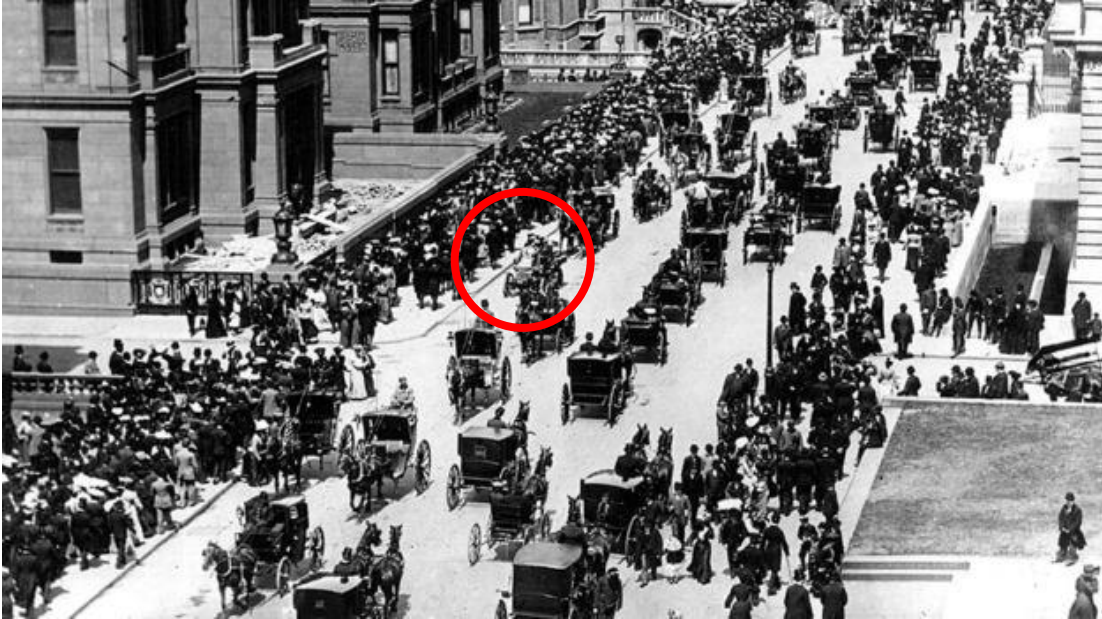


# WE HAVE LOADS OF DATA - BUT WHAT DO WE WANT TO KNOW?

# THINGS CHANGE FAST

5<sup>th</sup>. Avenue, NYC 1900

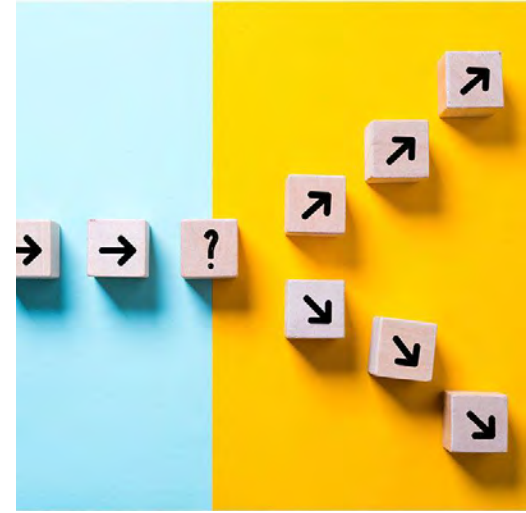


5<sup>th</sup>. Avenue, NYC 1913



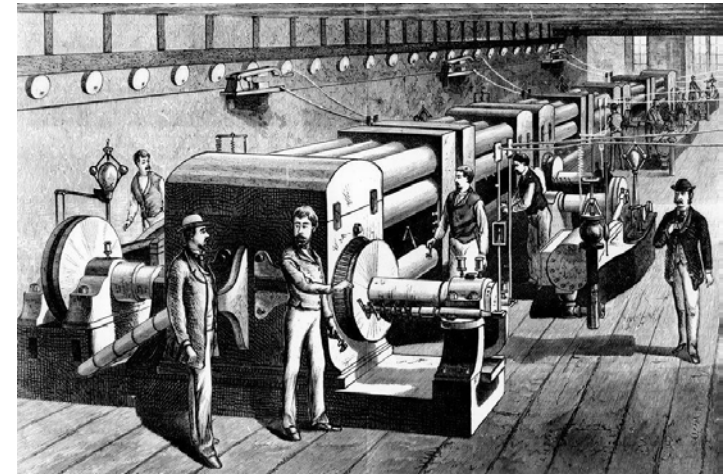
# HOWEVER...

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Speed is overrated: The U.S. Navy SEALs abide by the saying, “Slow is smooth, and smooth is fast.”

