

3-Part Series on developing your metacognitive skills

- #1: Succeed with your strengths: Assess and apply your unique strengths to improve your chances for success in grad school
- #2: Assess your communication strengths with the Myers-Briggs types and apply them to work effectively with others
- #3: Succeed through your failures: Learning to fail productively in grad school

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Assess your communication strengths with the Myers-Briggs types and apply them to work effectively with others

Steve Lee, PhD
CLIMB Program
Assistant Director
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CREATING A DIVERSE COMMUNITY OF YOUNG SCIENTISTS

Activity 1:

Given these possible PI types, identify and explain which PI you would prefer the least.

National Institutes of...
THE NINE TYPES OF PRINCIPAL INVESTIGATORS

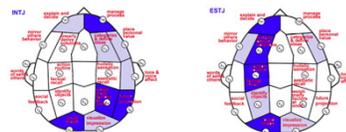
Big Talker These results have other implications for the cases of cancer near lifetime. (1) Makes your data seem really important (2) Doesn't really understand what you do	Slave Driver You know, looks a good idea, but going to waste in this lab. (1) You get late some (2) You forget your spouse's name	Demi God (1) Power, prestige, better job prospects (2) You never see them
Control Freak Why didn't you use 250M nMol in the second assay? (1) Knows exactly what experiment you did (2) Knows exactly what experiment you're doing	Science Wonk Why don't you try this new enzyme, goddammit, something that's new? (1) He's a total geek (2) Knows everything about science	Laid-Back Make it quick, I've got a 2:30 tee time. (1) Leaves you alone (2) Doesn't care about your results
Psycho WHAT DO YOU MEAN YOU MADE A MISTAKE?? (1) Keeps you on your toes (2) Scary	Small Town Grocer (1) Happy with his own little life (2) Little Ambition	Rising Star (1) Exciting Ride (2) Not much room for you

Alexander Dent

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What are the Myers-Briggs Type Indicators?

- Katharine Briggs and Isabel Briggs Myers – 1960's
- The MBTI provides a framework for understanding communication and working preferences
- The MB types and the test have been validated
 - Widely used in educational and professional settings
 - Dario Nardi's research at UCLA



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What are benefits of using the MBTI's?

- increase self-awareness
- understand how others perceive your actions
- identify your assumptions when interpreting others' actions
- learning to adapt and change to others around you
- improve communication
- increase productivity

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Four dichotomies of the MBTI

How do you prefer:

- to relate to people?
 - Extroverts or E-types
 - Introverts or I-types
- to gather information?
 - Sensors or S-types
 - Intuitors or N-types
- to make decisions?
 - Thinkers or T-types
 - Feelers or F-types
- to relate to the outside world?
 - Judgers or J-types
 - Perceivers or P-types

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Common Misconceptions

- I can't function as my opposite type
 - preference ≠ ability
- If I know someone's types, I can predict (or manipulate) their behavior.
 - knowing their MB types only gives a framework to understand them
- I need to find people with the same types to be productive
 - complimentary strengths can help your weaknesses

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Activity 2:

Discuss the case studies and respond to the questions

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MBTI's among CLIMB students

	Total	Percentages
E/I	51 / 56	48% 52%
S/N	66 / 45	59% 41%
T/F	51 / 56	48% 52%
J/P	80 / 25	76% 24%
	XSXJ	

	Men	Women
E/I	14 / 26	37 / 30
S/N	23 / 18	43 / 27
T/F	27 / 12	24 / 44
J/P	25 / 13	55 / 12
	ISTJ	ESFJ

	2008	2009	2010	2011	2012
E/I	1 / 5	11 / 6	11 / 18	10 / 10	18 / 17
S/N	4 / 3	3 / 14	19 / 9	9 / 12	31 / 7
T/F	4 / 3	9 / 8	16 / 13	7 / 13	15 / 19
J/P	5 / 2	11 / 4	22 / 6	15 / 5	27 / 8
		ENXJ	ISTJ	XNFJ	XSFJ

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Resources

- Keirse, *Please Understand Me II* (1998)
 - good reference for the MB types
- Rath and Conchie, *Strengths Based Leadership* (2009)
 - another good assessment test
- Wagner and Gale; *Why Partners Need Complementary Strengths*; Gallup Press (2009)
- Stone, Patton, Heen, and Fisher; *Difficult Conversations: How to Discuss what Matters Most* (2000)

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For Self-Reflection or Discussion

- Consider a recent fruitful working relationship. What made it work out well? How can you try to repeat those features?
- Consider another difficult working relationship. Why do you think it became so challenging? What can you learn from this, so that you can avoid similar difficulties and actually benefit from this challenge?
- How can you anticipate potential benefits and problems with a PI that you might work with?

