

What to do when it feels like everyone
in graduate school is smarter than you?
(Alt. title: I don't belong here)

UC Davis Department of Civil and Environmental Engineering Grad Orientation

September 24, 2019

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Graduate School is Awesome

Surrounded by intelligent, motivated, usually quirky individuals

Access to journals on the latest innovations in your field

More freedom to pursue courses that suit your interests and research

Always something new and exciting in which to be involved

Transition to Graduate School

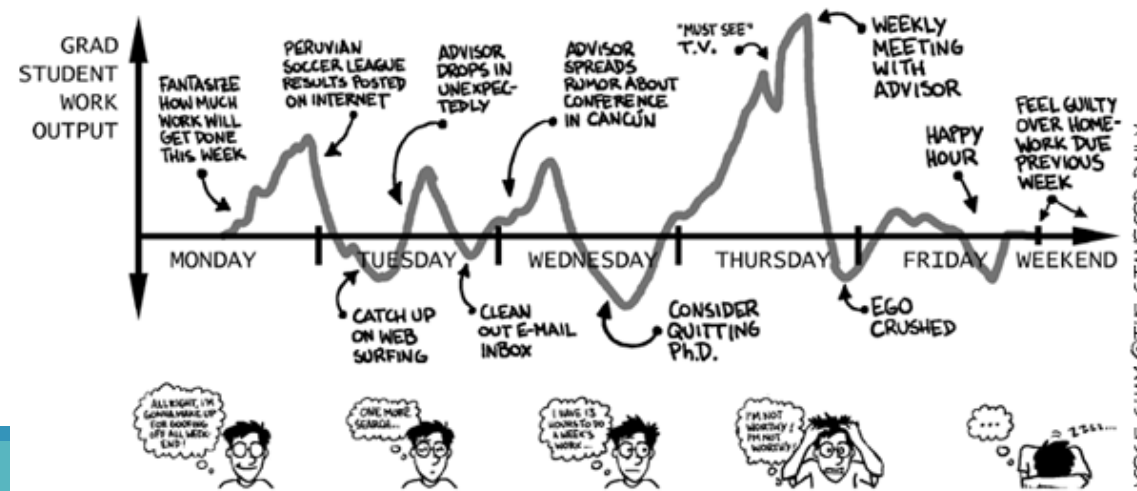
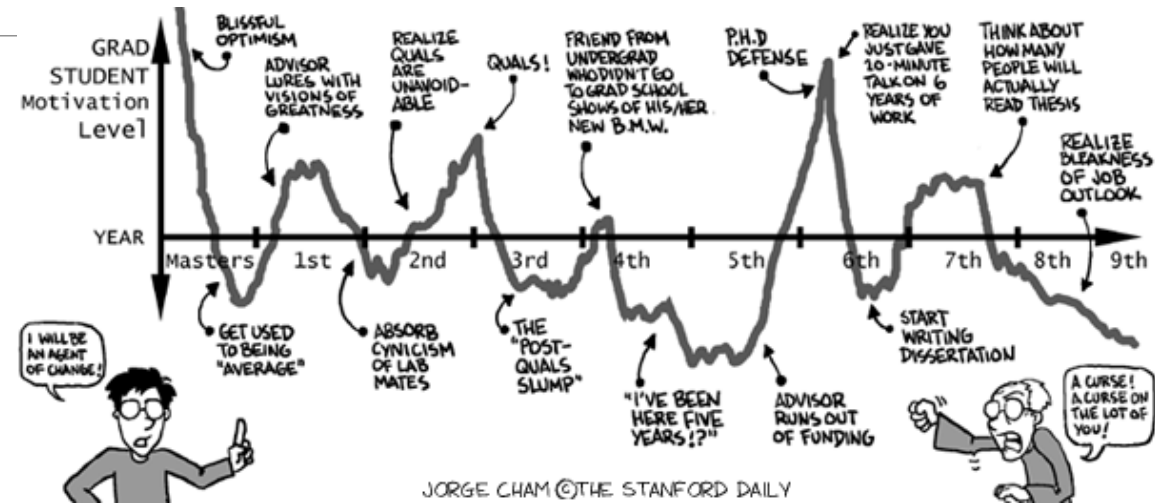
Different from undergraduate experience (academically, financially, emotionally, etc.)

