Managing People and Getting Support

1. **How to mentor the next generation of scientists**
   - recruiting students
   - healthy student/adviser relationships

2. **Getting the support for yourself**
   - Cultivating your network of mentors and sponsors
   - Engaging in healthy conflict
   - Dealing with stress, rejection and negative energy

Managing People and Getting Support

1. **How to mentor the next generation of scientists**
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EXERCISE: What is the difference between an advisor and a mentor?

Managing People and Getting Support

- your long-lasting impact will be the people you influence
- the true horsepower of any lab are the smart minds to drive it
- student and postdoc mentorship can be a large source of job satisfaction
- however….faculty are never trained to be effective managers of people!

Managing People and Getting Support

What to look for in prospective students:

- recruitment does not have to be a crap-shoot!
- high GRE scores do not correlate with academic success, enthusiasm, and creativity
- high GPA scores are more indicative of student academic success

- What I look for:
  - dedication, passion, drive and fun to work with personality
  - find out why they want a PhD – I've heard a lot of different reasons, some of which have led me to not recruiting that student
  - research experience – particularly on a topic/skill that you also use (does not have to be both, but training a student in both your specialty and your skills can be challenging – particularly for MS students)
  - a good match to your research desires – some applicants use grad school as a springboard to something else and they often don't care what they research
  - references from trusted colleagues

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How to recruit:

- put some guidelines for prospective students on your webpage – I ask for them to send me a CV and their unofficial transcripts (to determine admission potential)

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Our group places a high value on collaboration, both within our group, our school, and in the broader community. By learning and challenging one another we build a deeper understanding of the Earth around us, and a more respectful workplace that is inclusive for all. We are excited by colleagues who can work independently and yet know when to ask for help; who have a good sense of humor; who possess a healthy dose of passion for what they are doing; who have creative ways of figuring out problems; and of course like to work hard (and cold beer).

FOR FUTURE STUDENT COLLEAGUES:

The Jackson School of Geosciences comprises three different research units composed of several hundred scientists. We get hundreds of graduate student applicants each year. Thus, in order for me to find you in the stack of applicants, it is helpful for you to **write me** inquiring of any possible graduate opportunities. Further, this begins a dialogue between us that gives me a sense of how we might work together. Field opportunities may be available but are not a consistent part of everyone's research. There are many exciting things are being done using the wealth of available remote sensing data and new modeling techniques, and these skills would prepare you better for the modern job market.

The primary qualities I look for in graduate students is the ability to think independently, enthusiasm, drive for research, easy-going nature, and strong quantitative and/or computational skills. You don't necessarily have to have these skills already, but a desire to learn them will be rewarded over your lifetime. I also look for a strong match between my research interests and those of any prospective student. **You should therefore have thought a bit about why you want to pursue a PhD in glaciology.** Particularly, when the field is not necessarily hiring at the pace of graduation rates. **Specifically, I would like to know what aspects of glaciology are most exciting to you. What do you think is the most relevant research currently in glaciology?** The first critical step is to develop a project that really excites both of us. I also want to know your career goals and what skills you would like to develop while in graduate school. By providing me a sense of where you want to eventually be, we can collaboratively develop your skill set and expertise to meet that goal. I have prepared a document that outlines my expectations for graduate students under my supervision.

While your academic pedigree and GPA/GRE scores matter, they are considered less than the types of courses you have had. That said, there are still graduate program requirements for all student admissions. So **please send a transcript** (unofficial is fine) so that we can rule out any possible problems. I look for someone who desires to have a rigorous, quantitative understanding of earth sciences and prefer more math, physics and computer science than general education courses. It is also **preferred that you have some research experience** so that you are more adequately prepared for the shift from a course-centric undergrad career to a research-centric graduate career. If you can, **please send any research papers you have written** (e.g. class research projects, published papers).

APPLY HERE

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How to recruit:

- send out inquiries to listservs, colleagues, at meetings
- start with an email conversation to determine if interests/goals align
- meet via zoom to gauge motivation, reasons for picking you/your program, intellectual maturity, fit with your research (science and people)
- some do multiple zoom meetings to narrow down topics, application procedures, etc.
- acceptance rate is ~50% at JSG (students accepted to the program that actually come) so I have frequent conversations to get a sense of if they will accept or not
- you may have startup to use for students – but don't feel like you need to use it all in the first year **– a student that is a bad fit is worse than no student at all**

- remind them that younger faculty advisers have much to offer:
  - you are more likely to work alongside them
  - more sympathetic to the life of a grad student
  - generally more enthusiastic

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Mentoring the lab group:

- as PI it is your responsibility to foster a culture of “this is our lab group” not “this is my lab group” to boost morale, productivity, internal-collaboration, etc.
- this also gives them a chance for them to make the culture that they want
- it is important to treat students as individuals with different needs, strengths, career aspirations
- consider creating a lab group handbook and/or a code of conduct
    - if you don’t create a code of conduct deliberately, a culture will emerge organically, which carries risk; revise with time as new members join your group
    - this can be a good document for recruiting students

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Create a lab handbook:

- things to include:
  - your approach to how you do research (collaboration, etc.)
  - expectations for how people are treated (feedback, etc.)
  - modes of communication (email/texts/slack)
  - how conflict is resolved?
  - general preparations that members must meet in order to graduate from the lab
  - how meetings are structured?
  - working styles – do members work whatever hours/locations they wish?
  - how is feedback received?

Create a list of resources:

- how to do purchase orders, key requests, etc.
- links to existing handbooks
- poster printing, software access

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Getting Feedback:

- if you don’t want to do formal documents, have an annual group meeting with the entire group to foster discussion on lab culture
- create an anonymous submission form (google forms) for feedback on your advising style
- create a separate one on how to improve lab culture/organization/etc.

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Mentoring the individual:

- LEARN TO SPELL AND SAY THEIR NAMES – I can't tell you how many people call me Jenny or spell my name as Ginni – even colleagues I've had for over a decade
- engage in ongoing conversations with students about multiple topics: science, personal life, work to understand their life/career goals and how you might assist them with those goals
- celebrate their accomplishments and acknowledge prior achievements
- set up regular meeting times – you may need a notebook or calendar to keep track of where student progress should be when you meet
- determine semester-long goals and work backwards to identify mid-term goals that can be reached monthly (or shorter)

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Mentoring the individual:

Expect that some students may be very intimidated by you

- recognize the power differential between you and your students
- foster camaraderie and enthusiasm among your group
- encourage mentoring from senior students (good experience and saves you time)
- multidisciplinary projects tend to involve groups of faculty and their students and can lead to maturity of thought on topics outside of the normal scope within one discipline and creates communities where students can interact
- consider formally using an IDP (Individual Development Plan) that establishes short- and long-term career objectives
    - empowers your mentees to take ownership of their career path
    - facilitates conversations between mentor/mentee
    - creates realistic road maps for reaching goals
    - identifies resources, strategies needed to reach goals

