

# Management For Scientists

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Joanne Kamens, Ph.D.

Executive Director

Addgene

[www.addgene.org](http://www.addgene.org)



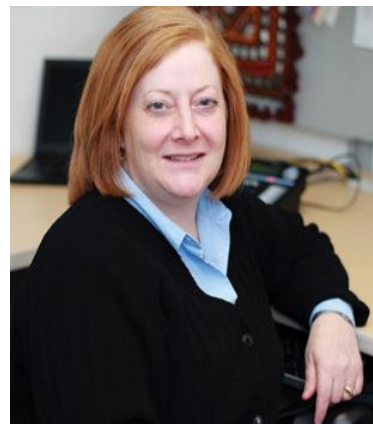
A better way to share plasmids

# Management for Scientists –

*Avoid common management pitfalls and lead a successful team*

New managers are rarely chosen because they have demonstrated skill at managing and this is especially true in science. It is assumed that if you are good at science and you are smart, you can be a good manager. Managing a team is hard and most people have some learning they need to do before they can be good at it.

I will be sharing what I've learned along the way, including tips about what it takes to be a good manager and lead a successful team, especially when your team is comprised of scientists.



Joanne Kamens, Ph.D.

Executive Director

Twitter: @jkamens

Addgene

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# WHAT MAKES A GOOD MANAGER ANYWAY?

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*"I'm slowly becoming a convert to the principle that you can't motivate people to do things, you can only demotivate them. The primary job of the manager is not to empower but to remove obstacles." – Scott Adams, Dilbert cartoonist*

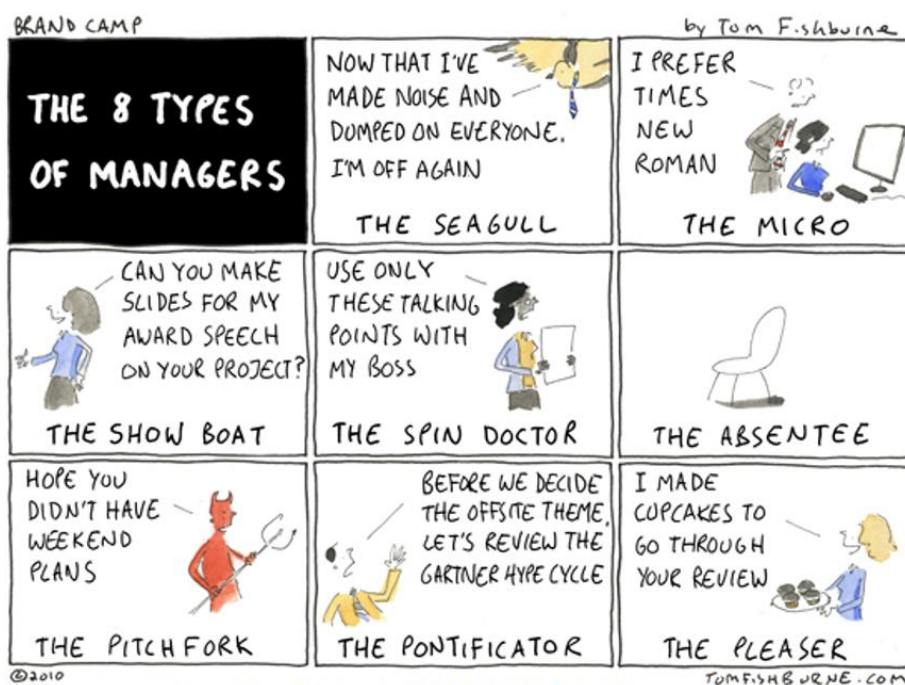


Image credit: <http://tomfishburne.com/2010/10/the-8-types-of-manager.html>

If that is all it takes, then how come there are so many bad managers? New managers are rarely chosen because they have demonstrated skill at managing and this is especially true in science. It is assumed that if you are good at science and you are smart, you can be a good manager. The kind of smarts and the type of skills that it takes to be a good scientist are not the same ones it takes to be a competent manager (much less a really good one). While getting your PhD or doing a postdoc few science trainees will have opportunities to work on [Emotional Intelligence](#) or to hone delegation skills, for example.