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Sticky Message



assess and apply your strengths



to improve your chances for success

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Assess your communication strengths with the Myers-Briggs types and apply them to work effectively with others

To help you understand and apply the Myers-Briggs personality types, discuss these case studies within your groups, and address the questions. These case studies have been created based upon real and hypothetical situations that a grad student might encounter. Each case study has been simplified to involve primarily only one of the four possible categories of the MB types, since this workshop is an introduction into the Myers-Briggs personality types.

- Case 1 – John and his PI
 - John has been having trouble understanding his PI's expectations and goals for his research. This is particularly frustrating for John, because he's very friendly and gets along with most people. He has weekly meetings with his PI, where he tells her all about his ups and downs from his research progress, along with complications and successes. John is aware that he's communicative and talkative, so he believes that he's doing a good job with informing his PI about his research progress. But occasionally his PI will ask him a particular question that surprises him, because John didn't realize that his PI had wanted something else. John just wishes that she would explain more clearly what she wants and expects, so that they can work better together. But his PI doesn't seem to say much during their meetings, and seems withdrawn from John's perspective.
- Questions:
 - Which of the 4 Myers-Briggs categories might explain their different preferences?
 - Based upon this description, what do you think is John's MB type? Explain your reasoning, referring to details mentioned in the case study.
 - What do you think is the PI's MB type? Explain your reasoning.
 - How might John adapt, to work better with his PI? How can he improve his understanding of her expectations for his research?
 - How might John use his strengths from his MB type to help resolve his problem?
 - What underdeveloped type skills (see tables below for some ideas) might John need to address as he considers how to improve the communication with his PI?
- Case 2 – Grace and the lab manager
 - Grace has started a new project that requires working during odd hours at night and weekends, but an unexpected conflict has begun with the lab manager. She's been able to coordinate the new schedule with her new project, classes and personal life, which has helped her sanity, because she likes to plan things in advance and schedule her activities. Also, she's been able to keep things under control by marking clear boundaries for her benchtop space and keeping her own area organized, because the rest of the lab seems messy to her most of the time. But when Grace works in the lab during odd hours, she's been having trouble finding reagents in the lab. The reagent catalog has not been updated recently, so it's been difficult for Grace to

find items. During the normal working hours, the lab manager is helpful in tracking down items for Grace. But on this particular Saturday Grace had to cancel an experiment because she couldn't find a critical reagent in the lab, and so fell behind her schedule. Grace thinks that it's the job of the lab manager to update the reagent catalog, and is frustrated that she had to cancel her experiment and fall behind her schedule. In her frustration, she begins to write an email to the lab manager.

- Questions:
 - Which of the 4 Myers-Briggs categories might explain the different preferences for Grace and the lab manager?
 - Based upon this description, what do you think is Grace's MB type? Explain your reasoning, referring to details mentioned in the case study.
 - What do you think is the lab manager's MB type? Explain your reasoning.
 - Do you think she should email the lab manager, or perhaps communicate with him in another manner? How might Grace adapt, to work better with the lab manager?
 - How might Grace use her strengths from her MB type to help resolve her problem?
 - What underdeveloped type skills (see tables below for some ideas) might Grace need to address as she considers how to improve the working relationship with the lab manager?

- Case 3 – Mary and her postdoc
 - Mary enjoys working in her lab, but has started to notice problems in communicating with the postdoc who's been assigned to mentor her. Mary prides herself as a "do-er" who works hard and is very willing to put in extra hours in the evenings and weekends in the lab. She enjoys working with her hands, and so has developed excellent technical skills. She prefers having detailed protocols that she can closely follow, so that she doesn't have to create new protocols or make changes. But her postdoc often asks questions during their weekly meetings about her research that don't seem relevant to her, and gives her papers to read that seem to be outside of her field. Mary has been very busy with her coursework and research, and would prefer to focus on only her project. But the postdoc keeps bringing in ideas and papers that seem too abstract to Mary. Furthermore, he recently asked why a particular step in the protocol was needed, and Mary was stumped. She felt embarrassed, because the particular step consumed an expensive reagent and she realized that she had simply followed the procedure without thinking carefully.