People not understanding it is different

New and changing power relationships

Teaching and/or research responsibilities

Searching for funding



Some Sources of Graduate School Anxiety

Transition Period

Advisors

Imposter Syndrome

Stereotype Threat

General Anxiety

Overextension

Perfectionism



Have you ever felt like this?

“I don't belong here...I'm clever and hard--working enough to have faked them out all these years and they all think I'm great but I know better...and one of these days they're going to catch on...they'll ask the right question and find out that I really don't understand...and then...and then....” (Felder, 2008)

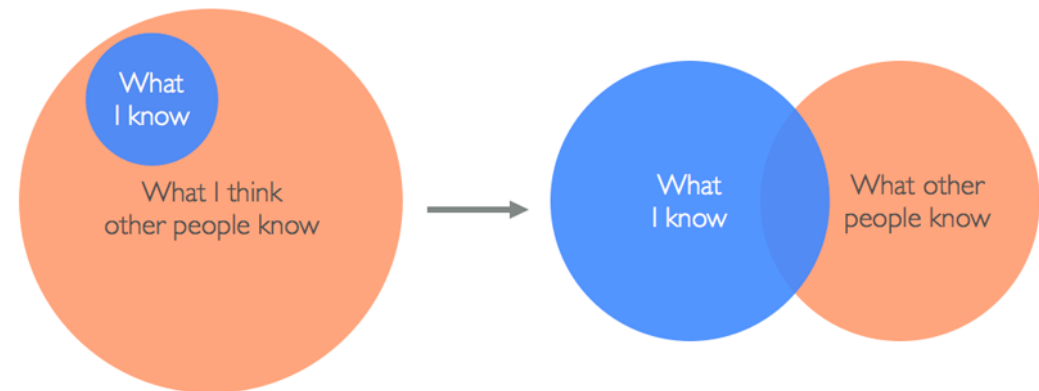
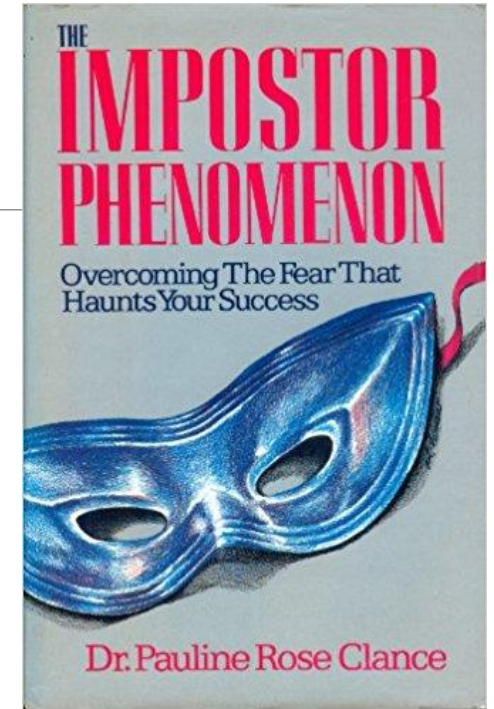
Then you have experienced the Impostor Phenomenon

What is impostor syndrome

Impostor phenomenon described by psychologists in the late 1970s

A collection of feelings of inadequacy that persist even in face of information that indicates that the opposite is true

- Chronic self-doubt
- Feelings of intellectual fraudulence



Famous Quotes

“I have written 11 books but each time I think ‘Uh-oh, they’re going to find out now. I’ve run a game on everybody, and they’re going to find me out.’” – Maya Angelou

“The beauty of the impostor syndrome is you vacillate between extreme egomania and a complete feeling of: ‘I’m a fraud! Oh God, they’re on to me! I’m a fraud!’ . . . just try to ride the egomania when it comes and enjoy it, and then slide through the idea of fraud.” – Tina Fey

“I am not a writer. I’ve been fooling myself and other people.” – John Steinbeck

Who experiences Impostor Syndrome?

