



BMES

BIOMEDICAL ENGINEERING SOCIETY™

Best Practices for Managing Employees in Academia and Industry

How to earn trust, establish credibility,
and communicate clearly

November 7, 2013
2:00 PM ET

Moderator

- ▶ **David Kwartowitz, PhD**



Assistant Professor
Department of Biomedical Engineering
Clemson University

Announcements

- ▶ The archived recording, presentation slides and resources will be available a few days after the webinar at:
<http://bmes.org/elearning>
- ▶ You may submit questions throughout the webinar by using the online chat function. All questions will be addressed at the end.
- ▶ Please take a few minutes to complete the brief survey following the webinar to provide us with your feedback.

Polling Question

Where are you in your career?

- A. Undergraduate student
- B. Graduate student
- C. Post-doctoral fellow
- D. Faculty
- E. Employee in industry
- F. Other

Speaker

▶ **Joan M. Greve, PhD**



Assistant Professor
Biomedical Engineering
University of Michigan (Jan 2014)

Speaker

▶ **Craig J. Goergen, PhD**



Assistant Professor
Weldon School of Bioengineering
Purdue University

Joan's Path

▶ Undergraduate degree in BioE

- Large public university, very small department.
- 2+ years research in the same lab with new/young professor, small group ($n = 4-6$), interface stresses experienced by below-knee amputees.

▶ Research Associate

- Med-large biotech company (3k), small group ($n = 3$), flat organizational model.
- Junior researcher, individual contributor (no direct reports).
- In vivo preclinical MRI to study peripheral artery disease.

▶ Graduate degree in BioE

- Small private university, very small department.
- Cardiovascular mechanics lab, large group ($n = 15-20$).
- Primary leadership role in preclinical MRI lab (collaborations with professors, post-docs, med-fellows, grads, undergrads).
- Growing biotech company Visiting Scientist.

Joan's Path

▶ **Scientist (lab leader)**

- Large biotech company (10k), less-flat organizational model.
- Individual group $n = 3-6$, within department of $n \sim 25$.
- In vivo preclinical MRI lab (oncology, neurodegeneration, cardiovascular).
- Leadership role in project team to translate Alzheimer's drug to the clinic.

▶ **Scientific Program Manager**

- Medium non-profit ($n \sim 200$), hierarchical organizational model.
- Individual contributor (i.e. no reports, but accountability and responsibility to deliver on program goals; the epitome of influencing without authority).
- New program focused on in vivo visual neural coding.

▶ **Faculty in BME**

- Large public university, medium department.
- GOAL: Small-medium size group ($n = 4-8$); staff, post-doc, graduate students, undergraduates.
- Partnering with another professor to co-direct preclinical MRI lab.
- Develop preclinical MRI methodology to study vascular biology. Where appropriate, use computational fluid dynamics tools to compliment experimental data.

Craig's Path

- ▶ **Undergraduate degree in BME**
 - Cellular biomechanics lab
 - Immunology lab at a non-profit research institute
 - Large medical device company internship
 - Manufacturing
 - Small medical device startup consulting
 - Research and design
- ▶ **Graduate degree in BioE**
 - Cardiovascular mechanics lab
 - Large biotech company Visiting Scientist
- ▶ **Post-doc in Radiology**
 - Research center within a large hospital
- ▶ **Faculty in BME**
 - Focused on in vivo imaging and cardiovascular disease
 - Mentoring students and technicians
 - Currently being advised by senior faculty

Hiring

- ▶ Skills
 - Technical?
 - Interpersonal?
 - Communication?
- ▶ Recommendations
 - Reading between the lines...
- ▶ Personality
 - Good fit with current members?



<http://stopsellingvanillaicecream.com/using-the-talent-management-system-for-better-hiring/>

Who, What, and Where

Who are you going to be managing?

- Engineers, biologists, physicists, chemists, younger, older, up-down-sideways
- Full-time employees (FTE's), contractors (internal/external), interns, co-ops, students.

What are you going to be managing?

- Lab projects (direct reporting – authority), team projects (matrix reporting – influencing without authority), budgets, equipment installation, paper writing, grants, data analysis, software upgrades, classes, etc. etc. etc. → **PEOPLE**

Where are you going to be managing?