So aside from a focus on removing obstacles, what makes a good manager? First, it takes an open mind to be willing to learn and grow in skills. Managing a team is hard and most people have some learning they need to do before they can be good at it. Like any other skill, it can be developed with education and practice. Second, it takes a focus on the goal. Let's assume that **the goal is to work with a team to get a lot of stuff done.**

Being a good manager is not the same as not being a bad manager (see cartoon on previous page –what type of bad manager have you had?). You can avoid some of these common pitfalls of management and still not get the most from your team. It is pretty clear that if people are mostly happy at work, they will work harder and contribute more. Assuming basic needs are being met (i.e. enough pay and benefits to live on), the factors that contribute to job satisfaction are a bit surprising. There is a lot of research in this area and studies overwhelmingly agree that [these are the factors](#) that most contribute to job satisfaction:

- **A feeling of being appreciated and valued**
  - This often stems from being included in organizational decision-making. It is imperative that employees are thanked for their work by the words and actions of their managers. You can't just think it, you have to tell them. A good manager learns that her success and recognition come from the successes of the team.
- **A strong sense of engagement in the work**
  - Behind-the-scenes support from their bosses and employers. Availability of superiors for consultation, advice and brainstorming. Employees must understand the part they play in the goals of the organization and feel the importance of their contributions.
- **Flexible work schedule**
  - Flexibility to manage their personal lives to achieve a healthy work-life balance. It is harder to manage when the measure of work is not just time spent at the desk, but it is worth it. This requires a focus on deliverables. It does not mean a manager must allow his team to work mostly at home.
- **Having a high degree of freedom and diversity built into their jobs**
  - Chance to do/learn new things, diversity of responsibilities, which might include training or teaching others, research, and policy development. Every worker at every level does better with some variety in their job.
- **Good relationships with clients and colleagues**
  - Sometimes this means you have to fire a good performer if they are enough of a jerk to make the rest of the team miserable.

A good manager keeps these factors in mind at all times when making decisions, assignments and policies. Sometimes the boss has to be the boss and make difficult and “unpopular” decisions, but that should not be the common mode of operating.

I should add a few special words about managing scientists because, let’s face it, we are special. Below are some special characteristics of scientists in the work place as described by Sebastiano Massaro in his Nature Biotechnology article “[Managing knowledge-intensive workers](#)”. I have added a *few comments of my own* to this list: Need feedback on their work but prefer to be approached as peers rather than

- Need mental space and dislike intrusions (*this actually varies, a manager does best to identify the work style of each team member*)
- Need challenging work, opportunities to pursue and problems to solve (*I think this is true of most people, not just scientists*)
- Are self-directed, but need precise leadership and support from their superiors (*beware of not micromanaging the scientist if you want their best work*)
- Are continuous learners and have individual priorities for advancement in science
- Have their own working schedules and may not necessarily be comfortable with imposed deadlines(*there’s that need for flexibility, sometimes taken to an extreme by scientists*)
- Are highly mobile and can move to a new workplace if opportunities for learning and personal growth do not exist or if they feel underutilized in their present positions

By removing the primary obstacle of job dissatisfaction, the work can get done, and get done well. The rest of the blogs in this series will address more specific tactics managers can utilize to be in touch with the needs of the team and to be most effective in their role. The best managers have learned to get results with the carrot, and not the stick.



# SEEKING FEEDBACK

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Successful management can almost be boiled down to one, key concept: Creating a culture of excellent, effective communication between all members of a team. As described here in a 2012 Intuit [blog post](#), a [study coming out of MITs Human Dynamics Laboratory](#) identified five characteristics of very successful teams. Here they are annotated *with my comments*:



- **Everyone on the team talks and listens in roughly equal measure, keeping contribution short and sweet.**
  - *One key to this is ensuring that the group always conducts exceptionally [well-managed meetings](#).*
- **Members face one another, and their conversations and gestures are energetic.**
  - *This can take [practice and training](#). This is important because it creates a culture of engagement in the issues at hand and eagerness to get, as well as give, information to make improvements.*
- **Members connect directly with one another – not just with the team leader.**
  - *There is no way a manager can be efficient without delegating and empowering the team to solve problems together (tactics for effective delegation will be covered in a future post in this series).*
- **Members carry on back-channel or side conversations within the team.**
  - *We are not talking about gossip here – this means encouraging a [culture of maximum information flow](#) so everyone knows what is going on and can contribute*
- **Members periodically break, go exploring outside the team, and bring information back.**
  - *No team has all the answers – reinventing the wheel is inefficient. An effective team regularly seeks expertise wherever it can be found.*



