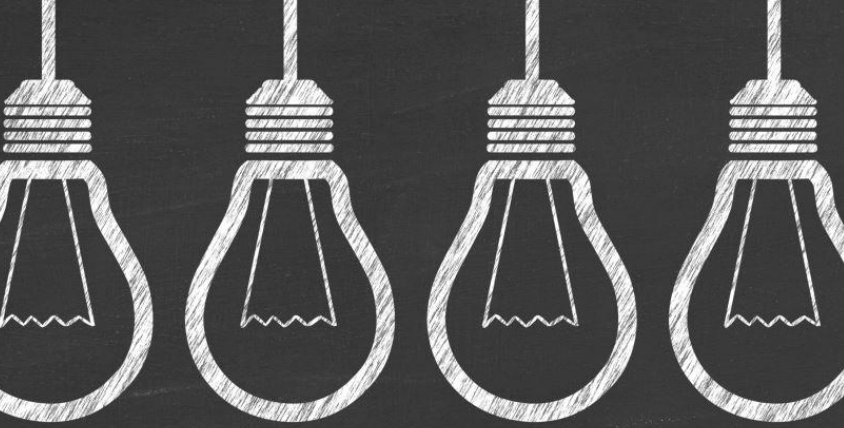


Rethinking the Analogous Art Doctrine in the AI Age

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Roadmap



1. The Rise of Centaur (Human + AI) Inventing Synergy (“CIS”);

2. The CIS Challenge to the Analogous Art Doctrine



The Rise of Centaur Inventing
Synergies (CIS):
Human – Problem Finding and
Framing
AI – Predicting Solutions



Patentability Requirements: U.S. Code, Title 35, Part II

- Subject Matter / Patent Eligibility (S. 101)
- Utility (S. 101)
- Novelty (S. 102)
- **Non-obviousness (S. 103)**
- Disclosure (S. 112) : Enablement and Written Description

S.103: 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.

Analogous Arts

Under Federal Circuit law, the scope of analogous art can be determined by one of two means: (1) whether the art is from the **same field of endeavor**, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether it still is **reasonably pertinent to the particular problem with which the inventor is involved.**" *In re bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). Whether a reference is analogous art is an issue of fact. *In re ICON health & fitness, inc.*, 496 f.3d 1374, 1378 (Fed. Cir. 2007).

USPTO Guidance

- Request for Comments (RFC) Regarding the Impact of the Proliferation of Artificial Intelligence on Prior Art, the Knowledge of a Person Having Ordinary Skill in the Art, and Determinations of Patentability Made in View of the Foregoing

89 Fed. Reg. 34217 (April 30, 2024)

4. In view of the availability to a PHOSITA of AI as a tool, how, if at all, is an obviousness determination affected, including when:

A. Does the “analogous” art standard still make sense in view of AI's capabilities?

My reply: Yes, but the AA doctrine (together with other patent law doctrines) should be clarified to overcome its current drawback in failing to recognize the creativity embodied in Problem Finding and Framing – otherwise, the drawback will be magnified in AI age and bias human creativity.

Drawback of Current AA Doctrine

- The CAFC has provided **inadequate and inconsistent** guidance on prong two, **even though this prong has been relied upon in “a majority of cases.”** *In re Bigio*
- The CAFC and district **courts take it for granted that the “problem with which the inventor is involved” is out there, and even in the cases that went the extra step of “formulating the problem,” often use the inventor’s own perspective rather than the PHOSITA’s.**
- **Such hindsight error may have been magnified *post-KSR***, which taught an “expansive and flexible” approach to nonobviousness.

In re Wood (1979); *In re Clay* (); *In re Klein* (2011); *Sci. Plastic v. Biotage AB* (2014); *Circuit Check v. QXQ* (2015); *Airbus v. Firepass* (2019); *Donner v. Pro Stage* (2020); *Corephotonics v. Apple* (2023); *Daedalus Blue v. Vidal* (2023), et al.

Drawback of Current AA Doctrine

1. By presuming the readiness of a creative problem, and conflating the inventor's perspective with the PHOSITA's perspective (the correct one) in **defining** the "problem to be solved," **US courts have disregarded the cognitive fact that in groundbreaking inventions, the inventor's finding and framing of the problem and his/her reference-seeking are iterative and mutually constitutive.**
2. By such disregard, courts have largely neglected the creativity embodied in PFF, and such error may lead to severe under-recognition and under-appreciation of human being's inventive contribution in the CIS.

The Creativity in Problem Finding and Framing (PFF): Bicycle □ Aviation

- An essential problem common to biking and flight: **once you are moving, how do you dynamically control this inherently unstable machine?**



Arguments Supported by Modern Research on Creativity and Hindsight Research

- **Groundbreaking problems (“catalytic questions”) are especially prone to the cognitive error of hindsight bias.** (Gregersen, 2018; Seelig, 2016, et. al.)

Conclusion

- Current AA doctrine, if left unclarified, may wrongly characterize remarkably non-analogous art as “reasonably pertinent”. In doing so, it risks undermining patent protection for radical problem finding and framing—those that likely still remains human being’s stronghold in the foreseeable future. Once a human inventor identifies and frames a new problem, AI’s unmatched capacity to draw correlations may retrospectively render even distant art “reasonably pertinent”—despite the fact that such art would have been invisible to the PHOSITA *before* the problem was so found and framed. The result would be a systematic, under-recognized bias against human creative leaps at the frontiers of technological knowledge.