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Mentoring the individual:

Expect that some students may not take you seriously as an authority (esp. URM faculty)

- remember, you are their adviser first, not a friend (this doesn't mean you cannot be friendly)
- what kind of socializing is typical (in and outside of working hours)?
- document as much as possible to ensure that your decision-making when dealing with this situation do not come back to haunt you
- power differentials get larger with time – consider how your identity evolves over time

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Treat them as trusted colleagues:

- use the phrase: “What do you think about….”
- involve them in proposal writing so that they learn how to plan research
- include them in “higher-level” talks with collaborators
- encourage them to present their work to visitors
- include them in group meetings on projects that they are interested in
- advocate on their behalf to get them opportunities
- respect their free time
- when they stumble:
  - ask them to send daily or twice-weekly reports about their research and progress
  - Some days it could just be a summary of a paper or a talk or even “I didn’t do anything”
  - After 3-4 weeks of this, they often get back on track

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Mentor their scientific and social skills:

- practice writing/speaking skills and answering difficult scientific questions
- encourage them to show initiative and keep you educated on the field
- teach them to acquire research taste and how to identify problems that, if solved, are more likely to scale and have impact
- set specific goals and measures of accomplishment – e.g. publishing goals with deadlines
  - get them to dive into research early – within their first year
- explain departmental culture: many “rules” are not written
- be open to even the most basic of questions about the culture and your science – particularly for URM students who might not be as experienced with academia

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Provide constructive and supportive feedback quickly and often

- don’t be the bottleneck
- there is a huge learning curve with scientific writing during graduate school
  - guide them through the writing and revision process to teach them how to write
  - sit down with them and review their writing live to explain your process
- give students in the last six months the highest priority on your schedule and the opportunity to meet as much as they want to reduce their anxiety
- ask “what questions do you have” instead of “do you have questions”

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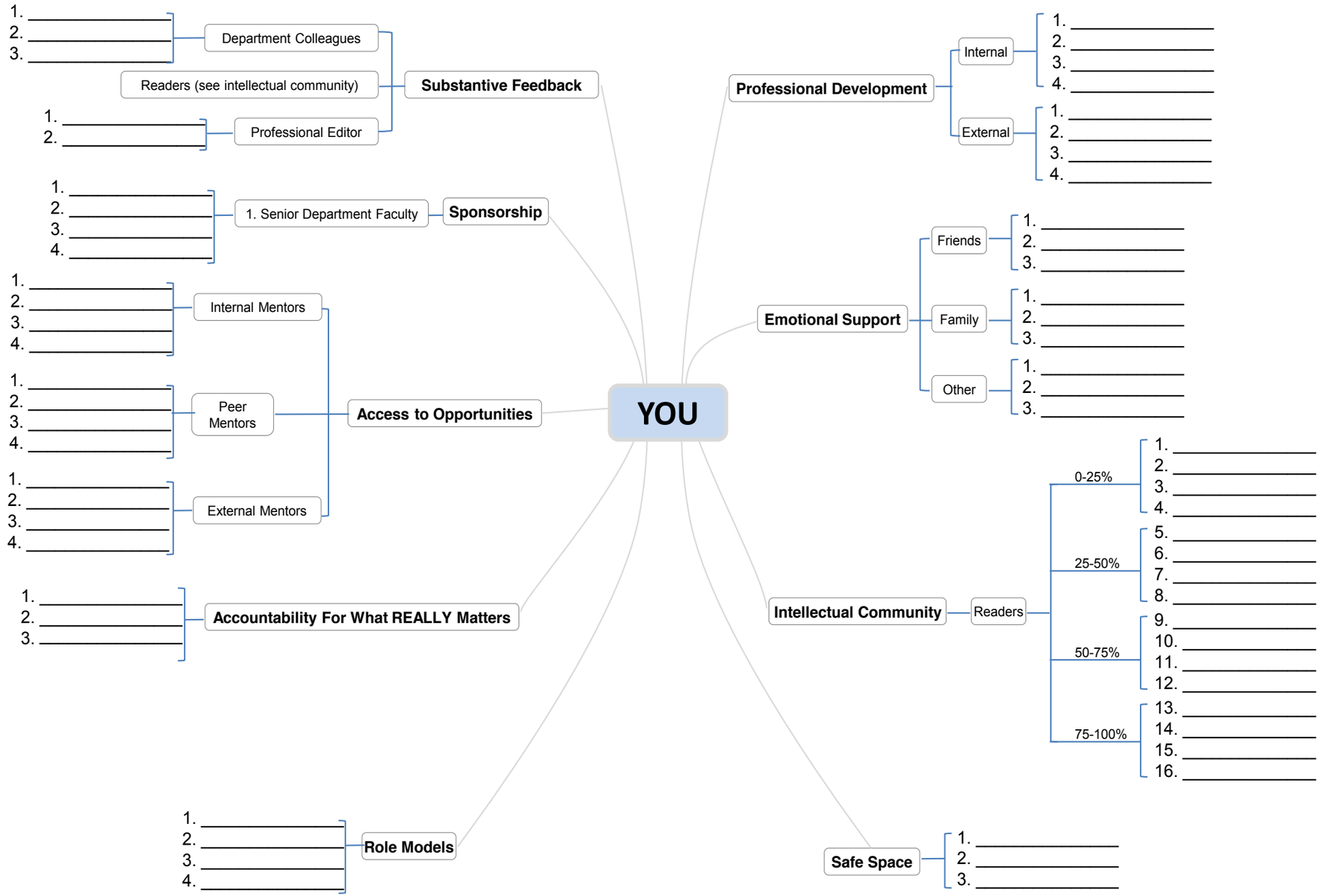
- as a new assistant prof. you are likely to have a wide-range of mentoring needs
- your job will not be understood by many people – in many cases, your family
- you also need to foster professional relationships with trusted colleagues – even if you do not work closely with them – they are likely to be letter writers for your tenure