- Academia, industry, medicine, non-profit, government labs, start-up ... maybe your own!

When, Why, and How

When are you going to be managing?

- Undergraduate, undergraduate + experience, grad school (MS and/or PhD), post doc, beyond → **ALL THE TIME**

Why are you going to be managing?

- Your own desire, the fact that bio(medical) engineers are the translators between disciplines, your area of expertise.

How are you going to manage – ??!!

- **Self-evaluation is the place to start**
- 

The Golden Rules of Management

1. There should be no surprises!
 - Ask for help or clarification when a problem arises

2. Clear and open communication



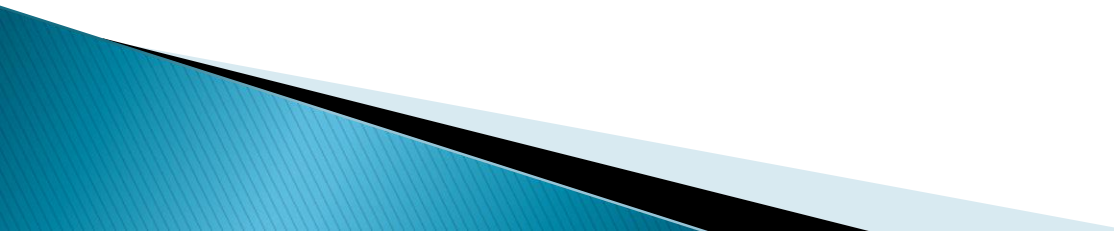
3. Set expectations

<http://www.gocomics.com/calvinandhobbes>

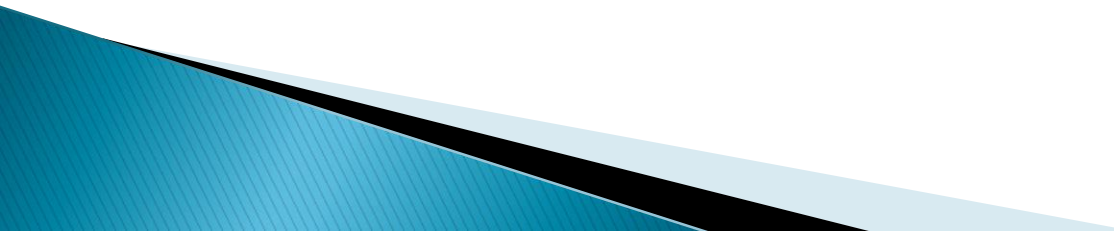
How can students best focus their energy so that they are...

- **Responsible**: reliable/dependable in meeting goals, deliverables, or for something within one's *control*.
- **Accountable**: obliged to report, explain, or justify something (usually to someone)

In your opinion, what is most important in a manager–managee relationship?

- A. No surprises
 - B. Open communication
 - C. Clear expectations
- 

Manager–Managee Examples

1. Manager talks about a new research project that she thinks you will be interested in. The concept is new to you though and you don't understand the details.
 - > Speak up and ask questions about what you don't understand now. Learning now means less confusion and embarrassment later when you work on something new.
 2. Your PI asks you when you think you will finish something. You respond that it will take you a week, when you think it would realistically take two weeks.
 - > Be honest about what is doable so that you don't compromise work or fail to make deadlines. Be upfront about other obligations.
- 

The Manager/Managee Relationship

Communication (including constructive criticism, both ways)

Respect → Trust!

'Honey-moon' Phase
(critical?!)

Near-term (~1 yr)

Development Phase
(individuals, relationship)

Mid-term (~3-5 yrs)

Leadership Phase
(supervised to expert)

Long-term (5+ yrs)

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Review data together:

- To understand and learn from how the other thinks.
- Identify knowledge gaps of managee (and manager).
- Identify motivational drivers of managee (scientific and otherwise).

Frequent interaction:

- Scientifically (in the lab shoulder-to-shoulder, with manager or designate).
- Organizationally (review lab notebooks, excel files, etc.; lab continuity).
- Managerially (goal setting, reviews).

Manager:

- Adjust managerial approach based on managee; keep within framework of management style to be consistent across all managees (!).

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Define managee's longterm career goals.