- Questions:
 - Which of the 4 Myers-Briggs category types might explain their different preferences?
 - Based upon this description, what do you think is Mary's MB type? Explain your reasoning, referring to details mentioned in the case study.
 - What do you think is the postdoc's MB type? Explain your reasoning.
 - How might Mary adapt, to work better with her postdoc? What might she say or ask the postdoc?
 - How might Mary use her strengths from her MB type to help resolve her problem?
 - What underdeveloped type skills (see tables below for some ideas) might Mary need to address as she considers how to improve the communication with the postdoc?

- Case 4 – Tony and his new lab
 - Tony is really glad that he and his new friend, Sheila, have joined the same lab. He also enjoys playing with Sheila's child, and helping take care of her baby occasionally. Their group is trying

to decide on a new weekly time to hold their group meetings, but this has caused problems because their group has recently grown bigger and it's hard to find a new time that's convenient for everyone. Soon afterwards, the PI sent around an email, announcing that the new group meetings will be held on Sunday mornings. Tony thought the group should talk about it first, or that at least a Doodle poll should have been sent around. As Tony talked with Sheila, he realized that the meeting time would be extremely inconvenient for her, because Sheila will need to make special, expensive arrangements for childcare. Tony gently encouraged Sheila to speak up for herself, but she is reluctant to cause problems as a new member of the group. Tony also hears that the new time would cause significant problems for others in the group because of family and religious obligations. Tony would like to talk with the PI about possibly changing the meeting time, but isn't sure how to approach the PI.

- Questions:
 - Which of the 4 Myers-Briggs category types might explain their different preferences for Tony and his PI?
 - Based upon this description, what do you think is Tony's MB type? Explain your reasoning, referring to details mentioned in the case study.
 - What do you think is the PI's MB type? Explain your reasoning.
 - How might Tony communicate with his PI? How might Tony use the strengths of his type to approach his PI?
 - How might Tony use his strengths from his MB type to approach his PI?
 - What underdeveloped type skills (see tables below for some ideas) might Tony need to address as he considers how to contribute to the decision-making process of the lab group?

- Case 5
 - Have you or someone in your group experienced similar situations, where you had different types? Please share your situation: how the different preferences impacted the relationship, the consequences, if the situation changed, how you dealt with the differences, etc.

- **Success Types in Medical Education by John Pelley**
 - <http://www.ttuhschool.edu/SOM/success/>

What the Types Can Offer Each Other

EXTRAVERTS

- Provide the outwardly directed energy needed to move into action
- Offer responsiveness to what is going on in the environment
- Have a natural inclination to converse and to network

INTROVERTS

- Provide the inwardly directed energy needed for focused reflection
- Offer stability from attending to enduring ideas
- Have a natural tendency to think and work alone

SENSING TYPES

- Have a mastery of the facts and attention to details
- Bring a knowledge of what materials and resources are available
- Appreciate knowing and doing what works

THINKING TYPES

- Take a hard look at the pros and cons of situations, even when they have a personal stake
- Able to analyze and solve problems with logic and reason
- Want to discover the "truth" and they naturally notice logical inconsistencies

JUDGING TYPES

- Can organize, plan, and follow through on projects
- Push to get things settled and decided
- Appreciate well-oiled efficiency at work

INTUITIVE TYPES

- Know by way of insight and attention to meanings
- Bring a grasp of what is possible and what the trends are
- Appreciate doing what hasn't been tried before

FEELING TYPES

- Know what is important to and for people, and adhere to that in the face of opposition
- Have an ability to build relationships and to be persuasive
- Want to uncover the greatest "good" in a situation and they notice when people may be harmed

PERCEIVING TYPES

- Can respond quickly and flexibly to the needs of the moment; spontaneous
- Strive to keep things open so new information may be gathered
- Appreciate the need for spontaneity and exploration at work

Well-developed type skills		Underdeveloped type skills	
Extraversion	Introversion	Extraversion	Introversion
Active approach	Reflective approach	Hyperactive	Withdrawn & secretive
Bring breadth	Bring depth	Superficial	Overly serious
Sensing	Intuition	Sensing	Intuition
Practical	Imaginative	Slow & dull	Careless
Brings data	Brings perspective	Narrow focus	Impractical & dreamy
Thinking	Feeling	Thinking	Feeling
Analyze situations	Affiliate people	Cold & uncaring	Easily hurt
Bring consistency	Bring harmony	Overly competitive	Overly sentimental
Judging	Perceiving	Judging	Perceiving
Decisive	Inquisitive	Overly opinionated	Indecisive
Bring a plan	Bring options	Controlling	Procrastinating