Managing People and Getting Support

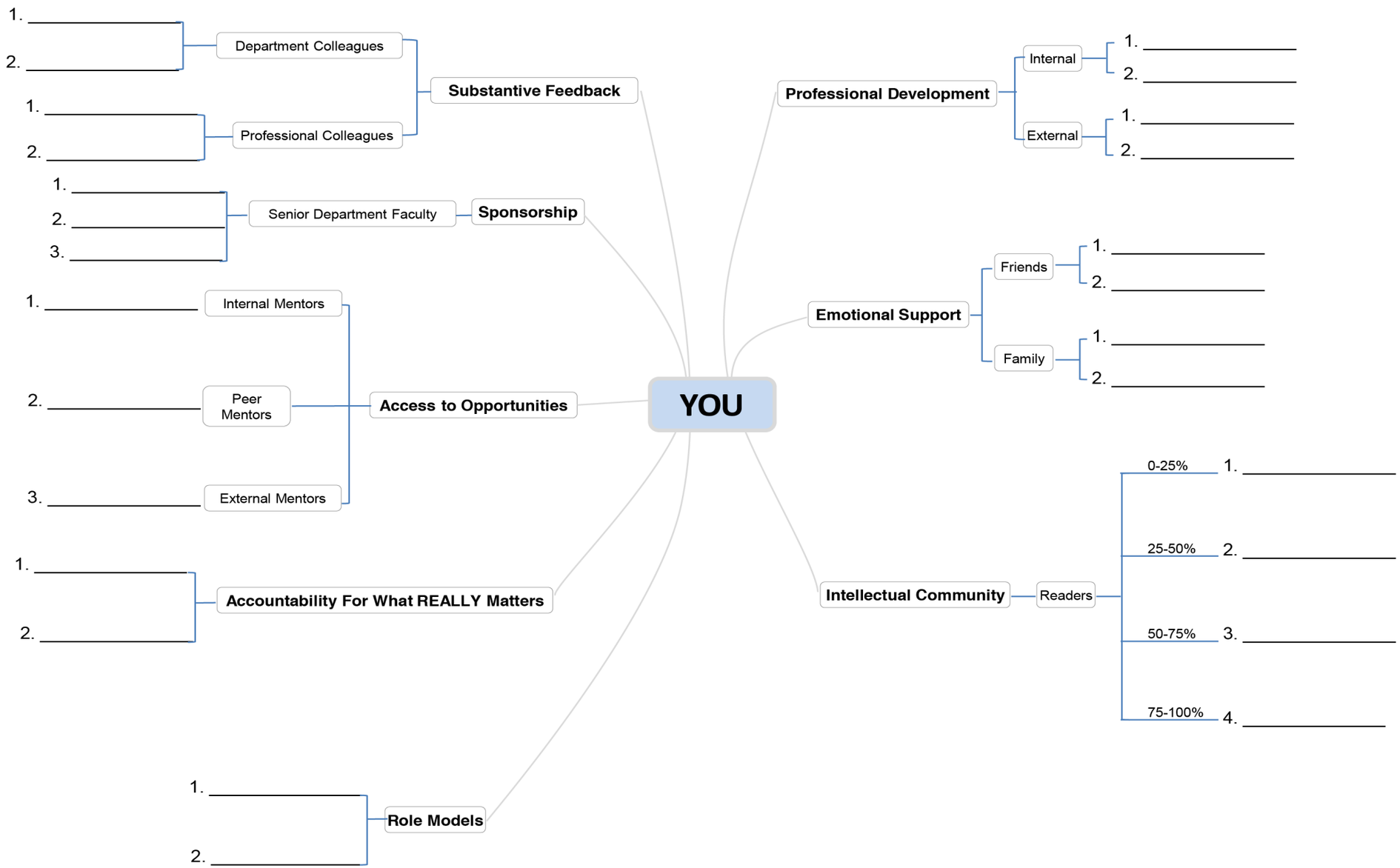
- these needs are thus not likely to be met by one person (guru)
  - heavy dependence on one person creates strain on that relationship
  - you want want more than one person's opinion about your career