Manager assesses and communicates how the managee's career goals fit with their own, the lab's, the department's, the organization's.

Provide opportunities that optimize managee's motivational drivers AND that close knowledge gaps critical to managee's longterm goals.

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Managee could continue to be an individual contributor but manage larger or more complicated projects internal to group or as a collaboration.

Managee could grow to have matrix reports, say through collaborations; or, could acquire direct reports, in which case the manager now has two levels of management to think about.

Managee becomes content expert and teaches/informs manager as requested/needed based on managee's, manager's, lab's, department's, and/or organization's goals.

Possible Leadership Styles

1. Sink or swim
 - Hands-off advising
2. Leading by example
 - Watch one, help one, try one, teach one
 - Telephone game teaching
 - Remaining hands-on in some small way
3. Micromanagement
 - Direct oversight of all aspects
4. Mix of all above



Which leadership style do you have?

- A. Sink or swim
- B. Leading by example
- C. Micromanagement
- D. Mix of all three

Leadership Styles

1. Motivation

- Intrinsic vs. external
- Carrot vs. stick

2. Differences

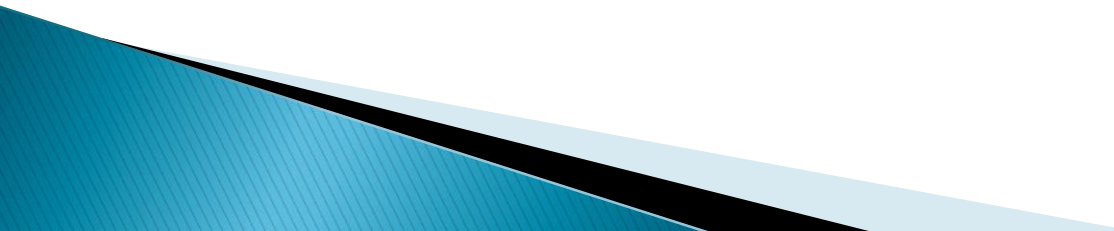
- Manager style
- Managee style
- Adjustments are often needed

3. Questioning results does not always mean a lack of trust

4. More information on leadership styles:

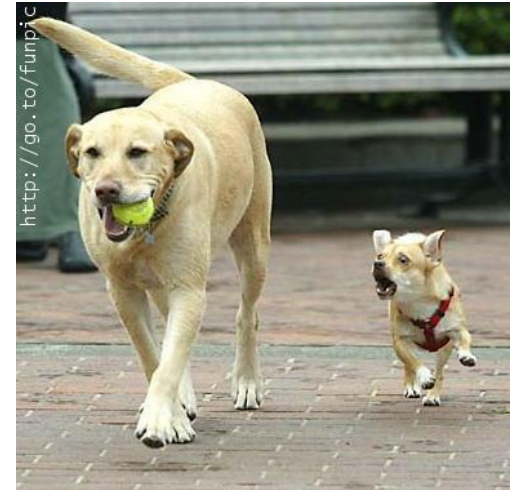
- http://en.wikipedia.org/wiki/Leadership_styles

Which leadership style do you prefer your manager have?

- A. Sink or swim
 - B. Leading by example
 - C. Micromanagement
 - D. Mix of all three
- 

Academia vs. Industry

- Power differential
- Drivers
- Time scale
- Management practices
 - Annual/semi-annual reviews as written record
 - Important for promotion or performance improvement planning/discipline



http://www.k-state.edu/womenscenter/Violencework%20Advocacy/Womens%20Center%20Materials/Materials/animal_pictures.htm

Advocacy as a Manager

▶ Industry

- Promotion
- Benefits
 - Including yearly bonus
- Advancement opportunities

▶ Academia

- Graduating on time
- Thesis defense
- Qualifying exams
- Collaborations with others
- Finding and procuring jobs after graduation

Which furniture layout do you prefer?

A)



<http://www.afandar.com/the-executive-office-furniture-to-support-your-work-as-well/>

B)



<http://www.thisfurniture.com/furnituremanufacturer-1-33/office-sofa.html>

C)



<http://1000awesomethings.com/2009/02/20/825-overly-elaborate-office-pools/>

Which furniture layout do you prefer?

