Columbia Business School

Pre-Thesis Seminar

Simon Oh (Finance Division)

October 21st, 2025 | Tuesday

Plan for Today

Part 1: Aperitivo

- Best (potentially useful) “advice” for navigating the PhD program
- A Few Thoughts on AI
- Crafting Academic Narratives

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Part 2: My Research Area: Asset Pricing, Investments, and Insurance

- “Pricing of Climate Risk Insurance: Regulation and Cross-Subsidies”
- “Climate Capitalists”
- “Asset Demand of U.S. Households”

Some (potentially useful) “advice”

Shockley (1957)

On the Statistics of Individual Variations of Productivity in Research Laboratories*

WILLIAM SHOCKLEY†, FELLOW, IRE

In the following pages a co-winner of the 1956 Nobel Prize in Physics presents a novel study of one of today's most precious commodities—scientific productivity. The author not only measures the variations that exist between different research workers, he also explains these differences and draws some specific conclusions about the relationship of salary to productivity. PROCEEDINGS readers will find this an especially timely and significant discussion, particularly in view of the present widespread concern about manpower shortages and proper utilization of scientific personnel.—*The Editor*

Shockley (1957)

Still another way of rationalizing the log-normal distribution may be based upon the hypothesis that the interacting mental factors are of several different kinds rather than several of one kind, as in the case of several ideas as discussed above. For example, consider the factors that may be involved in publishing a scientific paper. A partial listing, not in order of importance, might be: 1) ability to think of a good problem, 2) ability to work on it, 3) ability to recognize a worthwhile result, 4) ability to make a decision as to when to stop and write up the results, 5) ability to write adequately, 6) ability to profit constructively from criticism, 7) determination to submit the paper to a journal, 8) persistence in making changes (if necessary as a result of journal action). To some approximation, the probability that a worker will produce a paper in a given period of time will be the product of a set of factors F_1, F_2, etc. related to the personal attributes discussed above. The productivity of the individual would then be given by a formula such as

$$P = F_1F_2F_3F_4F_5F_6F_7F_8. \qquad (1)$$

Now if one man exceeds another by 50 per cent in each one of the eight factors, his productivity will be larger by a factor of 25. On the basis of this reasoning we see that relatively small variation of specific attributes can again produce the large variation in productivity.

A Useful Checklist (1/6)

- Ability to think of a good problem

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- **Ability to think of a good problem**

1a. Read! There needs to be input in order to generate output.

  - Media Articles
  - Books
  - Industry Reports
  - Academic Papers (cast a wide net!)
  - Reading Groups
  - There is no shortcut!

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- Books
- Industry Reports
- Academic Papers (cast a wide net!)
- Reading Groups
- There is no shortcut!

1b. Repetition is more important than perfection

- If you want to write a great job market paper, you could spend years polishing one perfect idea in isolation.
- Or, you could present your research early and often, learn from feedback and rejection, and iterate on your work until it stands out.
- This is incentive compatible! Schools increasingly want evidence of sustained output, so a portfolio of research helps build your case.

A Useful Checklist (2/6)

- Ability to work on the problem

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- **Ability to work on the problem**

2a. Courses are the foundation.

  - Common methodologies: diff-in-diff, IV, regression discontinuity
  - Common theoretical frameworks
  - You never know which course will be useful – embrace a learning mindset and stay open to unexpected connections

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2b. Tools are your leverage.

- Master relevant software for empirical work.
- Explore advanced computational tools (e.g. cloud computing) for complex projects
- Effective use of LLMs and AI more broadly is key (more on this later)

A Useful Checklist (3/6)

- Ability to recognize a worthwhile result

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- **Ability to recognize a worthwhile result**

3a. Stay in touch with the literature

- Attend seminars regularly – it's the easiest way to learn.
- Browse through conference programs.
- Read beyond your immediate area of interest – don't stay too narrow.

