Summary of:

Artificial Intelligence and the Future of Work: Human-AI Symbiosis in Organizational Decision Making

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Introduction

The article highlights:

- Fear that AI will automate all of human work.
- Nuances of AI and human decision-making and how AI is still dependent of human interaction
- The strength of AI and humans in symbiosis

For the structure of our presentation, we introduce key concepts within organizational decision-making paired with examples, then we end with highlighting the conclusion section of the article

Organizational Decision Making

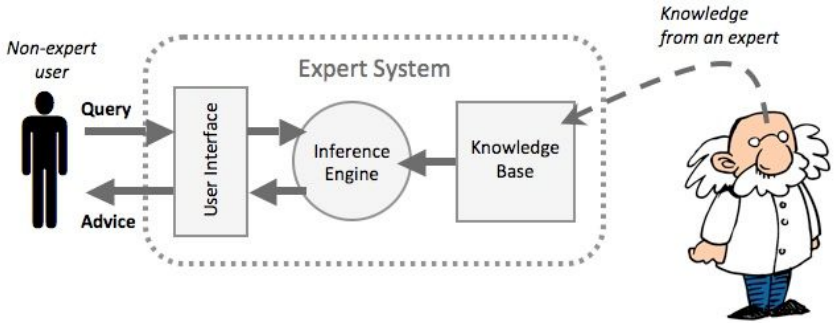
All types of decisions, from financial investments based on gut feeling to pricing of a product based on months of market research

The article divides approaches to problem as intuitive and/or analytical, and presents three hurdles which complicate the process, uncertainty, complexity and equivocality

Analytical approach

Analytical approaches commonly make use of the extensive computing powers of AI. Large data collection and analysis which then are used to find correlations between data points

An example is expert systems, where non-expert users extract advice by answering queries that the computer uses to give advice, for example medical procedure. Knowledge of the domain is provided by experts



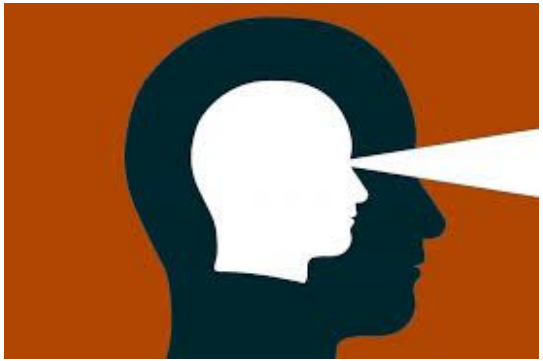
Intuitive approach

Intuitive decision approaches is prevalent throughout managerial roles

“Gut feeling” honed by experiences, common practices and judgement

Decisions cannot be pulled from “thin air”

Abstract solving technique, hard for AI to mimic humans intuition



Uncertainty

Lack of information at hand. Difficult to interpret a situation and difficult to make a decision

There might be unknown factors such as shortage of human resources, new disruptive technologies, competitors or new policies

Intuitive decisions often better than analytical when facing problems with uncertainty

Examples of uncertainty

Global crisis is mentioned as having few precedents, as well as technical glitches, which complicate the process for an AI. Here humans excel because of decisions that "feel right"

Launching a new product and selecting its' color palette include degrees of uncertainty. Steve Jobs intuitively selected candy colors for iMac under 30 minutes, a decision that would've taken months to motivate otherwise

Compare for example chess with managerial decisions. In chess all information is available, in managerial decisions, there are a lot of unknowns, it is uncertain

Complexity

“Complex situations are characterized by an abundance of elements or variables.”

