

CREATIVITY, GENERATIVE AI, AND PATENT INVENTORSHIP

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IP REQUIRES HUMANS.
HUMAN CREATIVITY IS KEY.
WHAT IS IT ABOUT
CREATIVITY?

- **U.S. Const., Art. I, Sec. 8, Cl. 8** – Patent and Copyright Clause
 - [The Congress shall have power] “To promote the progress of science and useful arts, by securing for limited times to authors and *inventors* the exclusive right to their respective writings and discoveries.”
- **35 U.S.C. Sec. 100, 101, 102** – Patent Act
 - “The term ‘inventor’ means the *individual* ... who invented or discovered the subject matter of the invention.”
 - “*Whoever* invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, ...”
 - “*A person* shall be entitled ...”

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**WHAT IS IT ABOUT
CREATIVITY?**

PATENT: INVENTORSHIP BASED ON “CREATIVITY”

- “This Court ... recognizes the importance of rewarding inventors for their **creative** genius and protecting their intellectual property rights from infringers.”
 - *Telebrands Direct Response Corp. v. Ovation*, 802 F. Supp. 1169, 1179 (D.N.J. 1992) (emphasis added).
- “Generally, a patent may be obvious if it lacks skill and **ingenuity** that characterizes a patentable invention. However, a nonobvious invention can arise from systemic experimentation as well as from a flash of **creative** genius.”
 - *Braintree Laby’s, Inc. v. Novel Laby’s*, No. 11-cv-1341-PGS, 2013 WL 2970739, *21 (D.N.J. June 4, 2013).
 - NOTE: Even “systemic experimentation” is not patentable if it’s based on permutations that are “obvious to try”

- AI-as-Inventor question is rooted in the definition of “inventor” in 35 U.S.C. § 100(f), further used as “whoever invents” and “inventor” in 35 U.S.C. §§ 101, 102.
 - No clear hook for humans-as-inventors-because-they-are-creative
- Creativity requirement is tied to non-obviousness as used in 35 U.S.C. § 103. Creativity requirement articulated as
 - Spark of genius, or
 - Result of systematic experimentation that was not “obvious to try”
 - Not enough to just “brute force” through permutations
- Viewed from the standpoint of a POSITA at the time of the invention (social element).

OBVIOUSNESS

- “A patent for a claimed invention may not be obtained ... if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious ... to a person having ordinary skill in the art [POSITA] ...” 35 U.S.C. § 103.
- Obviousness may be found by modifying one piece of prior art or combining two or more pieces of prior art – if a POSITA “using ordinary creativity,” or common sense, would have found the claimed invention obvious (e.g., by modifying or combining the prior art). See *Intercontinental Great Brands LLC v. Kellogg North Am. Co.*, 869 F.3d 1336, 1346 (Fed. Cir. 2017).
- So “non-obviousness” involves **more-than-ordinary creativity** in modifying or combining prior art.
 - Or stated in the negative, if all that is involved is combining what is known, using common sense or ordinary creativity, it may be considered obvious (and therefore unpatentable).

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WHAT IS IT ABOUT
CREATIVITY?**

