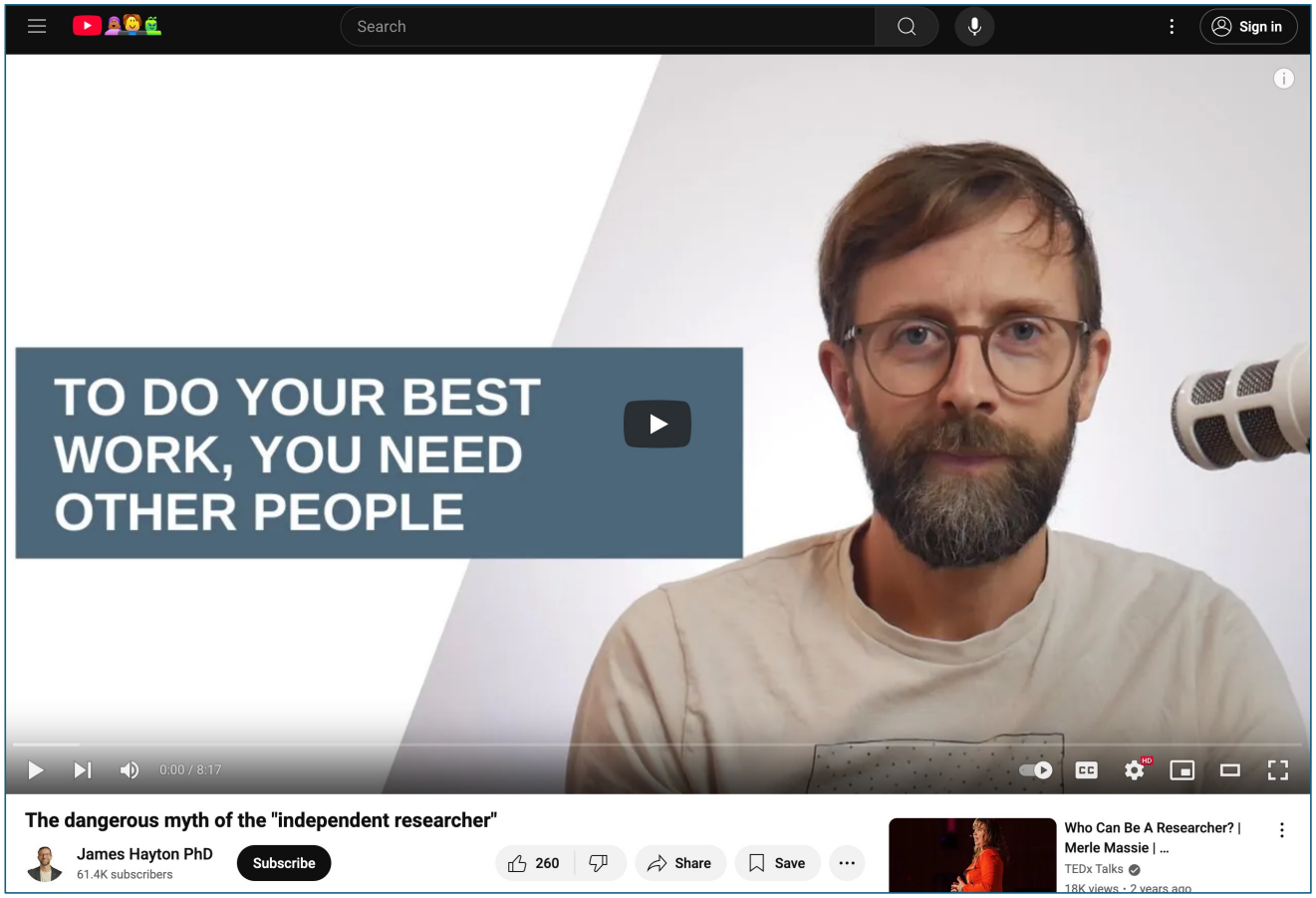

XYZ LABS INC.
PURE RESEARCH
SOMEWHAT SULLIED RESEARCH
TOTALLY CRAVEN, PROFIT-DRIVEN RESEARCH

CMV – stands for?

Calm
Mature
Voracious …some major qualities of great up-and-coming scientists

https://phd.academy/blog/the-myth-of-the-independent-researcher/



Establishing Amicable Independence (highly advised "sole" leadership of research program)

Talk with PD mentor about project to develop and potentially take with you – when & what project type?

- no simple answer here: varies, but – generally – please have constant conversations
- what's the **significance** of the problem area? (hopefully a major gap area, plausibly fillable in reasonable time by your work)
- PI and you **should** have a candid, professional, co-invested relationship
- >> Choice of PI at GS and PD levels (and future mentors, including for you as PI yourself) is crucial for career progress

How best to demonstrate independence from your PI?

- cover it head on: in-person discussions (poss. with recruitment-committee chair), cover letter*, research plan, chalk talk
  [show maturity regarding your selected scientific community and how to establish "presence"]

* My view, cover letter critical
– clear synopsis of **everything**
– my "first to read" (& rank)

The "right" timing to begin a faculty search?