NCFDD MENTORING MAP



www.FacultyDiversity.org

NCFDD MENTORING MAP

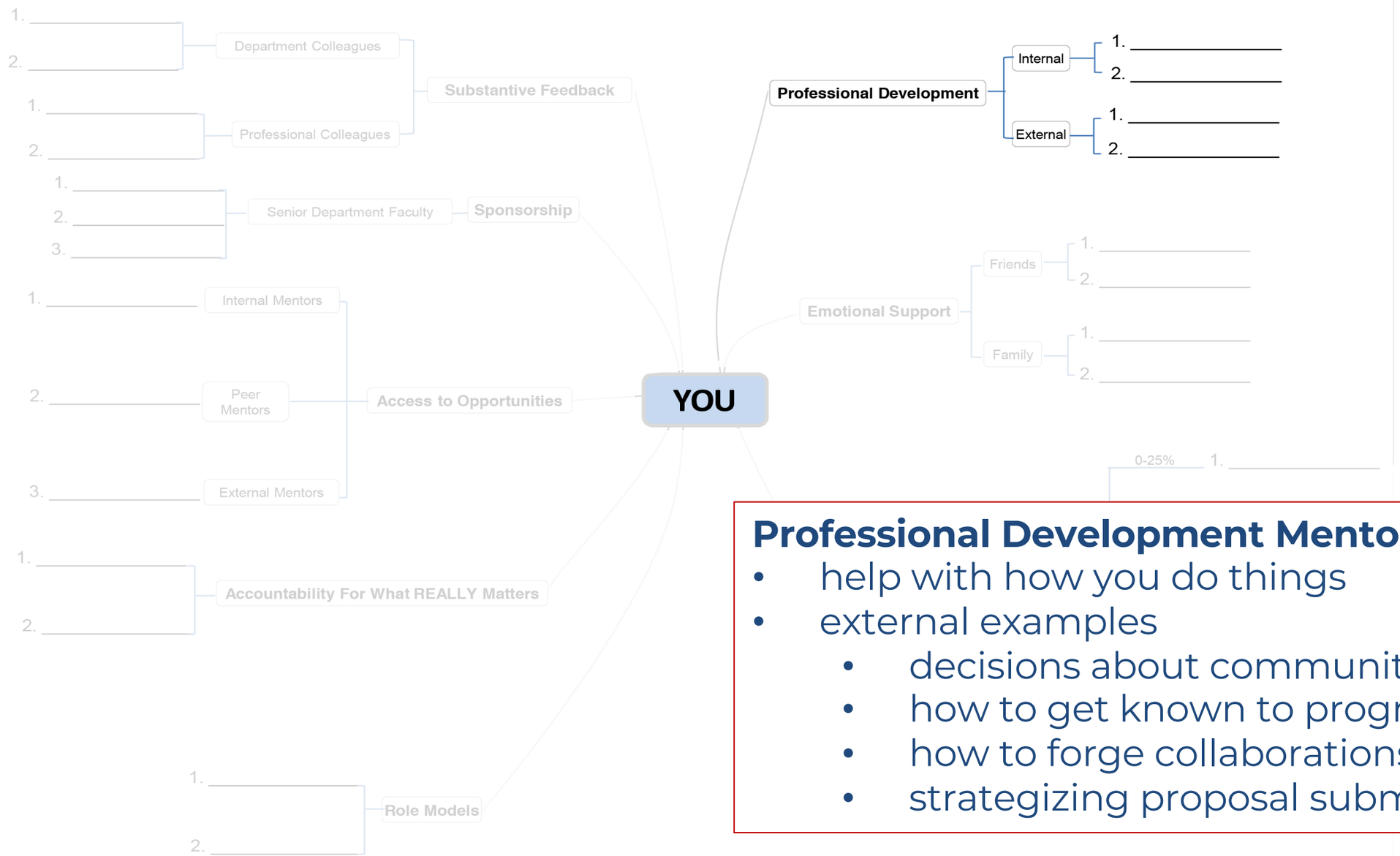


NCFDD MENTORING MAP

Professional Development Mentors

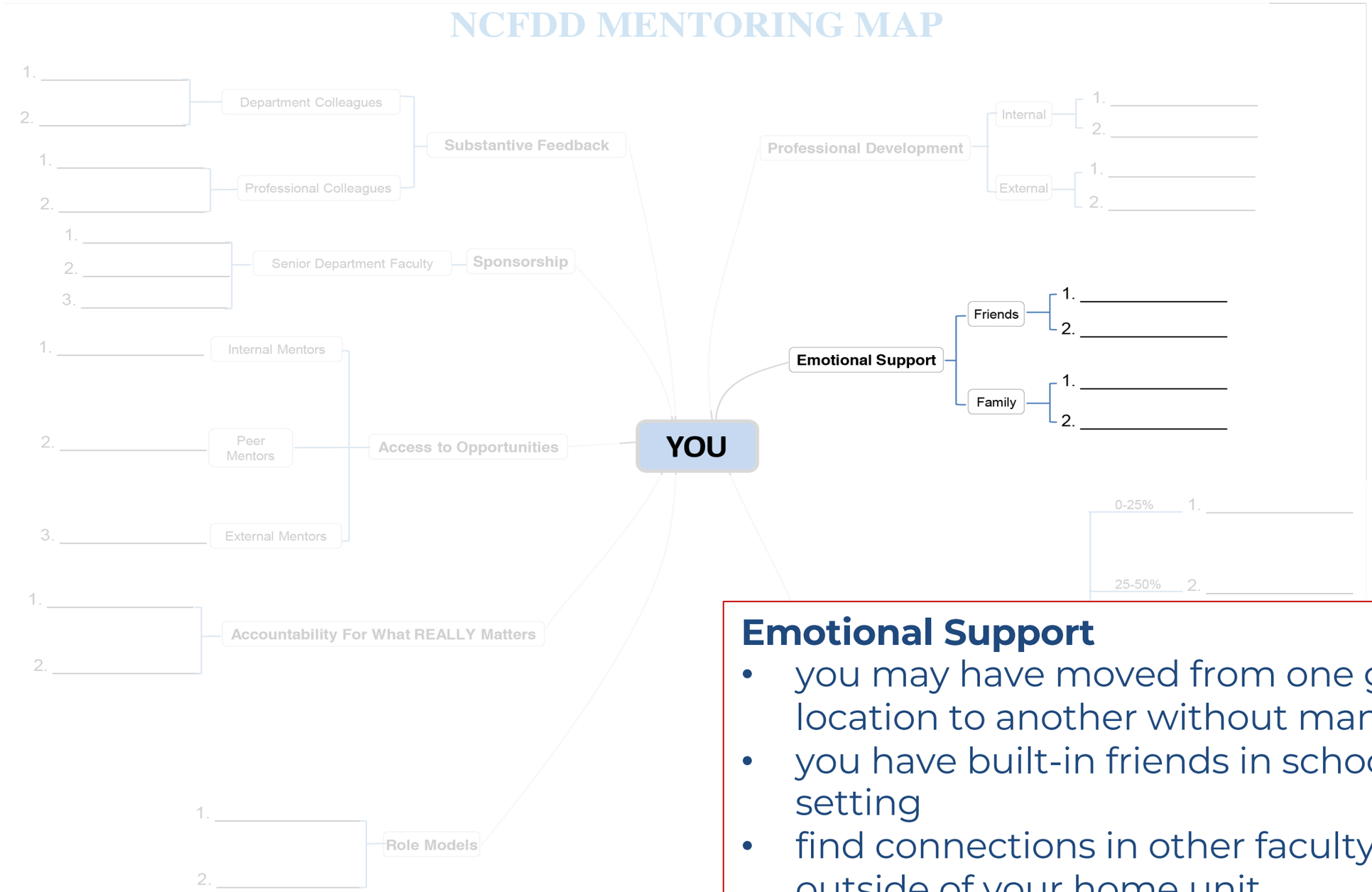
- help with how you do things
- internal examples
  - how do you teach a seminar?
  - how do you recruit undergrad assistants?
  - how do you prepare for annual review

NCFDD MENTORING MAP



Professional Development Mentors

- help with how you do things
- external examples
  - decisions about community service?
  - how to get known to program officers
  - how to forge collaborations
  - strategizing proposal submissions



Emotional Support

- you may have moved from one geographic location to another without many friends
- you have built-in friends in school – not so in job setting
- find connections in other faculty – even/esp. outside of your home unit

Intellectual Community:

- In grad school, intellectual community is built-in for you. But when you are hired as the person who does X in a department, you are not likely to have faculty peers who deeply understand your work and can contribute to it
- these are people who will read drafts of proposals for you
- who will be there to bounce ideas off of
- % means how well-developed the work is from 0% (ideas) to 100% polished manuscript