## SEEKING FEEDBACK FREQUENTLY

**One of the most important paths of information flow is the one that brings feedback back to the manager.** Team members rarely rush to give honest feedback to the manager for a variety of reasons. They may feel that giving feedback will be perceived as complaining. They may worry that it seems like "tattling" if others are involved. They may feel they are wasting their time. The manager may appear to be too busy to be receptive.



Whatever the reason, it is a fortunate and successful manager that is genuinely receptive to feedback and so receives this valuable input from at least some employees. Watch out for "information allies" – these are employees in your group that regularly step up to give feedback and fill you in on percolating issues in the team.

Here are some other practices to encourage constructive input from your team:

### Solicit feedback regularly and often

- A one-time event doesn't work to get people sharing.
- Frequently ask direct questions for specific feedback in non-public settings. Ask over coffee.
- Have regular 1:1 meetings with team members (don't become known for cancelling these); ask for feedback and input on multiple topics every time you meet.

### Seek feedback in multiple formats

- Ask for input and opinions in meetings, via email, at formal communications events or at informal gatherings, like at lunch.
- Many experts recommend using [anonymous surveys](#) with regular frequency. Anonymity can be a great way to get honest feedback, but shouldn't be the only way.



- From a colleague: MBWA "Manage By Walking Around" – don't hide in your office. Never use email to deliver corrective feedback. A manager must be able to respond to the employee's level of discomfort appropriately to get the message across. Stop by instead of emailing.

### **Demonstrate you are open to feedback with your actions**

- Use active listening skills such as the [PAC Method](#). P = demonstrate patience, pause; A = ask at least one question to clarify the situation; C = confirm that you have understood the speaker accurately.
- Thank employees who volunteer constructive feedback and suggestions. Consider offering rewards (gift card, afternoon off, etc.).
- Act on information to make change whenever possible. Be public about changes influenced by feedback. If you don't do this, employees will stop providing feedback pretty quickly.

# GIVING FEEDBACK

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Feedback is help and it should result in authentic assistance for the recipient to become more effective and successful. Giving timely and useful feedback is an absolutely required aspect of being a successful manager. Great bosses tell people where they stand clearly and routinely. They are clear with each employee about what they do well and where they need to improve, and they're also clear about how the person is doing overall. Employees hate to wonder what you think of their work.

## GUIDELINES FOR GIVING FEEDBACK

- Use formal and informal mechanisms for feedback (more on this later).
- Make sure to give positive feedback when it is merited. Surprisingly, some people find this hard so get used to it by making it a concrete goal to say “thank you, job well done” to one of your employees every day.
- Prepare for a feedback session by writing down specific examples and notes so you can get back to the issues if the conversation gets off track or becomes emotional.
- Don't let things fester, give feedback as close to an event as possible. If you wait too long, a small correction can become an unnecessarily big issue for you and for the employee.
- Make sure to focus on the action, not the person - intent is usually good. More on this important [management topic here](#).
- Don't pretend something went well when it didn't... but don't “punish” someone for a past infraction. Feedback will only have a positive outcome if the employee sees that real change is possible in your eyes so their confidence is restored. A good manager does not hold grudges.

- Never use email to deliver corrective feedback. A manager must be able to respond to the employee's level of discomfort appropriately to get the message across.

## FORMALIZING THE FEEDBACK SESSION

Giving regular, informal feedback is a very effective way to bring about change in behaviors and habits in a nonthreatening way. However, I have also found that scientists seem to find it easier to give feedback in formal sessions using a specific list of questions after a task or period of work. Using this standard format not only enables you to discuss a person's performance or what has been learned, it helps to plan effective next steps. For a formalized feedback session, answer the questions below together and discuss openly. Both parties get used to using this format and it becomes even more effective over time if you take it seriously.