- advertisements – "open" searches versus field/area-defined, but "behind the scenes"…
- contact your network (including in your research talks), make it obvious you/your PI expect you'll be "ready" in *X* months
- best PIs help make this next step for you a success – reflects on them (scored by trainee accomplishments in many ways)
- "the field" may "know of you" already when you start publishing *(pleasantly surprised me, at a personal-experience level)*

Do postdocs (PD) need secured independent funding before they start their job search?

- locked in already for future PI phase? – not mandatory
- independent GS & PD fellowships are strong indicators of excellence, but lack is **not** a death-knell
- K99/R00 or similar indicates another level of step-up

"Red flags" concerning independence when interviewing candidates?

- a previous candidate here – **in chalk talk** – stated "I've never discussed project portability with PI" (committee: hhmmm!)

Defining your research niche

As a postdoc, what steps can **you take** to carve out your own research niche?
(as a GS you are expected to reach "colleague" status, and also as a PD)

At what point in your postdoc should this be taking place?

- early, mid-, right-at-the-end?
- there's one real answer – all of these, if possible (but scientific surprises can happen)
- some PIs allow PDs to do "whatever they want", others plug them in (discuss)

How closely related to your PI's work can/should it be?

- hint – would discussion help?

How to address the issue of competition from others more advanced in the field?

- how many groups cover "a field"?
- how often is one always making 98% of discoveries? (not often)
- describing the specific fit of your research and prospective "singular" contribution is great

Identifying collaborators and mentors

What makes a good collaborator?

- not **only** friends! (maybe (luckily) they already are; but collaborators often turn into close friends)
- complement & extend you, brave, innovative, open-minded, prepared to deal with problems openly if they arise (often critical to getting large grants as junior investigator)

What are the best ways to find collaborators?

- networking!
- direct even "out of the blue" contact – then build collegiality – which may take some time

How to establish working guidelines with a collaborator to manage expectations?

- specific, often written, defined expectations (especially if **effort-funded** collaborator on a large grant)
- contracted "scope of work" agreements
- scheduled meetings, agreed deliverables (PI often creates a management plan for major grant proposals)

Whom should you seek out as a mentor while a postdoc?

- several people! (and not push-overs – maybe none of this type – need candid, kind advice)
- various career levels

Is it a good idea to form a postdoc mentoring committee?

- of course!
- what types of members, do **you** think? (comment above)

Considerations for graduate students

Advice for students planning to pursue a faculty job – choosing a postdoc and other topics?

- Extend yourself in completely different direction? Why? Benefits to staying on “a track” vs. diversifying.
- Are you aimed at an independent PI study area, even as a 2nd-yr graduate student? (you can)
- Can you (with advice) create a map of your current and needed skill areas?
- Focus on **writing skills** – coherent and concise scientific writing, logic and flow. Relevant everywhere.

Developing a research plan and research statement

How long should a research plan be, and what components are expected?

- what is **average read/digest time** of an application for recruitment committee? (10 mins first pass)
- >> structured writing and presentation!
- wall of text (bad, BTW) vs. diagrammatic representations ("graphical abstract")
- front-load, even while using (short or extended) bullet points for emphasis and speed of digestion

How to balance illustrative figures vs. text?

- advice from **your local** recruitment-committee members, senior evaluators, and new faculty members

Preferred (or "**stand-out**") format of a research plan?

- how to distinguish yours as mature, **focused**, high-significance research topic(s) (not vague and open-ended)
- organized, coherent, cosmetically "sharp" (page limits may exist – if not, ~3-4 pages)

How much preliminary data expected in a research plan?

- your publications are your preliminary data, but having more is great!
- make it obvious how these data are targeting your goal (and your **research and funding** plan)

What time period should your research plan cover? (how many years into the future)

- short term (specific, even granular, directed, selected areas for **impact**)
- long term (less certain, yes, but how your lab would be described in 5-10 years, your main contributions)

How far along the thought process should your research plan be? (i.e. money, resources, preliminary data)

- structured – as a mature applicant, you realize that a small lab starts, becomes larger, then extends coverage
- all these concepts can be conveyed within a good research plan
- significance, feasibility, time frame, cost effectiveness (*vital special equipment needed or nothing works?*)
- find smart people to assist with negotiating "start-up package" (costs of research & establishing your group)
  – ***some*** *places will (at least try to) short you!*

How can you best balance between summary of previous research experience and future research plans?

- summarize progress as GS, how it led to PD, the "morph" towards your own leadership

What is the level of detail and specificity provided in the experimental approach?

- conceptual overview is most important, but include statements on feasibility (esp. if very new tech)

Should you try to distinguish your plans from your postdoc mentor's future plans?

- yes
- explicit descriptions of potential collaborative phase (with authorships agreed!), followed by "separation"

How to show recruitment committee that **you** are their probable best investment?

- In all personal interactions, including dinners – relaxed but mature, confident, articulate, & show you are **receptive**.
- Chalk talk – fit to institution/department and their needs, extensions and collaborations.
- Deep visionary statements on where you would ideally take things, if that vision exists (it usually does, or should).
- Make sure you fit the department/institution to which you've applied – and have the required skill sets.
- If some places are more teaching-invested – make it obvious you're tuned that way (describe experience and ambitions).
- Your extreme enthusiasm for future of your research and your teaching/research community in general.
  subtext: make clear (not tactlessly, however!) that you will become a stand-out in all aspects and part of the "fabric" of the institution.

Welcome to your job!