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- Browse through conference programs.
- Read beyond your immediate area of interest – don't stay too narrow.

3b. Analyze how papers are structured and evaluate their contribution.

- Every (successful) paper has a contribution.
- When reading the papers, try to pay attention to how a paper carves out its contribution (hopefully it's clear in the introduction)

A Useful Checklist (4/6)

- Ability to profit constructively for criticisms

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- **Ability to profit constructively for criticisms**

4a. Ask for feedback proactively

  - Don’t wait – reach out to advisors and peers
  - Be explicit about your needs
  - Frame your questions clearly

A Useful Checklist (4/6)

- **Ability to profit constructively for criticisms**

4a. Ask for feedback proactively

- Don’t wait – reach out to advisors and peers
- Be explicit about your needs
- Frame your questions clearly

4b. Find the advising style that fits you best

- Some advisors excel at high-level strategy, others at line-by-line edits
- Do you want detailed feedback, big-picture guidance, or just encouragement?

A Useful Checklist (5/6)

- Ability to write adequately

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- **Ability to write adequately**

5a. Practice writing

  - If you have a result, try writing it in paragraph form instead of bullets—writing clarifies your thinking.
  - Make it a habit to write regularly, even if it's just notes or reflections.

A Useful Checklist (5/6)

- **Ability to write adequately**

5a. Practice writing

- If you have a result, try writing it in paragraph form instead of bullets—writing clarifies your thinking.
- Make it a habit to write regularly, even if it's just notes or reflections.

5b. Read and emulate good writing

- Aspects: transitions, argument flow, contextualizing results
- Clarity over complexity

A Useful Checklist (6/6)

- Ability to present adequately

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- **Ability to present adequately**

6a. Practice presenting

  - Take every opportunity to present—conferences, PhD workshops, internal reading groups.
  - Record yourself to identify areas for improvement (e.g., pacing, tone, or clarity).

A Useful Checklist (6/6)

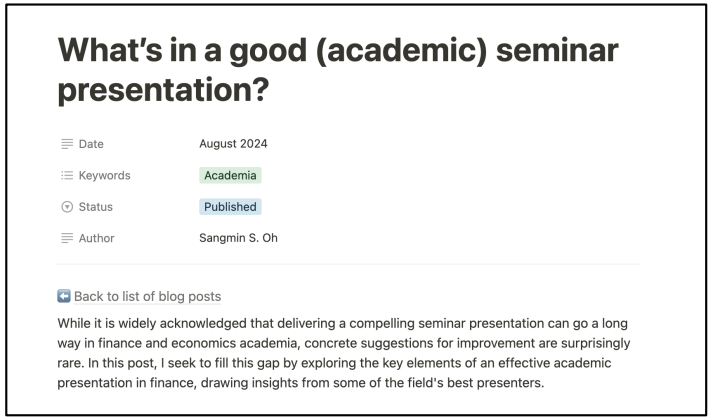
- **Ability to present adequately**

6a. Practice presenting

- Take every opportunity to present—conferences, PhD workshops, internal reading groups.
- Record yourself to identify areas for improvement (e.g., pacing, tone, or clarity).

6b. Watch and emulate good presenters

- Watch seminars and conference talks—analyze what makes them engaging.
- Pay attention to slide design, storytelling, and how presenters handle questions.



The Checklist: Shockley (1957) + Oh (2025)

1. Ability to think of a good problem
   - Read! There needs to be input in order to generate output.
   - Repetition is more important than perfection