AI reigns supreme due to sheer computing power

Ability to learn from raw data itself using deep learning

AI collects and analyzes data - Humans use intuitive judgement and insight

Examples of Complexity

Assessing a person’s credit risk based on friend list, living address, workplace or favorite shopping mall

Important to leverage humans' superior intuition when labeling social media posts as inappropriate or not. Humans have the final say

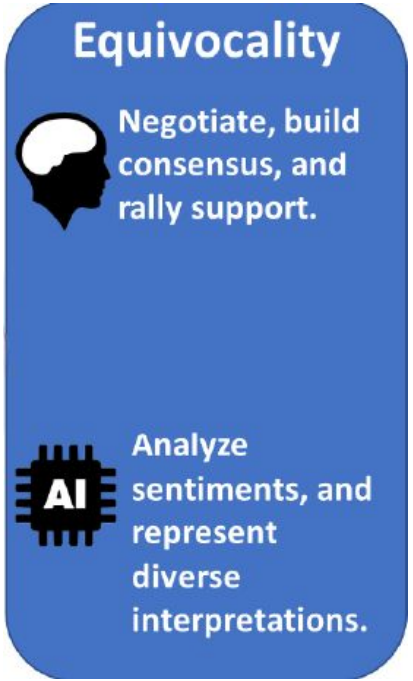
Venture capital firms use predictive AI to assess investment opportunities of startups by gathering large quantities of data

Equivocality

“The presence of several simultaneous but divergent interpretations”

What is *objectively* the best decision and who decides it?

Occurs due to conflicting interests



Examples of Equivocality

The optimal move in chess might not be aesthetically pleasing for human players

The best act of firing half of upper management to make the business more lean might not be appreciated

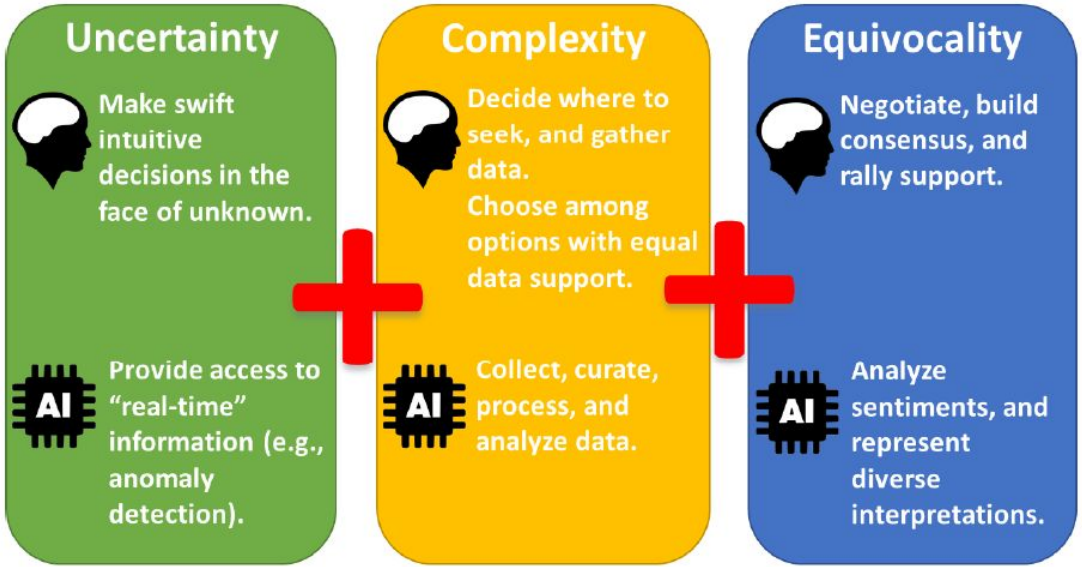
Equivocality should always be addressed and humans with domain-knowledge should try to understand the AI and promote the decision

Conclusion

Uncertainty, complexity and equivocality are **not** mutually exclusive

Approaches are not defined as purely analytical or intuitive

AI excels at complexity with brute force, human leverage superior intuition and deal with uncertainty and equivocality



Conclusion

Intuition is a non-transferable human attribute

It is deemed seemingly impossible to have an exclusively AI based organizational decision system

AI is a tool for augmentation rather than automation

"Computers plus humans do better than either one alone”

Thank you!

Questions?