- A) Standard desk
- B) Couch with coffee table
- C) Office pool

Environment

- ▶ Encourage interaction and questions
- ▶ Reduce perceived power differential
- ▶ Limit distractions

1. Lab
2. Office
3. Classroom



<http://pubpages.unh.edu/~kek546/Project3/OfficeProducts.html>

Conflict Resolution

- ▶ Try to let others resolve first
- ▶ Sometimes have to intervene
 - Resources often available to help



<http://macklessonsradio.com/index/episode-345-conflict-resolution->

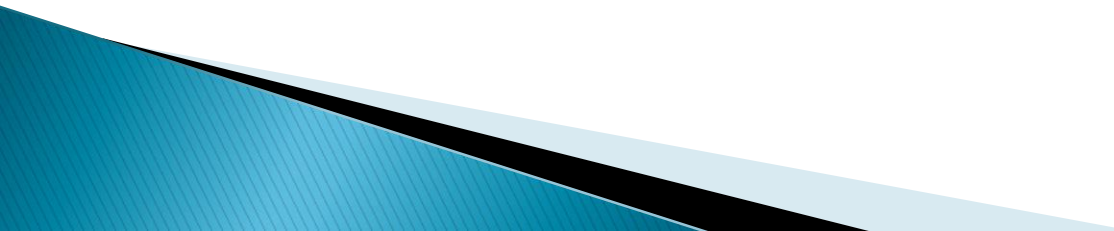
Review of Progress

- ▶ Documentation Important
 - Both successes and troubles
- ▶ Yearly written reviews
 - What to include?
 - How will this help evaluate progress?



gg57439968 www.gograph.com

How often have you posted something online that you would not want your supervisor to read?

- A. Often
 - B. Sometimes
 - C. Once
 - D. Never
 - E. What is social media?
- 

The Era of Social Media

- ▶ Sometimes surprised what goes online...
- ▶ What is appropriate?
- ▶ Official policy?
- ▶ Case-by-case basis?
- ▶ Disclosure of intellectual property?
- ▶ Human subjects and/or animal model data?



Hardest Part of Managing

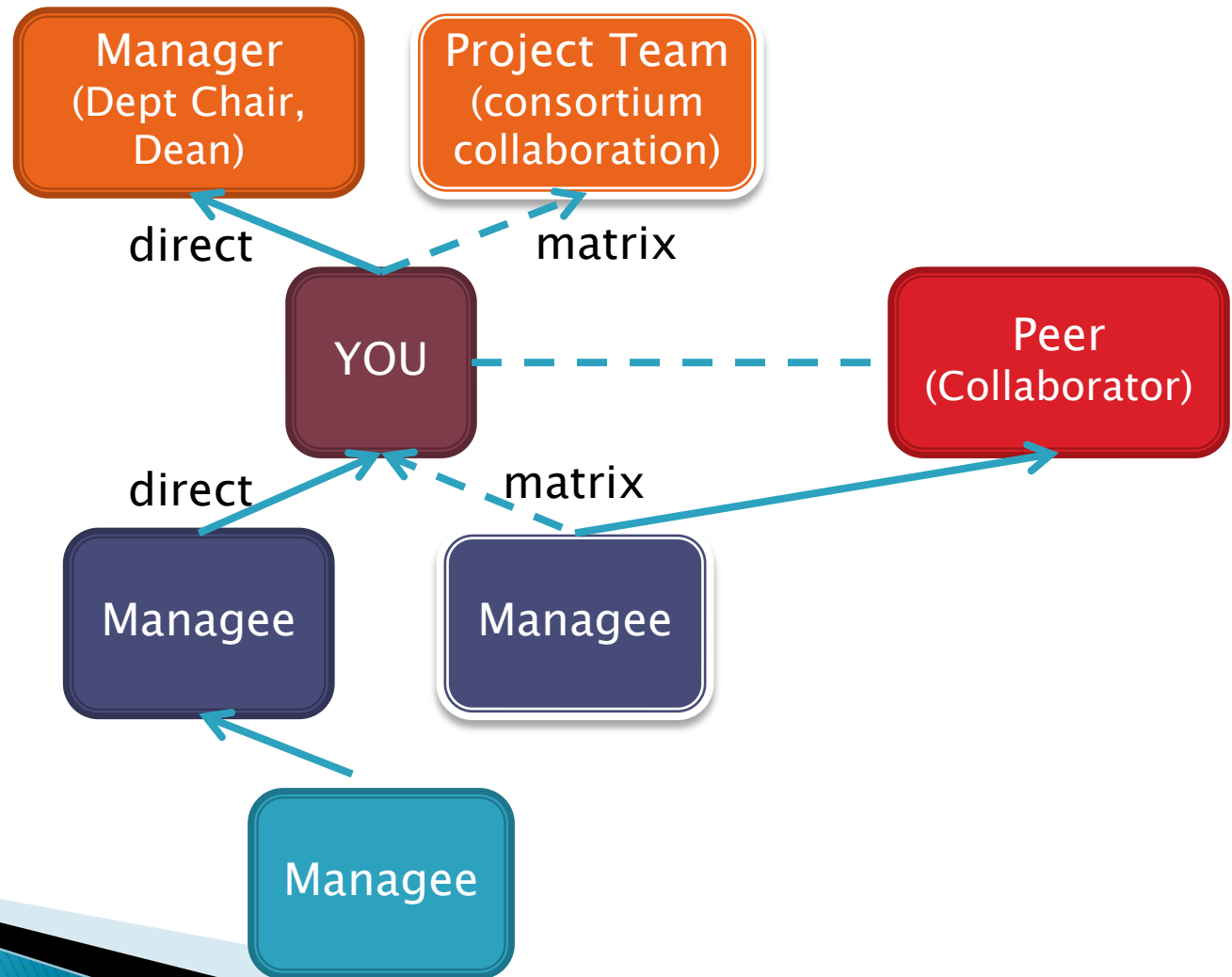
- ▶ Letting someone go...
- ▶ Try to have them see it from your point of view
- ▶ Document as much as possible
- ▶ Timing important
 - Do not rush
 - Do not extend