External

- New
- Valuable
- Surprising

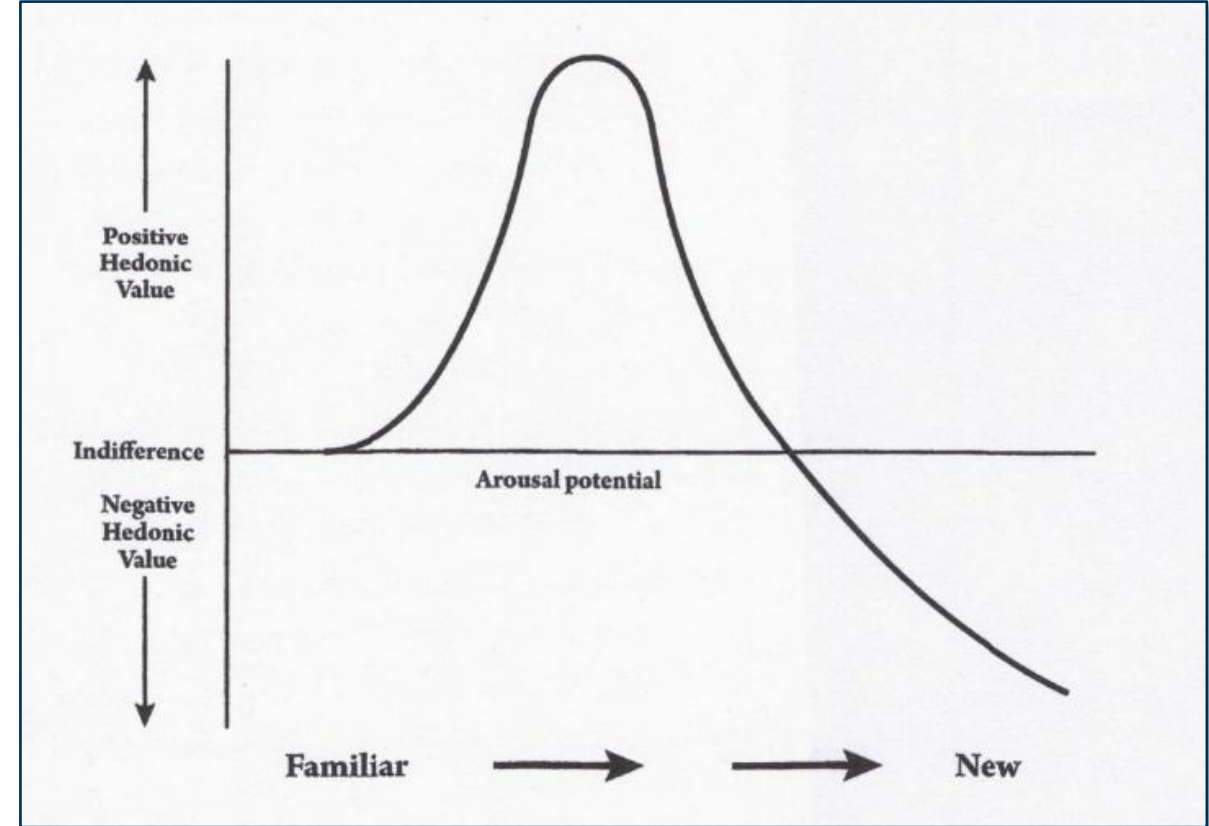
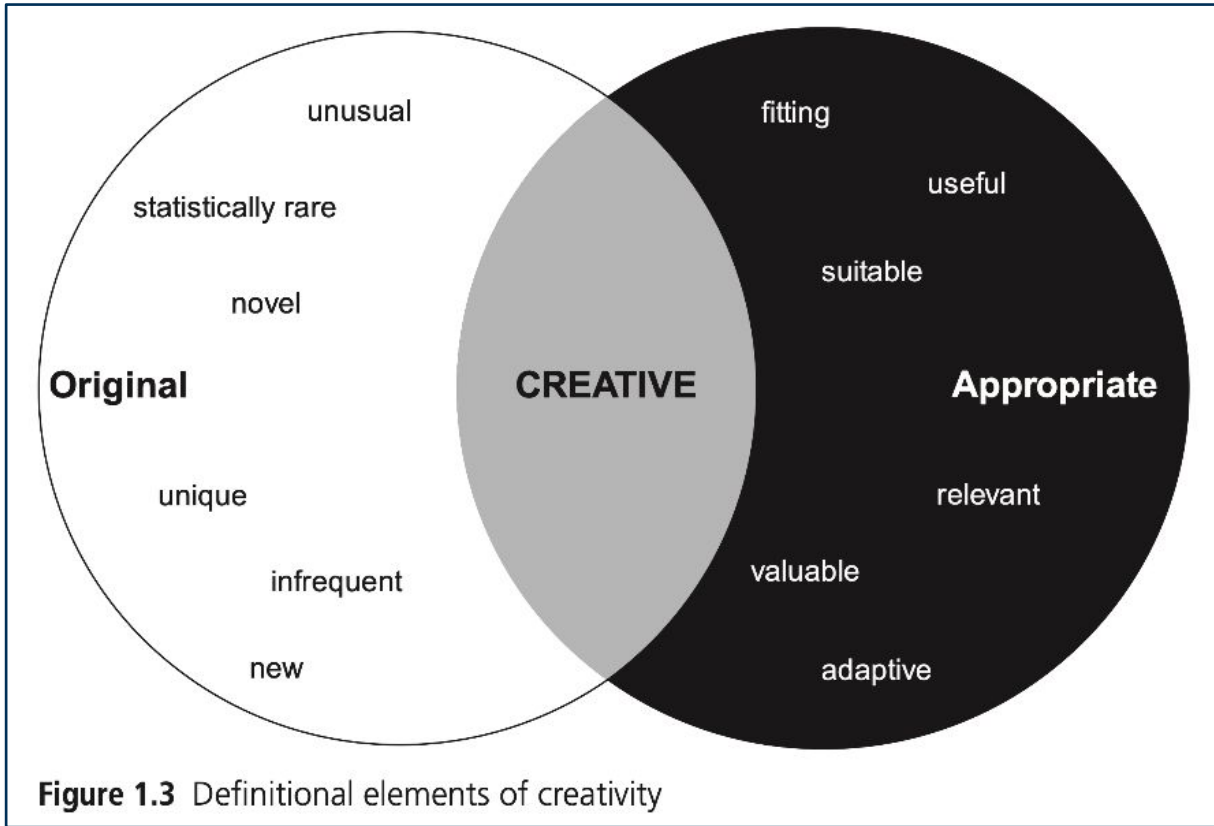
Psychological

- Convergent (task-positive) (CEN)
- Divergent (daydreaming) (DMN)
- Salience

Societal/Community

- Novelty depends on frame of reference (new to whom?)
- Value is social
- Salience has elements of social