High achievers

All genders

Common among people embarking on new endeavor (e.g., graduate school)

Impostor feelings exacerbated when from an underrepresented groups



Anderson, 2012

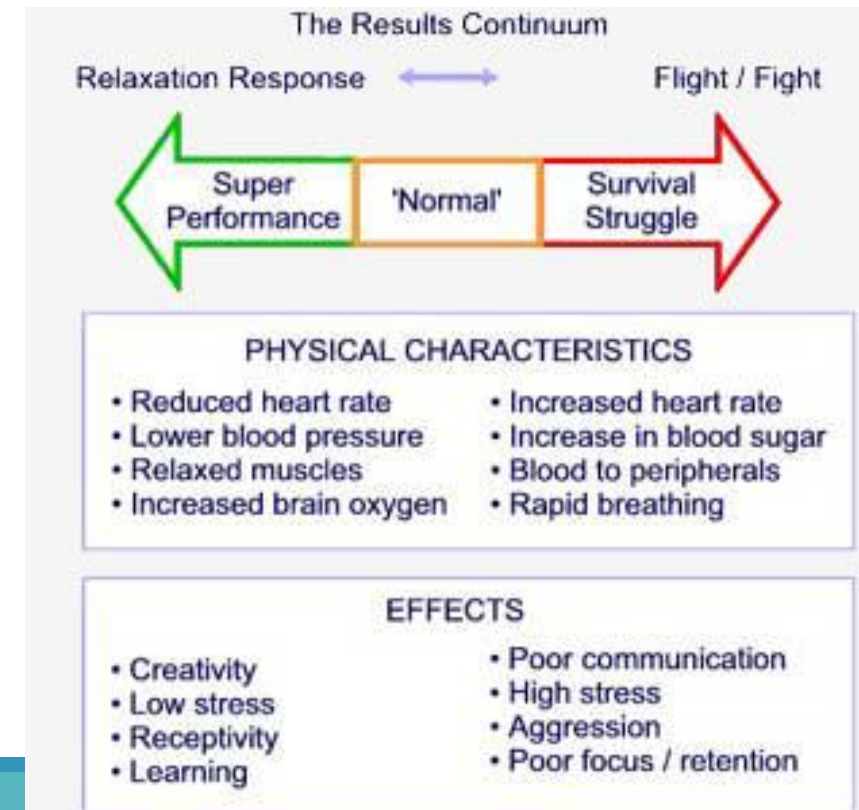
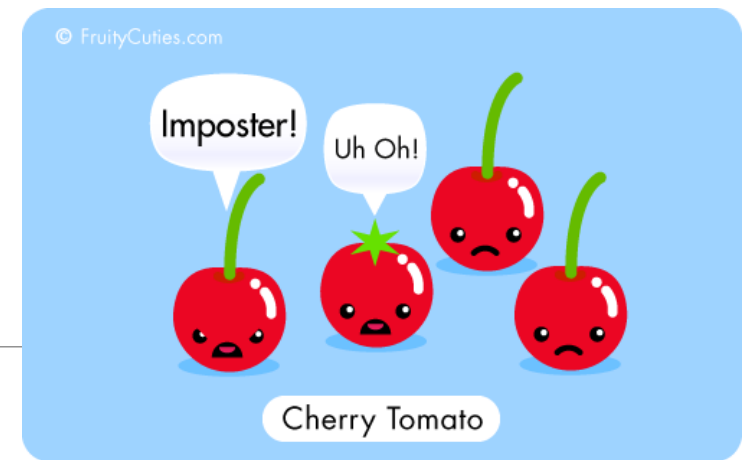
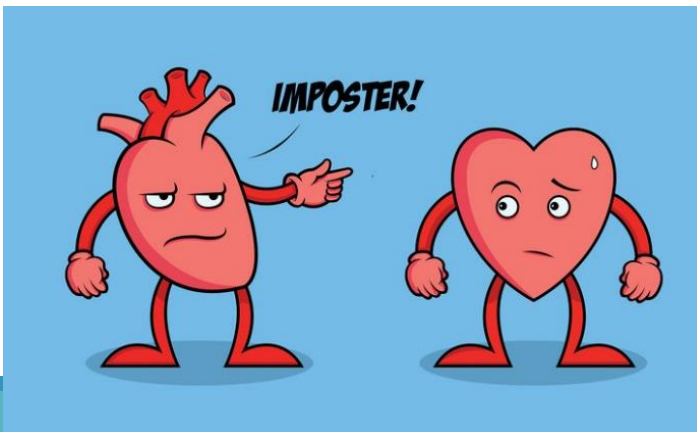
Impostor Feelings

