

# FROM BIAS TO BREAKTHROUGH:

## How to strengthen IP search outcomes

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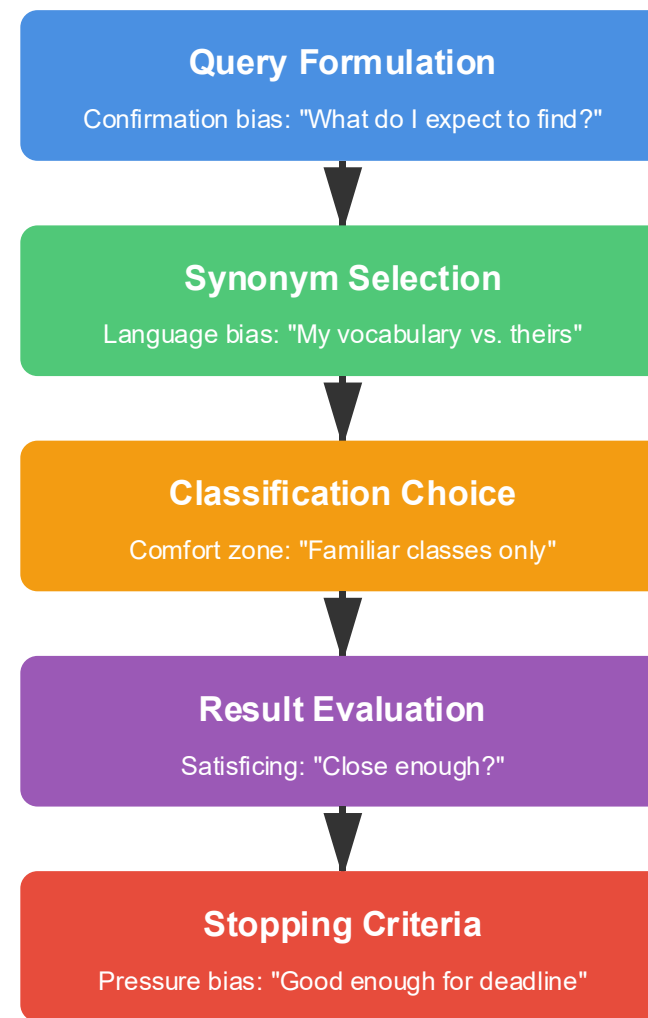
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# The 'invisible hand' in the search box

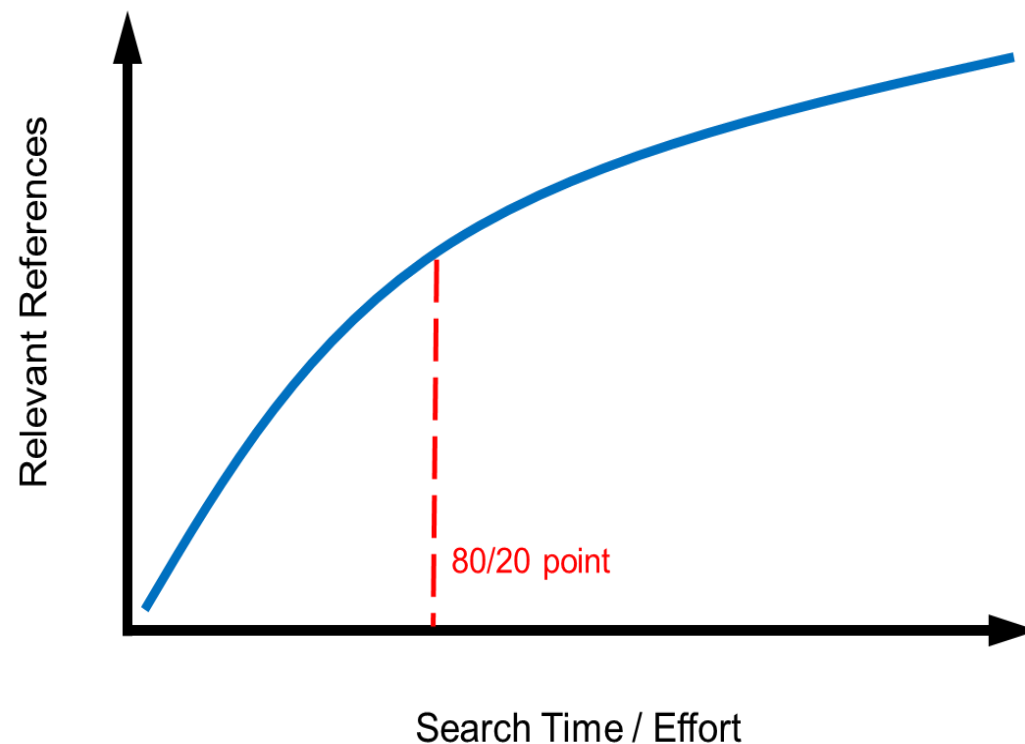
- **Cognitive biases** aren't a weakness, simply human efficiency mechanisms that can misfire in patent searching.
- The danger of "**satisficing**" (settling for 'good enough') in high-stakes IP decisions.
- **Organizational pressure** ("we need this patent filed") amplifies bias.
- Strategies to **counteract**: peer review, devil's advocate searching, structured search protocols.
- The role of **AI tools** in both **amplifying** and potentially **mitigating** human bias.