Remember also, we are in the ‘BETWEEN TIMES’ – since AI tech. is still not integrated on a systemic level but works mainly as fragmented individual software solutions, plug-ins, or apps (Agrawal et al. 2022)



# KEY ISSUES FROM RESEARCH ON DATA-DRIVEN MANAGEMENT

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Change in decision-making (processes)?

Data vs. problem formulation

Current research - what are social scientists interested in regarding data-driven management?

# STATE OF AFFAIRS...



Facing a *twin* transformation of digitalization and sustainability!

- AI, IT, data, sustainability - it's all integrated into strategic management now!
- Increasing investment in IT/Data, and AI is moving out of the basement
- Increasing number of apps/systems to coordinate within and around the organization (e.g., system and data integration challenges)
- New digital opportunities – but is the road leading to automation or augmentation?
- Industries boundaries are blurring
- Upskilling and reskilling of employees and management in the face of change



# CHALLENGES...

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Organizational and tech. problems often get pushed into categories and quickly framed to find a solution. Decision-makers often accept or inherit an initial framing of a problem, especially when they aren't made aware that it's more complex

Plunge-in bias: The desire to start solving a problem without fully understanding it and without knowing how to solve it – thus small experiments may work

Decision-makers need data literacy to discern which information is worth attending to and which can be ignored. Would investing in more technology just pull a company away from a good solution?

What is “noise” and what is “signal” becomes difficult to discern when problems are multifaceted and unfamiliar – Yet an appetite for learning via small experiments seems needed

# DECISION-MAKING UNDER COMPLEXITY AND UNCERTAINTY

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As prices drop of prediction technologies and accessibility increases, we have decision-making with increasing complexity (e.g., which data, how much data, and what does data tell us)

AI is basically an advanced statistical prediction technology able to learn continuously but useful for multiple purposes (e.g., text messaging to autonomous vehicles). It enables increased decomposition of judgment and prediction in decision-making

Organization (i.e., structure and processes, employees, supply-chain, market, etc.) that is geared for continuous change, tech. adoption, and adaption, learning

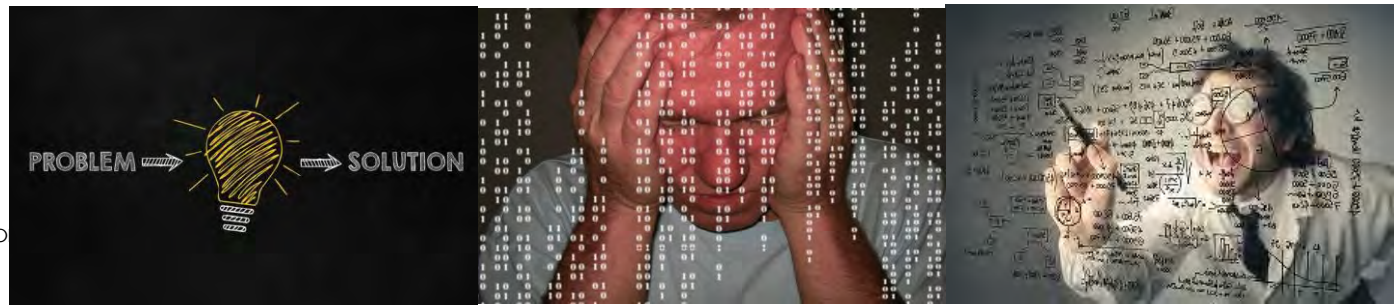
But what's the best division of labour between humans and machines in your organization, and what rules should be established to govern the relationship?

# DATA VS. PROBLEM FORMULATION

We have loads of data available and can also use generative AI for ideation, analysis, summaries, etc.

...but rather than fancy prompt engineering and abundance of data we need to understand how to *formulate* the problem we intend to solve!

Without an identified, analyzed, and delineated problem and clear purpose, abundant data is of no use





# PROBLEMS...

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- Problem decomposition – breaking complex problems into smaller manageable sub-problems
- Reframing problems and use of analogical transferring for alternative representation – position yourself as a user?
- Problem constraint design; What are the boundaries for the problem we are formulating?
- The importance of designing *the process* of strategic decision-making
- Focusing on the data availability and tech. opportunities can be counterproductive as they may take focus away from the exploration of the problem itself

# CURRENT RESEARCH EXPLORES

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- To what extent - and who improves when using generative AI for problem-solving? Lab. experiment with AU students and ChatGPT for testing learning (i.e., exam) (Noy & Zhang, 2023)
- Ideation but with crowds or AI (Boussioux et al. 2023)
- Can generative AI be equally useful in all processes of ideation? (Girotra et al. 2023)
- Use cases for how generative AI can be used in the scientific process (Korinek, 2023)
- How well can we predict winners in idea contests on digital platforms? (Dahlander et al. 2023)
- [https://authors.elsevier.com/sd/article/S0048-7333\(23\)00159-2](https://authors.elsevier.com/sd/article/S0048-7333(23)00159-2)

# THANKS

# YOUR COMMENTS ARE SOLICITED



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11 OCTOBER 2023

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