2. Ability to work on the problem
   - Courses are the foundation.
   - Tools are the leverage.

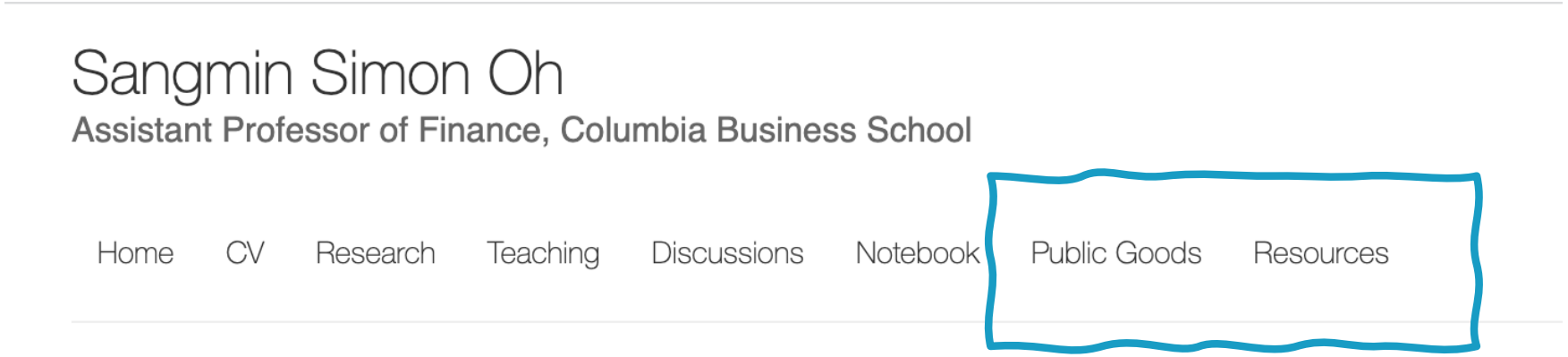
3. Ability to recognize a worthwhile result
   - Stay in touch with the literature.
   - Analyze how papers are structured and evaluate their contribution.

4. Ability to profit constructively from criticisms
   - Ask for feedback proactively
   - Find the advising style that fits you best

5. Ability to write adequately
   - Practice writing
   - Read and emulate good writing

6. Ability to present adequately
   - Practice presenting
   - Read and emulate good presentations

If you want more, go to my website.



A Few Thoughts on AI

Three Core Principles of AI (as of 2025)

1. AI is alien.

   - Never fatigues
   - Triggers anthropomorphic aversion
   - Bears no legal liability

2. AI is encyclopedic.

   - Trained on entire corpus of human knowledge (and error)

3. AI is generative.

   - Extracts patterns and reproduces them with high fidelity

Implications (1/3)

1. AI is alien.

- Never fatigues
- Triggers anthropomorphic aversion
- Bears no legal liability

Implications:

- Expect (unfair) backlash against over-reliance on AI
- Communication, emotional intelligence, and personal aura become differentiators
- Scholars who can frame ideas, not just generate results, will stand out

Implications (2/3)

2. AI is encyclopedic.

- Trained on entire corpus of human knowledge (and error)

Implications:

- Knowledge itself is less scarce; narrative construction and interpretive framing matter more
- Attention becomes a new bottleneck: successful researchers combine precision with storytelling
- Trust replaces expertise as the scarce resource

Implications (3/3)

3. AI is generative.

- Extracts patterns and reproduces them with high fidelity

Implications:

- Rewards those rich in ideas and breadth (generalists, connectors, and pseudo-polymaths)
- Advantages researchers who document and structure their thoughts
- Slashes the cost of prototyping (e.g., drafting introductions, outlines), but risks trapping users in local minima

Crafting Academic Narratives

The (Finance) Academic as a Storyteller

1. Why do I care?

"This is so boring"
"Why do I care about this?"
"I don't get why this is an important topic"

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1. Why do I care?

"This is so boring"
"Why do I care about this?"
"I don't get why this is an important topic"

2. Isn't this obvious?

"Is this new? I thought we knew this already"
"Is this supposed to be surprising?"
"I don't think I learned anything new"

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Provides new facts that prompt a re-evaluation of current paradigms

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Measures what was once thought immeasurable

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Post-Mortem
Uncovers the underlying causes and consequences of significant events