## BEWARE OF INDIRECT LANGUAGE

You must be honest about performance problems. While giving corrective feedback isn't pleasant, it's far worse for employees if you don't care enough to tell them about areas they need to improve in. If a manager has concerns about an employee and the employee doesn't know it, the problem is as much with the manager as with the employee. This is especially true if the problems are large enough that the employee should be aware that they are at risk of being fired and should be looking for a new position.

One of the most common mistakes I see is managers who hint at or use indirect language to talk about real performance issues. Watch [this little video](#) to learn more about indirect language from Steven Pinker. As a manager you must be able to state your observations truthfully and in clear terms. It isn't necessary to be cruel, but is necessary to be direct and clear. There is place in human discourse for indirect language, but it is not the way to go when giving feedback. The employee is not helped if the feedback session is over and they still don't know how you actually feel about their performance. **Giving honest and helpful feedback gets easier with practice so you must build it into your routines.**

## **FEEDBACK SESSION WORKSHEET**

**Person who will receive feedback does a self-assessment (of the task or period of work):**

- What 3 things would you say worked out best?
- What 3 things worked least well?

**Manager provides feedback (may be the same as self-assessment or different):**

- Here are the 3 things I would say worked out best.
- Here are the 3 things that worked out least well.

**Find out the effect of the feedback:**

- How does this feedback compare with your own perception?
- Tell me your interpretation of my feedback to you.

**What are we learning:**

- What would have happened if \_\_\_\_\_? What would have been a better outcome?
- What help did you need? What help did you solicit? When did you first see you needed help?
- What kept you from getting the help you needed?
- What could I (manager) have done differently?

**What can you learn going forward:**

- If you could plan this all over, what would your plan be?
- If you could do the thing all over, what would you do differently?

# YOU CAN'T DO IT ALL YOURSELF

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Once you are responsible for managing others you will only be successful in your role if you become a master at delegating tasks and responsibilities. The manager is not expected to DO all the work – she is expected to make sure the work gets done and done well. Involving your team effectively is now your new measure of success. It is imperative that you resist the temptation to “just do it myself” or micromanage –you don’t have time for that and you won’t be as productive.

## BENEFITS OF DELEGATING

The bottom line – delegation allows you to get more done. There are also a host of other advantages to practicing effective delegation skills. The team will be stronger and less dependent on the manager to succeed. More people in leadership roles leads to more ideas, initiative and creative thinking. The team members will be more invested in the projects and outcomes. The quality of the work is often dramatically improved when tasks are distributed appropriately. Team members have opportunities to develop and stretch which will make them happier and more productive in the long run.

**If you are overwhelmed with your to-do list and your team doesn't seem to have enough to do...you are not delegating enough.**

## RECIPES FOR DELEGATION SUCCESS

Remember that there are always things that the manager must do. You can't delegate the giving of feedback or performance review. You can't delegate tasks assigned to you and you must usually take on all tasks that involve confidential information. No matter who you delegate to, or what tasks you assign, the manager is ultimately responsible for outcomes. Be ready to support your team and take responsibility if things go wrong.

Here are some important criteria for delegating tasks appropriately:

- **Are the desired goals and outcomes clear?** If you don't have clear outcomes in mind, you won't be able to communicate these well to the task assignee and this is a recipe for bad outcomes. Clearly articulate the desired outcomes. Begin with the end in mind. Specify desired results.
- **Are you delegating to someone with sufficient skills and experience?** Do you think you are giving this responsibility to someone who can do the job. It is good to delegate so the person doing the task will have to learn and stretch a little, but be careful not to go too far.
- **Is the assignee interested in this task?** Don't give out tasks – where possible, include people in deciding what is to be delegated to them. Not all tasks are fun, but getting buy-in when delegating can help ensure successful results.
- **Can you provide the information and resources needed for the assignment?** Setting someone up for failure by delegating is a bad idea.

## RECIPES FOR DELEGATION SUCCESS

As with most managerial responsibilities, good communication is at the heart of delegating for success.

- **Meet regularly** before during and after the assignment to discuss goals, expected outcomes, timelines and deadlines. Agree on a way to review project progress. I recommend putting a regular check-in meeting on the calendar even if it is just 15 minutes a week.
- **Clearly identify constraints and boundaries.** Where are the lines of authority, responsibility and accountability? What types of issues do you want to know about right away?