Feeling like a fraud

Feeling like you are not smart enough or good enough

Feeling like you don't belong/fit in

Feeling like you are about to get caught



Caveats

Severity depends

Duration depends

Behaviors & characteristics depend

Common characteristics

Attribute their accomplishments to external factors (e.g., luck)

- Attribute their failures and setbacks to inability/incompetence

Unrealistic notions of what it means to be competent – internal bar is exceedingly high

Fear that others will unmask as a fraud

Generalized anxiety

Depression

Desire for perfectionism & rarely ask for help

Common behaviors

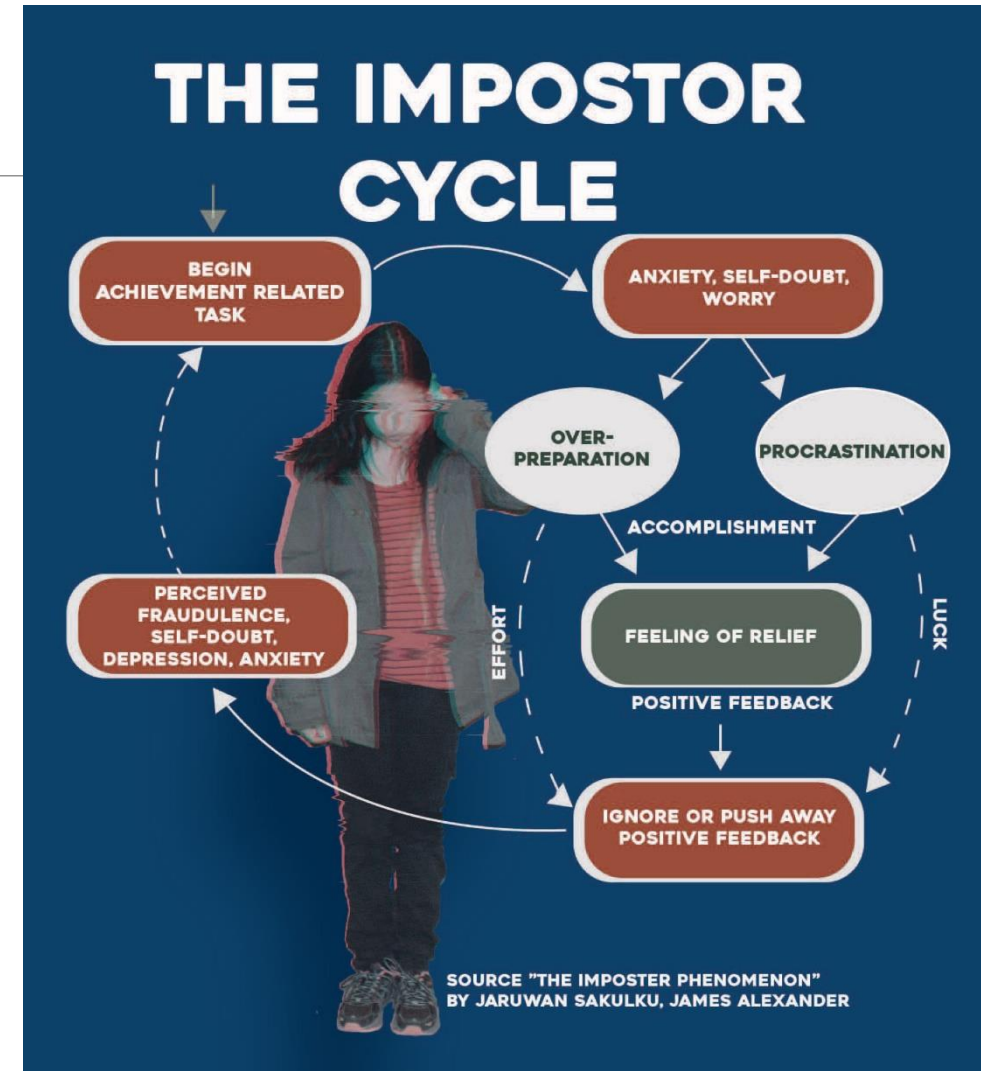
Diligence and hard work

- Over-preparation
- Unfortunate cycle

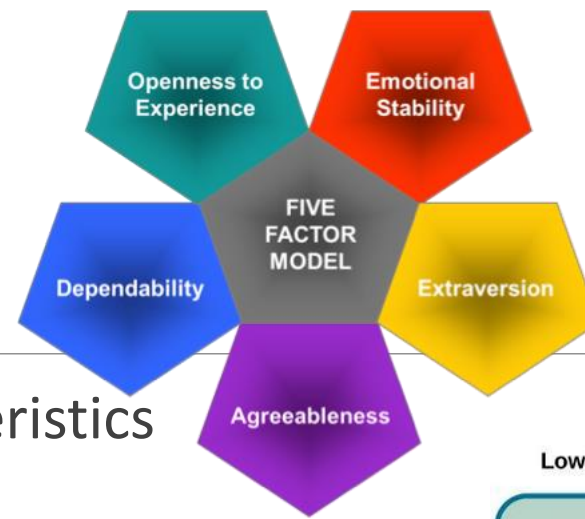
Procrastination

Intellectual inauthenticity

Using charm and/or perceptiveness to win over superiors



Big Five Model of Personality Traits



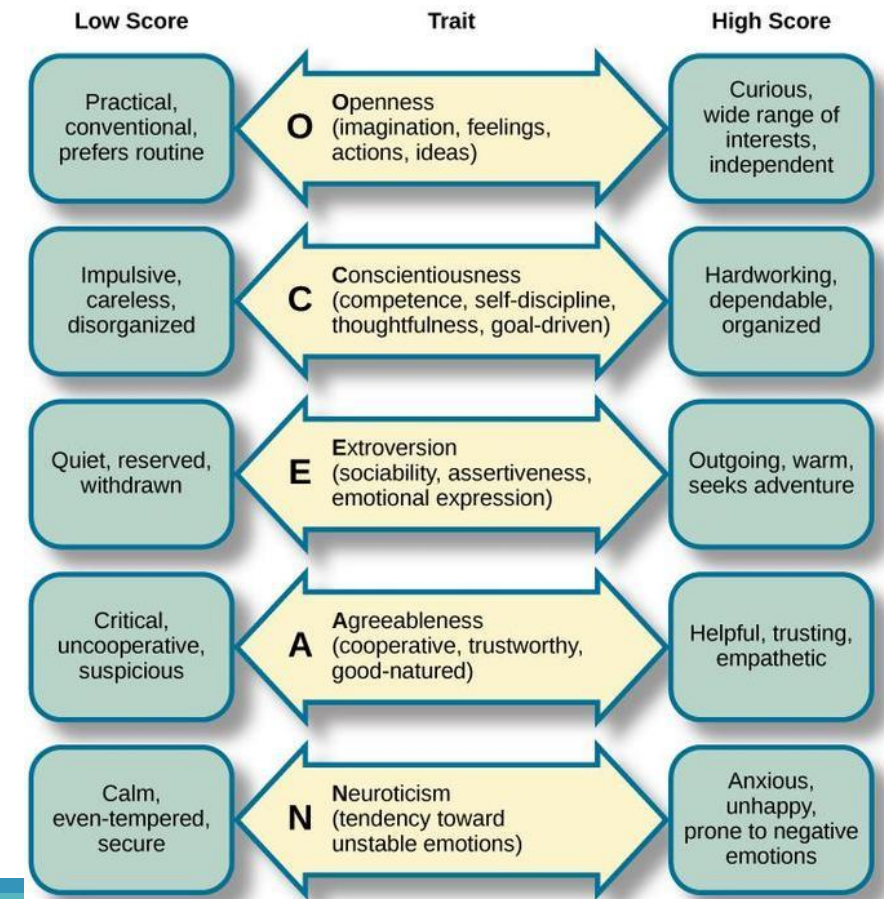
Correlation with following characteristics