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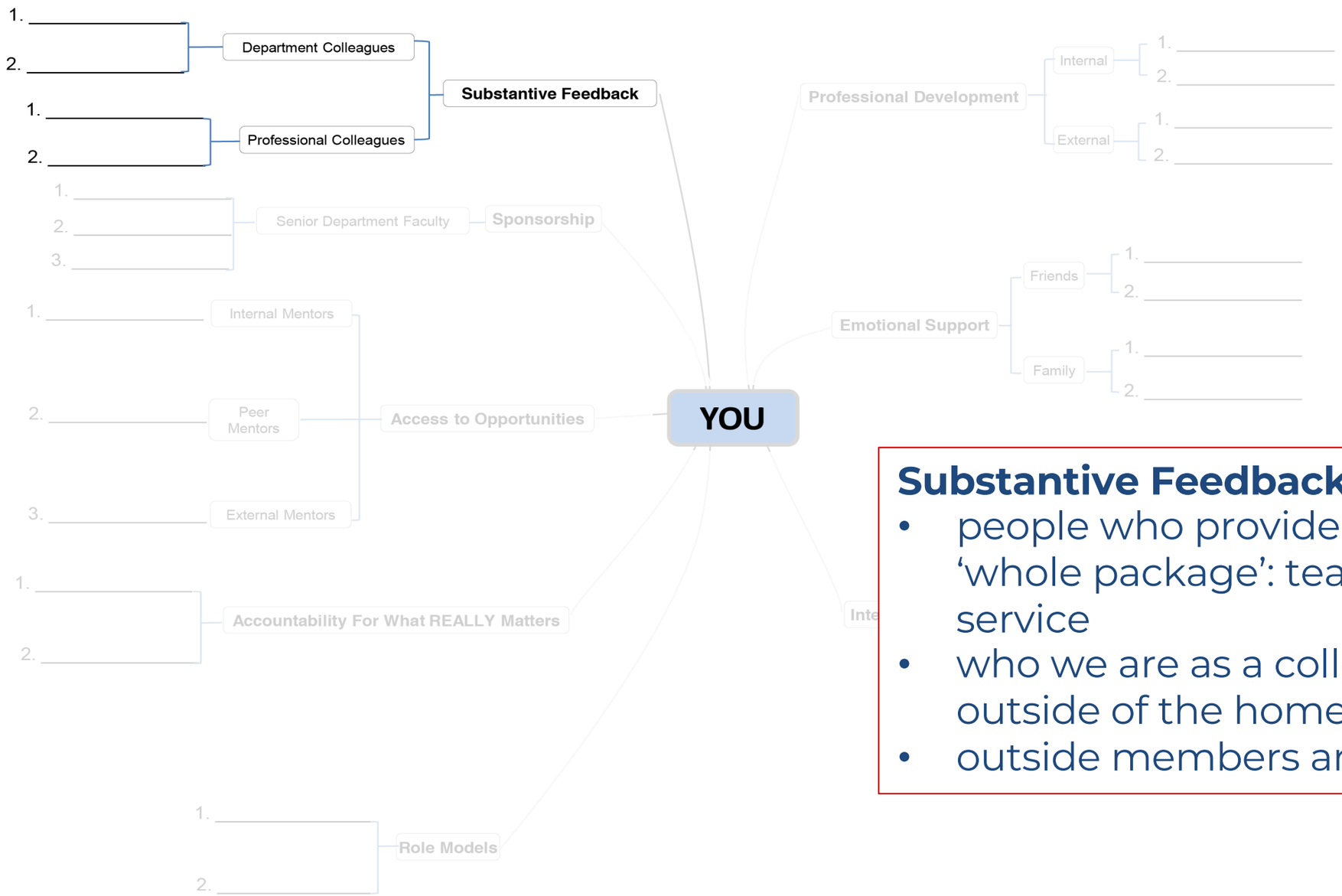

Substantive Feedback

- people who provide feedback on the 'whole package': teaching, research, service
- who we are as a colleague within and outside of the home department
- outside members are good letter writers

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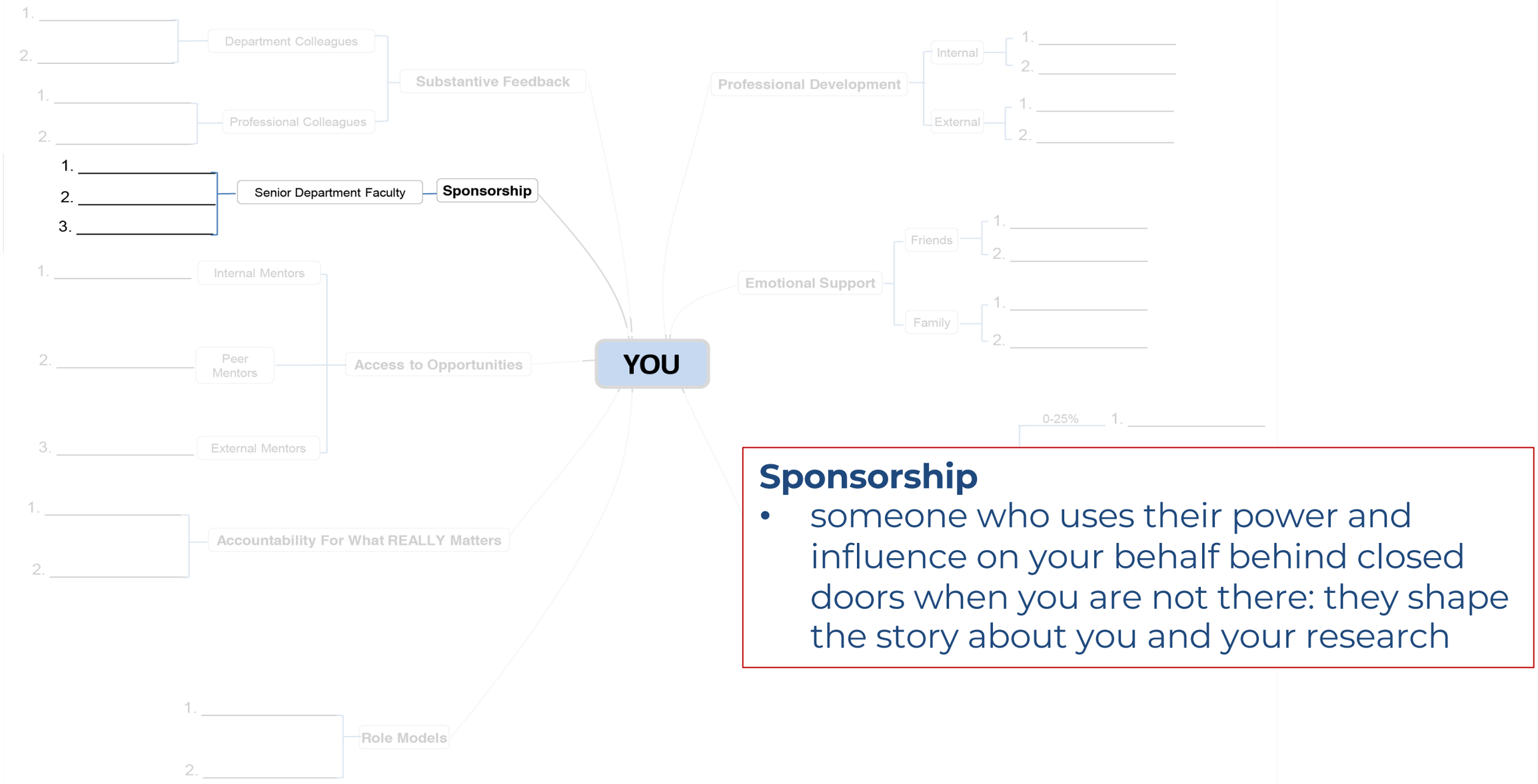