- **Provide adequate support.** The manager must be available to answer questions. If you are perceived as too busy to be approachable mistakes will be made that could have been prevented. Make sure everyone understands that no question is “dumb” and that it is better to ask before wasting time.
- **Focus on results.** What does success look like? Agree on desired outcomes. Concern yourself with what is accomplished, rather than detailing how the work should be done. Your way is not the only way and may not even be the best way. This facilitates success and trust. Micromanaging is bad for everyone.
- **Document action plans!** As a project progresses it is easy to forget the original plan. Write down your plans in a shared document. Update frequently with progress reports, meeting minutes and plan changes. Written documentation helps make sure everyone is on the same page.

Effective delegation allows you to make the best use of your time and skills. It also ensures that other people in the team grow and develop to reach their full potential in the organization. This will result in more engaged, successful employees who can accomplish great things.



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I am often asked to give career seminars on Leadership skills. After attempting to put together such a presentation many times, I could never actually figure out what skills were really leader-specific. How is leadership different from good management? Aren't all career skills leadership skills when done well? Do you just have to know it when you see it?

[illegible]

Doers focus on understanding what is expected of them and learning new skills to get the work done efficiently and with high quality. Their work involves coordination and can require technical mastery. Scientists need to be doers for a long time before they master the skills they need to be successful. Scientists are lifelong learners so we are all likely spending a lot of time in doer mode even late in our careers.

## MANAGERS MAKE SURE THE WORK GETS DONE

Managers do this by removing obstacles that stand in the way of the doers and by ensuring good communication. A manager must both hire and fire to make sure the team is the best it can be. Managers must ensure that their teams are working well together and collaborating effectively with other teams. While they sometimes dig in and do some of the work, they must be more focused on delegating tasks and in motivating their doers by ensuring they are as engaged as possible.

## LEADERS LOOK TO THE FUTURE

Leaders must get new things started and then step back to let others take the reins. They work alone much of the time, depending on the organization they lead. Effective leaders rarely give orders (although they must occasionally). Good leaders exert influence in other ways. While good managers must motivate their teams, it is the leader's job to provide the driving inspiration, to create a productive culture and to correct systemic problems.

Understanding these three roles allows you to identify what you need to do to be successful in a specific role or cycle. For example, if you try to lead when you are expected to be doing, you may not be recognized as successful because you are not fulfilling the requirements of the current task.

Most of us start as doers, some become managers and some take on leadership roles. You may be happy with a primary role of doer for your entire career. Scientists train as doers and often maintain an enjoyment in the doing. Many science managers or leaders will tell you how much they miss the hands-on bench work. To really be happy, you may need to find a way to do, manage and lead all in one day.

How do you convince others (in particular your boss) that you are ready to try operating in a different role? I think the secret sauce can be summed up in one word—initiative. Initiative is the ability to assess and initiate things independently.

Taking initiative doesn't mean going rogue, pointing out problems or highlighting criticisms. To be given the opportunity to take on the role of leader, one needs to take the initiative by bringing and effecting solutions to both known and unidentified issues.

# BOOKS AND RESOURCES:

## FOCUS ON LEADERSHIP

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### ONLINE RESOURCES:

- [www.CoachforGrowth.com](http://www.CoachforGrowth.com)
- Center for Creative Leadership [www.ccl.org](http://www.ccl.org)
- Harvard Business Review articles (may require fee) <http://hbr.org/>
- The Mentoring Group: [www.mentoringgroup.com](http://www.mentoringgroup.com)
- Emotional Intelligence (EI, EQ) tests <http://ei.mhs.com/>
- Center for Coaching and Mentoring [www.coachingandmentoring.com](http://www.coachingandmentoring.com)
- Stanford Executive Briefings DVD Programs (consider watching one with your group as a trigger for discussion) [www.executivebriefings.com](http://www.executivebriefings.com)
- The Keirsey Temperament Sorter [www.advisorteam.com/user/ktsintro.asp](http://www.advisorteam.com/user/ktsintro.asp)
- Myers-Briggs personality type assessments: [www.humanmetrics.com](http://www.humanmetrics.com)
- [www.Mindtools.com](http://www.Mindtools.com)
- [Soundview Executive Book Summaries: http://www.summary.com/](http://www.summary.com/)
  - No time to read the whole book—Let Soundview distill it into an article for your group to share and discuss