- Introversion
- Trait anxiety
- A need to look smart to others

Low correlation between

- Self-esteem
- Self-monitoring

Impostor phenomenon seen as way to compensate for feelings of insecurity and self-doubt



Intersectionality with other challenges in engineering & academia

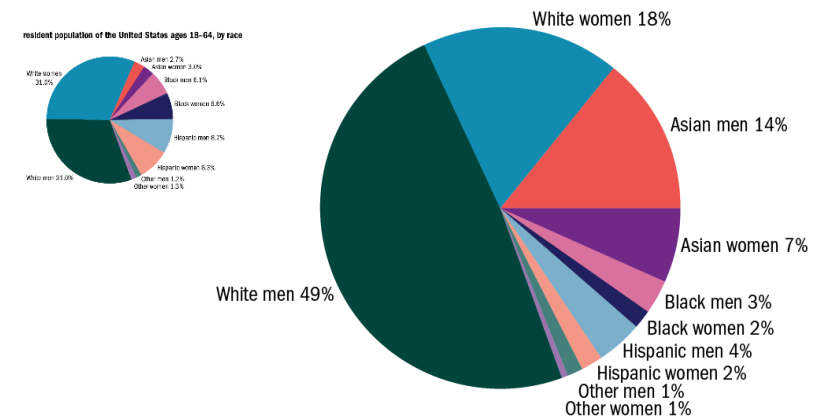
Mental illness & Mental Health

- Impostor feelings can be compound mental health issues
- Perfectionism
- Generalized anxiety
- Depression

Underrepresented groups

- Stereotype threat
- Fear that need to work twice as hard to be half as good
- Differing from peers in any way – race, gender, sexual orientation, college pathway, socio-economic status
- Family expectations

Scientists and engineers working in science and engineering occupations: 2015



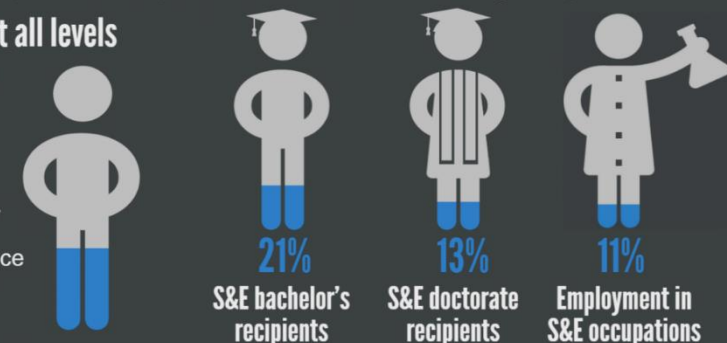
NOTES: Hispanic may be any race. Other includes American Indian or Alaska Native, Native Hawaiian or Other Pacific I
Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017

What does 'underrepresented minority' mean?

Some groups have disproportionately low representation in science and engineering (S&E) compared to the U.S. population. Groups like Asians and whites have higher representation.

Underrepresented at all levels

Blacks, Hispanics and Native Americans or Alaska Natives account for roughly **31%** of U.S. residents. How does that number compare to their representation in science and engineering?