ILLUSTRATING THE SOCIAL/COMMUNITY ASPECT OF CREATIVITY



CREATIVITY AND INTELLECTUAL PROPERTY LAW

		Patent
External		Required – reduction to practice (actual or constructive)
	New	Must be “new”
	Valuable	Must be “useful”
	Surprising	Must be “non-obvious” – see “Internal”
Internal		Required – either as “flash of genius” or methodical (but still non-obvious / not obvious to try) research; >“ordinary creativity”
	Convergent	
	Divergent	
	Salience	
Social Factors		Level of skill in the relevant art at the time of the invention

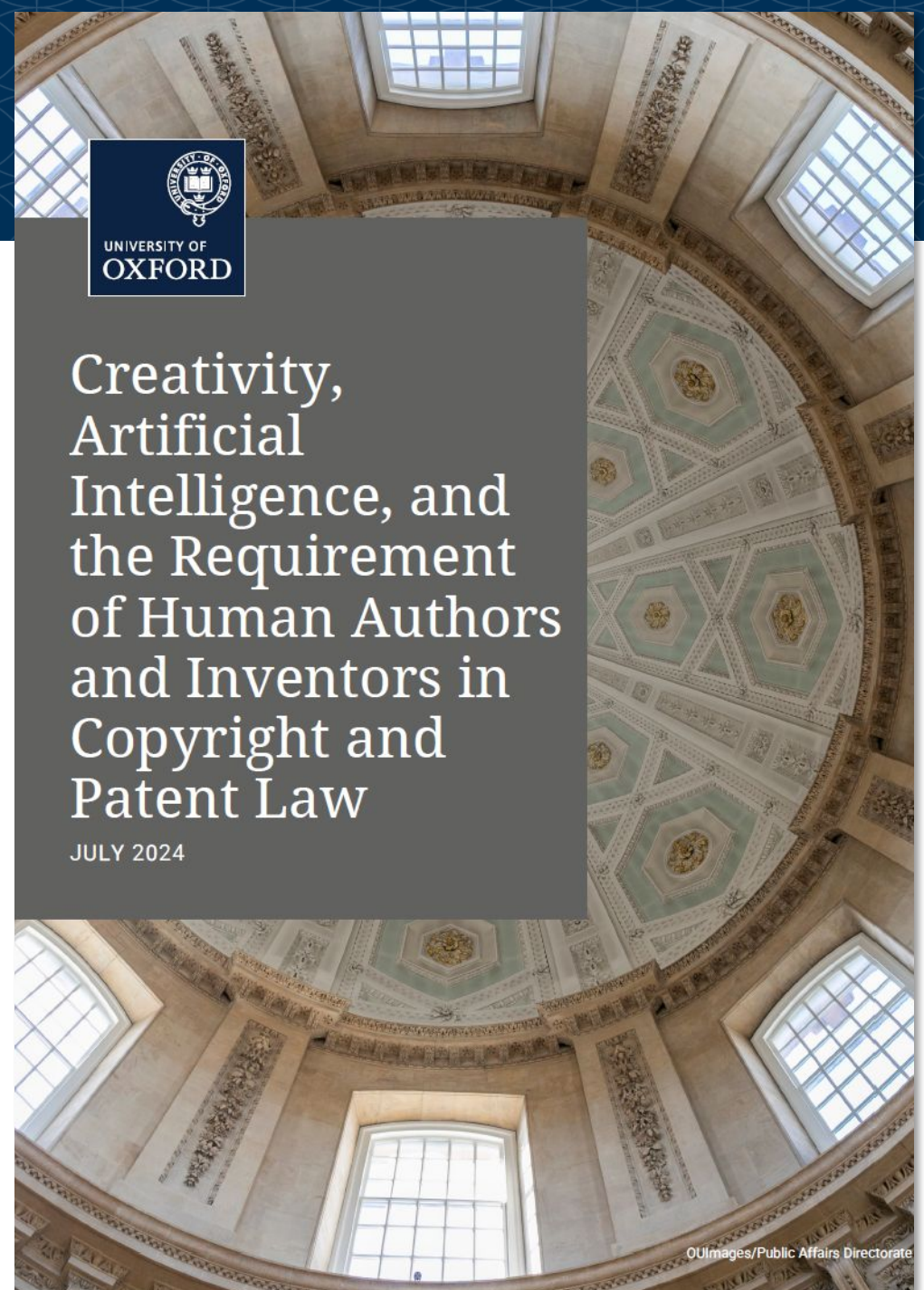
CREATIVITY AND ARTIFICIAL INTELLIGENCE

	Generative Artificial Intelligence
External	SAME-ISH TO HUMANS
New	apparently same as human (but is probability model more deterministic?)
Valuable	apparently same as human
Surprising	less prevalent than with humans because high probability outcomes
Internal	MIXED
Convergent	task-focus may be analogous to humans
Divergent	not present – closest analogue is brute-force computation through many permutations
Salience	not really present – determined by prompt engineer and programmed filters
Social Factors	VARYING AUDIENCE REACTION – “As if” human-made, comfortingly familiar (derivative), uncanny valley, too weird

FOR FURTHER READING:



- https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4892973





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