<http://www.examiner.com/article/words-of-wilson-when-you-re-fired>

Up, Down, and Sideways

- Managing occurs across multiple levels



Other Resources

- ▶ Effective Managers Earn Trust Quickly By Doing 5 Things Well
 - <http://www.forbes.com/sites/glennllopis/2012/07/10/effective-managers-earn-trust-quickly-by-doing-5-things-well/>
- ▶ 10 Golden Rules for Management
 - <http://www.bpmleader.com/2012/08/08/10-golden-rules-for-management-and-bpm-2/>
- ▶ 7 Characteristics of Effective Managers and Leaders
 - <http://igshaansoules.com/2012/02/effective-management/>
- ▶ How to Manage People Effectively
 - <http://suite101.com/a/how-to-manage-people-effectively-a17227>
- ▶ The book: StrengthsFinder
 - <http://www.strengthsfinder.com/home.aspx>
- ▶ The book: Drive
 - The surprising truth about what motivates us
 - <http://www.amazon.com/Drive-Surprising-Truth-About-Motivates/dp/1594484805>

Take-Home Messages

1. Communication is key
2. Set expectations
3. Managing occurs across multiple levels
4. Match leadership styles to the individual
5. Be an advocate for others
6. Review and document progress
7. Hire carefully

Acknowledgements

- ▶ Purdue University

- Evan Phillips
- Frederick Damen
- Shelby Abrams

- ▶ Joan Sanders, Nick van Bruggen, Simon Williams, Lisa Bernstein, Hope Steinmetz, Charley Taylor, Kim Malesky, Maj Hedehus

- ▶ All other previous mentors and mentees
- 



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QUESTIONS?

BMES Activities and Events

▶ Archived Professional Development Webinars

<http://bmes.org/elearning>

- How to Prepare an Effective Poster Presentation
- Grant Writing: Practical Approaches for Preparing and Managing Grants in BME
- Developing an Industry Career in Biomedical Engineering
- Effective Strategies for Teaching BME
- How to Build Leadership and Networking Skills

▶ Career Events

- BMES CMBE Conference January 7–11, Hilton Lajolla Torrey Pines, CA

▶ BMES 2014 Annual Meeting

- October 22–25, 2014, San Antonio, TX