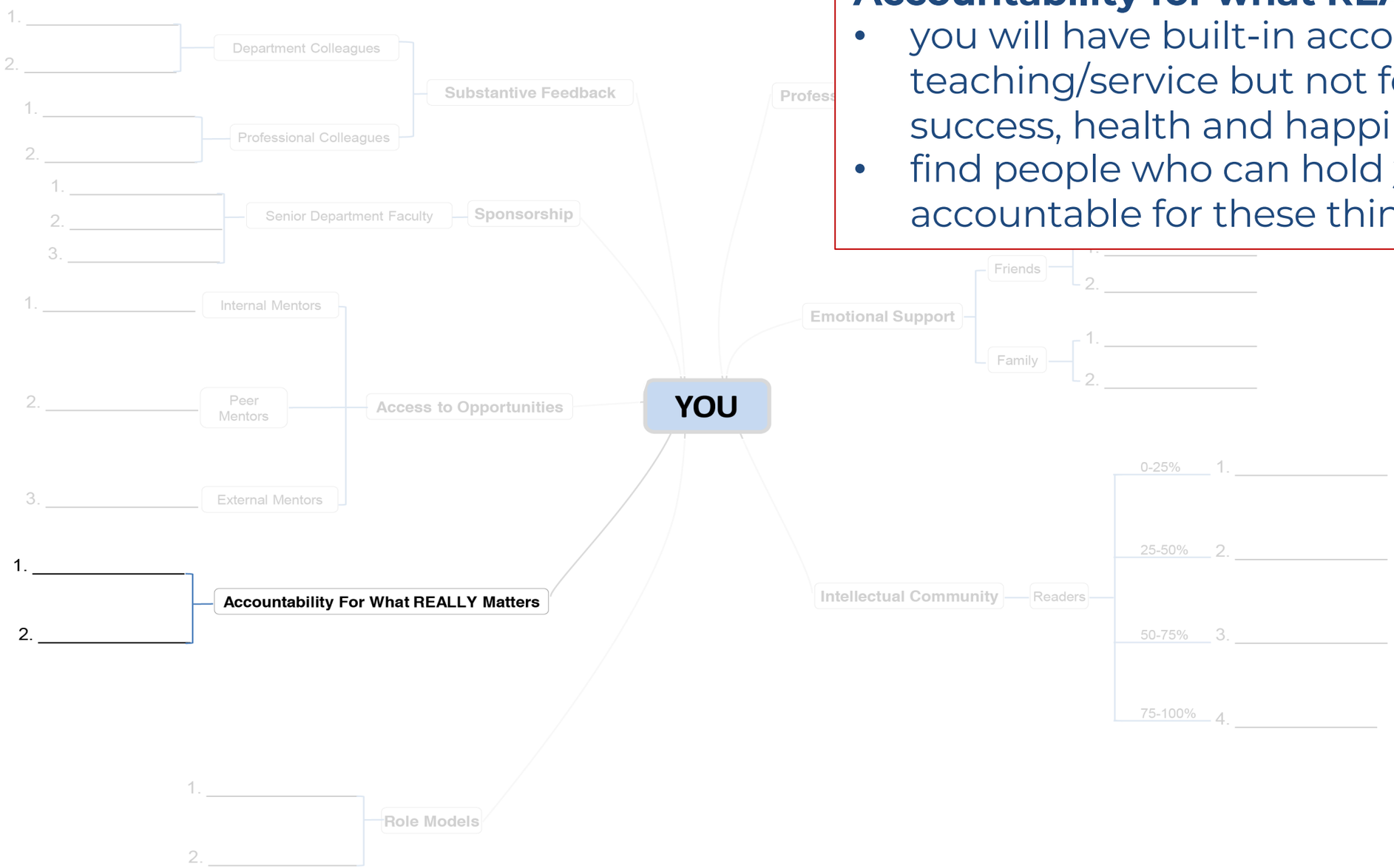
Sponsorship

- someone who uses their power and influence on your behalf behind closed doors when you are not there: they shape the story about you and your research

NCFDD MENTORING MAP

Access to Opportunities

- people who have connections and know where the resources are
- great when you are new on campus and trying to become known in your field
- internal – inside your college
- external – in your profession
- peers – all peers



Accountability for what REALLY matters:

- you will have built-in accountability for teaching/service but not for long-term success, health and happiness
- find people who can hold you accountable for these things

NCFDD MENTORING MAP

Role Models:

- people who are doing academic life in a way that you aspire to
- you need to be able to have conversations with these people, not just watch them from afar

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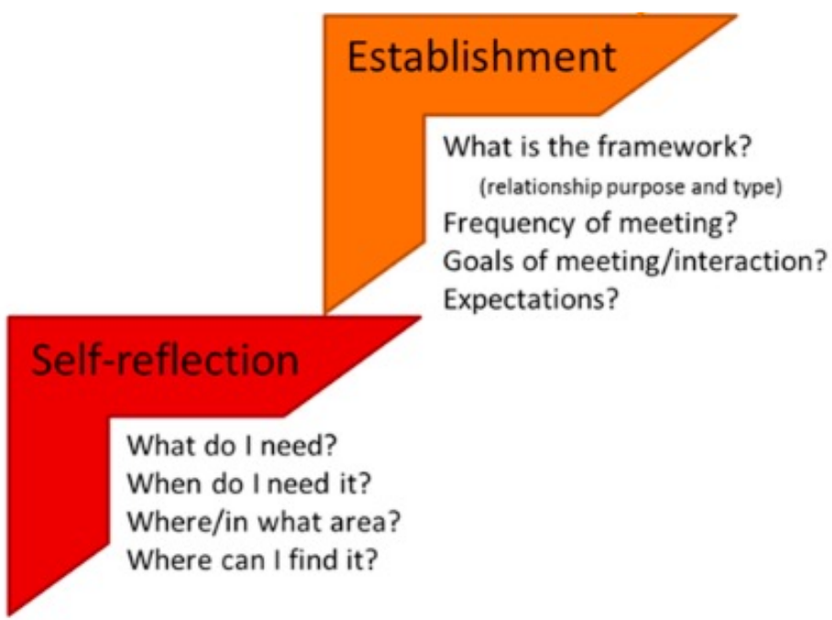
Managing People and Getting Support



