Judge Michel arguably goes awry in arguing that policy concerns over follow-on research or administrative concerns of the PTO should not “be considered in deciding whether the application ... meets the utility requirement” ... or the “requirements set forth in ... 101, 102, 103, and 112.”
- Indeed, the entire logic of Brenner rested on policy considerations.
 - Indeed, the whole “hunting license” point is that patents on inventions with uses only as “objects of further research” would impede the “Progress of the useful Arts”

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In re Fisher (Rader, J., dissenting)

- States that ESTs are “research tools” like microscopes
 - Not exactly: See earlier arguments
 - Essentially repeats Justice Harlan’s argument in Brenner
- Ultimately comes down to an empirical question:
 - Would patents on “research intermediates” promote or hinder innovation?
 - Lock up valuable resources (Fortas) vs. Denies incentives for “incremental” innovation (Rader)
 - No to little empirical research on this question
 - Query: If both arguments are sensible, what should be the default rule? Pro-patents or anti-patents?

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