# Efficiency versus exhaustiveness

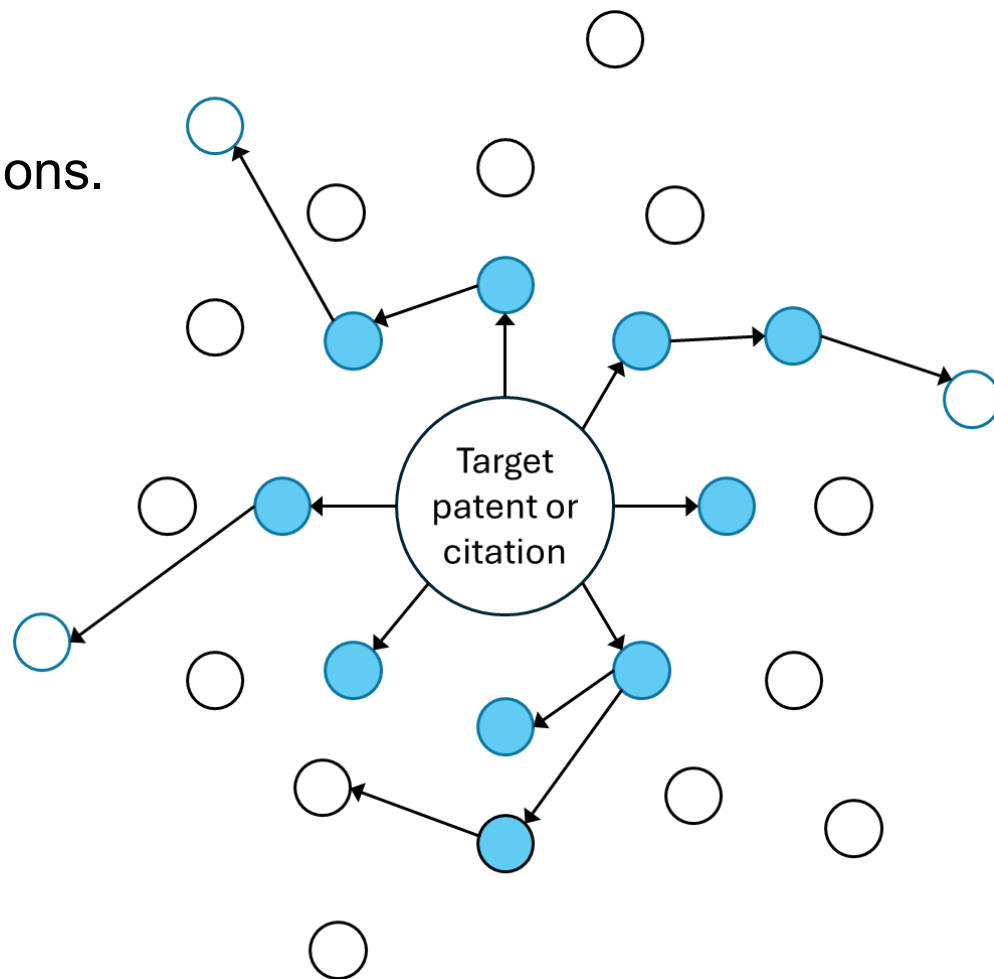
## The 80/20 rule in patent searching:

- Different search types demand different thresholds:
  - **Preliminary patentability:** 70-80% confidence may suffice.
  - **FTO/clearance:** 95%+ confidence needed.
  - **Litigation/invalidity:** Must be exhaustive within scope.
- Documenting your **search** is as important as documenting what you **found**.
- Red flags should trigger deeper searching despite time constraints.



# Degrees of separation in prior art

- Direct citations are just the beginning:  
**forward**, **lateral**, and **networks** reveal hidden connections.
- **Cross-industry innovation:**  
velcro (nature → textiles),  
touchscreens (research → consumer electronics)
- Searching "**adjacent possible**" spaces:
- Tools for citation mapping and **network analysis**.
- The risk of **tunnel vision**:  
staying within your comfort zone.





# Semantic gaps in patent searching

- Keywords alone will fail. **Synonym expansion**, but how far?
- **Historical terminology**: how was this described over time?
- Functional claim language challenge: "**means for...**" can encompass broad terminology.
- Semantic search tools as **complements**, not **replacements**.
- The importance of understanding the invention **conceptually** before searching **linguistically**.

## Wireless Communication:

- 1896: *Wireless telegraph*
- 1900s: *Radio communication*
- 1920s: *Radiotelephone*
- 1933-1939: *FM radio*
- 1947: *Cellular concept*
- 1973: *First cellular call*
- 1999: *Wi-Fi 802.11b*
- 2003: *Wi-Fi 802.11g*
- 2009: *Wi-Fi 802.11n*
- 2014: *Wi-Fi 802.11ac*
- 2019: *Wi-Fi 802.11ax*
- 2024: *Wi-Fi 802.11be*

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## Biologics:

1890-1909: *Yeast nucleic acids*

1933: *RNA in cytoplasm*

1958: *RNA and protein synthesis*

1960-1961: *Messenger or mRNA*

1960s: *Transfer or tRNA*

*Ribosomal or rRNA*

1977: *RNA splicing*

*pre-mRNA*

*Small nuclear or snRNA*

1993: *micro or miRNA*

1998: *small interfering or siRNA*

Early 2000s: *long non-coding or lncRNA*