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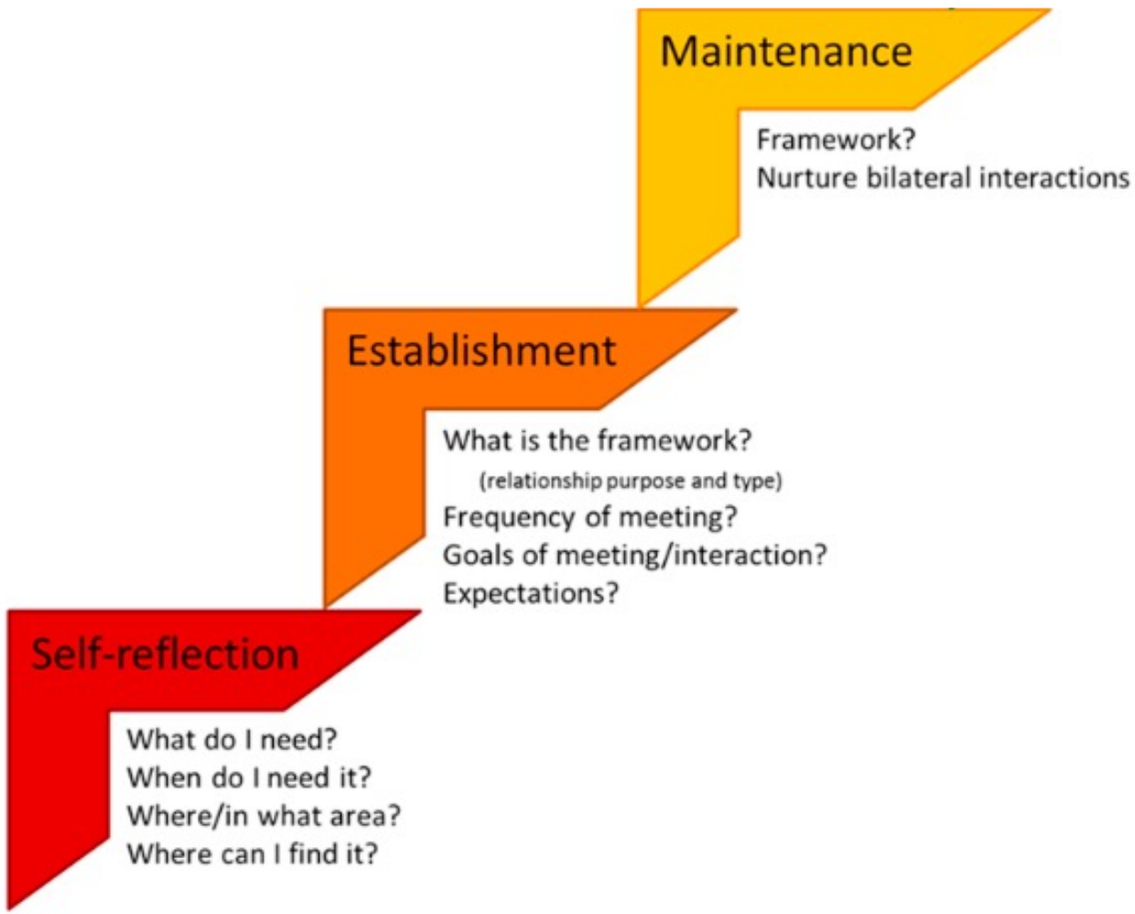


Managing People and Getting Support

Engaging in healthy conflict

- cleverness is a form of currency in academia, thus if performing like an asshole in public creates the perverse impression that you are more clever than others, there is a clear incentive to behave this way

- It is easy for a$$hole behavior to become normalized in the workplace, because, most of the time, assholes are not called to account and the nice, clever people will leave or not gain power

Engaging in healthy conflict

Conflict within your Department:

You are bound to not get along with everyone – just imagine your grad student colleagues are now your faculty colleagues

- you need to establish long-term healthy relationships with people you may not see eye-to-eye with
- in some cases, they have had a number of years to become the way they are, it's unlikely you will affect a huge change in their behaviors

Engaging in healthy conflict

Conflict within your Department:

You can only change your response to their behaviors

- listen to your colleagues by rationally detaching yourself
- convince yourself that your colleagues truly believe that their ideas are motivated by what's best – find the jewel behind the suggestion
- fight about the issues, not the people

Engaging in healthy conflict

Conflict within your Department:

Choose your battles:

- when conflict arises as yourself: "*Should I push back or should I pull back?*"; "*What will I gain, and what will I lose by speaking up?" and "if I do push back, what's the most effective way to do so?"*

Engaging in healthy conflict

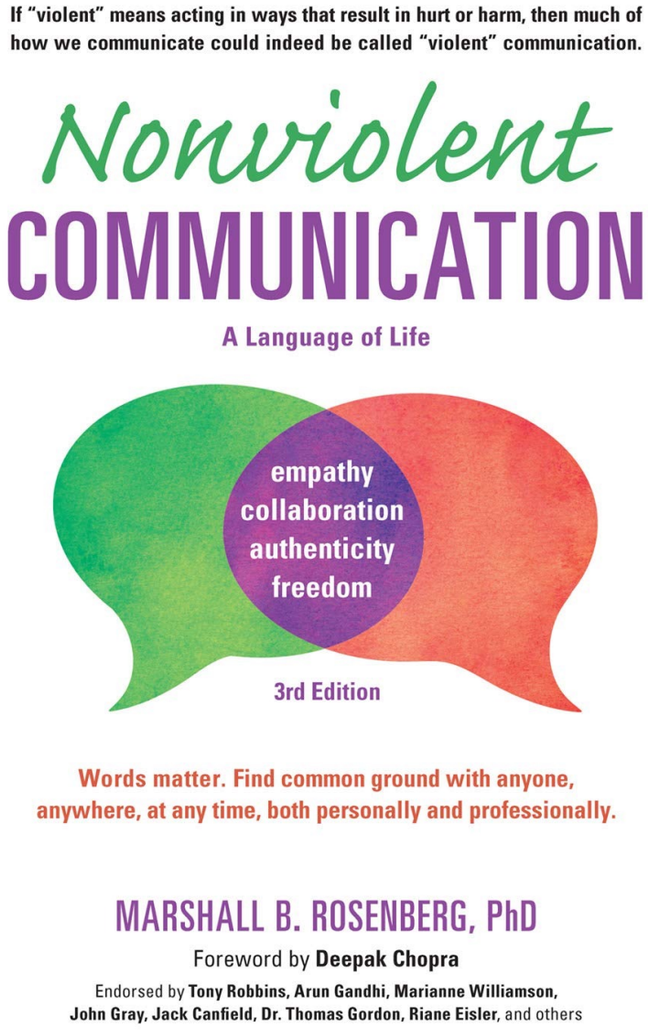
Conflict within your Department:

Choose your battles:

- when you do push back use this formula:
  1. state your observation of the problematic behavior
  2. describe how it makes you feel
  3. make your needs explicit
  4. clearly request what you want

when you _____, I feel _____, I need _____, and I want you to _____

Example: "When I'm the only person sitting in this office, and you ask me 'Where is Professor Catania?' it makes me feel frustrated that you've looked at me and assumed I couldn't be that person. It also makes me feel angry that I live in a world where I have to keep explaining to people that I'm really a professor. Professors come in lots of different packages, so I just want to encourage you to rethink your assumptions about the type of people who fill that role. Now, how can I help you?"