## ARTICLES:

- Fire, Snowball, Mask: How Leaders Spark and Sustain Change, by Peter Fuda and Richard Badham (*online version has interesting video content*) <http://hbr.org/2011/11/fire-snowball-mask-movie-how-leaders-spark-and-sustain-change>
- Leadership Insights for Engineers, Scientists and Computer Professionals as Leaders, by Ken Graham, Ph.D. <http://www.kengrahamphd.com/downloads/Lengineers.pdf>
- Women in Power: Yes, They are Different From Men, by Mark Koba <http://www.cnbc.com/id/44687913>
- Women and the Labyrinth of Leadership, by Alice Eagly and Linda Carli Harvard Business Review reprint #R0709C
- How Good Are Your Leadership Skills? Mind Tools Quiz Activity <http://www.mindtools.com/pages/Newsletters/02Jun09.htm>
- *Managing Knowledge Intensive Workers*, by Sabastiano Massaro <http://www.nature.com/nbt/journal/v30/n7/full/nbt.2299.html>
- *Terrible Teacher and Mentor, Top 10 Reasons Yoda Was* by Brandon Koeller <http://www.geekwire.com/2011/terrible-teacher-mentor-top-10-reasons-yoda/>
- Why Aren't You Delegating, by Amy Gallo Harvard Business Review <https://hbr.org/2012/07/why-arent-you-delegating.html>
- The Discipline of Teams, by Jon R. Katzenback and Douglas K. Smith Harvard Business Review <https://hbr.org/2005/07/the-discipline-of-teams>



## BOOK SUGGESTIONS: LEADERSHIP

- *HBR's 10 Must Reads: On Leadership* (Articles on Leadership from the Harvard Business Review, can be purchased at HBR individually)
  - What Makes a Leader (*this is a classic, must-read*)
  - What Leaders Really Do
  - The Work of Leadership
  - Why Should Anyone Be Led by You?
  - Crucibles of Leadership
  - Level 5 Leadership: The Triumph of Humility and Fierce Resolve
  - Seven Transformations of Leadership
  - Discovering Your Authentic Leadership
  - In Praise of the Incomplete Leader
- *What Got You Here Won't Get You There: How Successful People Become Even More Successful*, by [Marshall Goldsmith](#), with [Mark Reiter](#)
- *Seven Habits of Highly Effective People*, by Stephen Covey
- *Through the Labyrinth: The Truth about how Women Become Leaders*, by Alice Eagly
- *5 Steps to Professional Presence*, by Susan Bixler and Lisa Scherrer Dugan
- *Strengthsfinder 2.0*, by Tom Rath
- *Strengths-Based Leadership*, by Tom Rath and Barry Conchie
- *On Becoming a Leader: The Leadership Classic Revised and Updated*, by Warren Bennis
- *The Leadership Challenge*, by James Kouzes and Barry Posner
- *Organizational Culture and Leadership*, by Edgar Schein
- *Leadership*, by James Macgregor Burns
- *Leaders we Deserve*, by Alistair Mant

## BOOK SUGGESTIONS: MANAGEMENT SKILLS

- *Skills for New Managers*, by Morey Stettner
- *Managing Scientists*, by Alice M. Sapienza
- *Talking from 9 to 5: Women and Men at Work*, by Deborah Tannen
- *Seven Habits of Highly Effective People*, by Stephen Covey
- *Being the Boss*, by Linda Hill (HBS)
- *Successful Manager's Handbook* from PDI
- *The Wisdom of Teams: Creating the High-Performance Organization*, by Jon Katzenbach and Douglas Smith
- *Working with Emotional Intelligence*, by Daniel Goleman
- *Drive: The Surprising Truth About What Motivates Us*, by Daniel H. Pink
- *4 Ways to Make a Better To-Do List*, by Christine Ryan Jyoti
- *17 Best Tools and Apps for Building New Habits and Goals* : American Express OPEN Forum
- *The Unspoken Stigma of Workplace Flexibility*, By Tara Siegel Bernard
- *Are We Wearing Work-Family Blinders?* by Melissa J. Anderson