Engaging in healthy conflict

Conflict within your Department:

Choose your battles:

- seek compromise with the belief that resolution can support the interests of both parties
  - determine what are negotiables and non-negotiables for each party and find a solution that meets the non-negotiables for both
- determine the cost to you of not speaking up – many junior faculty feel uncomfortable speaking up prior to tenure – this is fine – but be sure that you let a confidante know how you feel about an issue you care about so that it gets heard at some level
- be honest, but not brutally honest

Engaging in healthy conflict

Conflict within your Department:

Celebrate successes

- acknowledge successful meetings/interactions to build positive relations
- this is also helpful when the next difficult situation occurs
- in difficult conversations - share the facts so that you can at least both agree on the facts, whether feelings about them are justified or not – celebrate this
- sometimes finishing a difficult project (paper, proposal, thesis) is a HUGE relief for the writer – make a point to acknowledge this accomplishment within your research group

Engaging in healthy conflict

Conflict within your Department:

Have a readiness to forgive and forget

- when the drama becomes too overpowering and you seem to be losing perspective, find a way to lighten up – maybe that means taking a break for a while
- Desmond Tutu says that when you lack forgiveness it is you that carries around that burden for your whole life, not the person you are in disagreement with

Engaging in healthy conflict

Conflict within your Department:

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When all else fails try to make difficult people irrelevant to your career

Engaging in healthy conflict

The Review Process: Changing the culture

- studies show that in reviews of the same manuscript, where the reviews make the same observations, but differ in delivery, the negative person is seen as unkind, but more intelligent and expert than those who expressed the same messages in gentler ways!!!
- I would argue that we just need to change the culture
- In general a review should start with a paragraph describing the paper and its contributions
- Then, provide an assessment on whether the paper delivers on the main claims
- Discuss positive aspects of the paper – always try to find something positive
- **Criticize the paper, not the authors**: Say *"The paper doesn't consider the related work"* rather than *"The authors don't consider the related work"*
- I (personally) make frequent use of anonymity in reviews – to be taken seriously, and to avoid having petty conflict with people over scientific disagreements

Dealing with stress and rejection

Dealing with stress and rejection

- remember, everyone gets negative feedback on their work so you have to learn to deal with it appropriately
- give yourself a short, defined amount of time to be upset and then get over it before responding

Dealing with stress and rejection

What makes a person resilient?

1. optimism and a sense of humor can go a long way in reducing stress
   - humor makes you own the situation as your plaything, rather than it owning you!
   - studies have shown that humor and optimism allow people to interpret undesirable life events more positively and experience less burnout
   - the muscular and respiratory processes involved in laughter serve an important role of releasing pent-up nervous energy (Martin and Ford, 2018)
   - humor also enhances student interest in a subject matter and makes you more approachable as an educator (Askildson, 2005)

   - a long-term study of 99 Harvard men (albeit biased) showed that the way they viewed negative life events predicted their physical health 5-35 years later
   - if you're the type that can't see the silver lining – you can change this by stoking positive thinking and curtailing negative thinking
   - our brains are hard-wired to focus more on negative thoughts so it takes more work to think positively (3:1)

Dealing with stress and rejection

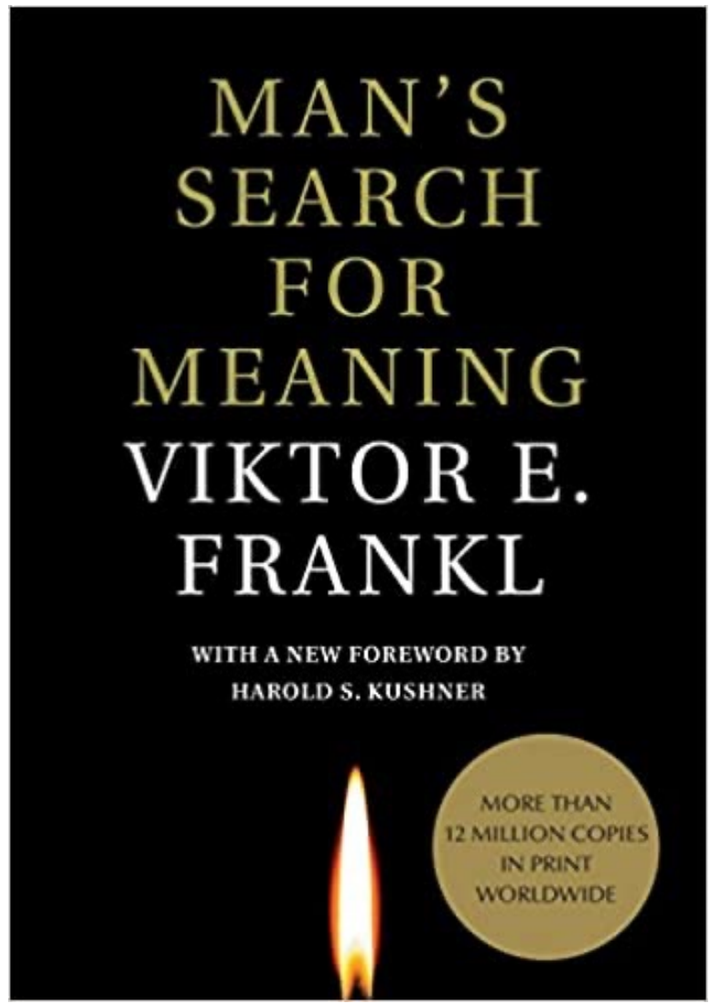
What makes a person resilient?

2. find meaning in work and life

Frankl says meaning is found in three ways:

1. Purposeful work
2. Love of someone or something (e.g. Nature)
3. Courage in the face of difficulty

*"Everything can be taken from a man but one thing: the last of the human freedoms — to choose one's **attitude** in any given set of circumstances, to choose one's own way."*



Dealing with stress and rejection

What makes a person resilient?

3. be adaptable in changing times

- how can you start to view stress as an opportunity to learn and grow
- once we accept our situation and let go of the outcome, it allows us to adapt and thrive in the face of adversity – e.g. COVID
- adjust from “judging questions”: “what’s wrong?” or “who’s to blame?” focus on “learning questions”: “what are my choices?” or “what is useful here?”

Dealing with stress and rejection

What makes a person resilient?

4. seek support in getting things done and for emotional well-being
   - avoid people who bring you down and waste your time
     - a 2006 study found that of 3000 women who had breast cancer, those with 10+ friends were 4X more likely to survive
   - take care of yourself (talked about in time management lecture)
   - get sleep and time off – our brains are surprisingly active (in areas associated with decision-making, memories and processing of events) even during moments when we appear to do very little
   - go outside: spending just 20 minutes outside in nice weather leads to more expansive thinking, combats anxiety, improves immunity

Dealing with stress and rejection

What makes a person resilient?

5. recognize that there is a limit to what you can control
   - there is a difference between controlling your circumstances and controlling your response to your circumstances
   - realize that you always have a choice – even in extremely stressful situations when you don't like the options
   - brainstorm a list of these options to keep yourself from feeling trapped