Source: National Center for Science and Engineering Statistics, National Science Foundation
Women, Minorities, and Persons with Disabilities in Science and Engineering: 2017
<https://nsf.gov/statistics/wmpd/>

Imposter syndrome - struggles

Trouble putting impostor feelings and worry about their errors in perspective

Many are adept at hiding struggle from others & struggle in silence

Retention

Self-sabotage

Burn-out

Lack of enjoyment due to mental exhaustion



azilliondollarscomics.com



Stress Warning Signs and Symptoms	
Cognitive Symptoms	Emotional Symptoms
<ul style="list-style-type: none">• Memory problems• Inability to concentrate• Poor judgment• Seeing only the negative• Anxious or racing thoughts• Constant worrying	<ul style="list-style-type: none">• Moodiness• Irritability or short temper• Agitation, inability to relax• Feeling overwhelmed• Sense of loneliness and isolation• Depression or general unhappiness
Physical Symptoms	Behavioral Symptoms
<ul style="list-style-type: none">• Aches and pains• Diarrhea or constipation• Nausea, dizziness• Chest pain, rapid heartbeat• Loss of sex drive• Frequent colds	<ul style="list-style-type: none">• Eating more or less• Sleeping too much or too little• Isolating yourself from others• Procrastinating or neglecting responsibilities• Using alcohol, cigarettes, or drugs to relax• Nervous habits (e.g. nail biting, pacing)

Example: Colleen Bronner

Now for a more upbeat note

What can you do to help you or someone else?

Demonstrate that you are not alone

- Decrease stigma
- Share stories of when you failed
- Share impostor feelings

Realize impostor feelings both normal and irrational

Challenging your cognitive processing

- Tracking evidence of successes/failures or weaknesses/strengths
- If feel incompetent, write down evidence for and against
- Note how you handle positive feedback

Savage Chickens

by Doug Savage



What can you do to help you or someone else?

Change behaviors

- Time limits for assignments/papers
- Deadlines to turn drafts over to a peer
- Stop deflecting compliments and saying “I’m sorry”
- Challenge yourself to ask a question in seminar/lecture

Assess strengths realistically

- Don’t set your baseline at a professors with 20-30 years of experience

Remember what you have achieved in a tangible manner

- Write down achievements
- Mentor/tutor less experienced students
- “Things for rainy days” files

What can you do to help you or someone else?

Realize perfection/super human model is a myth

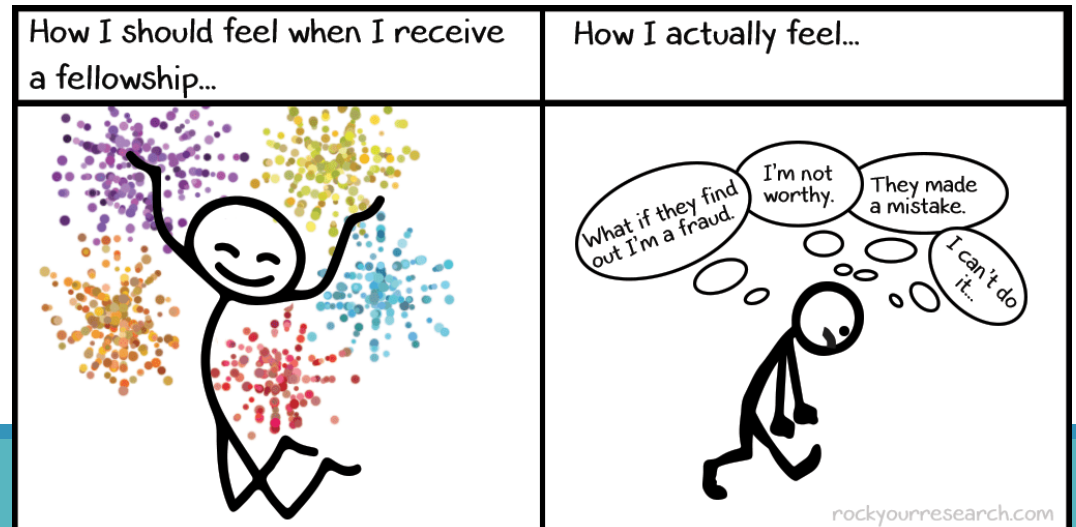
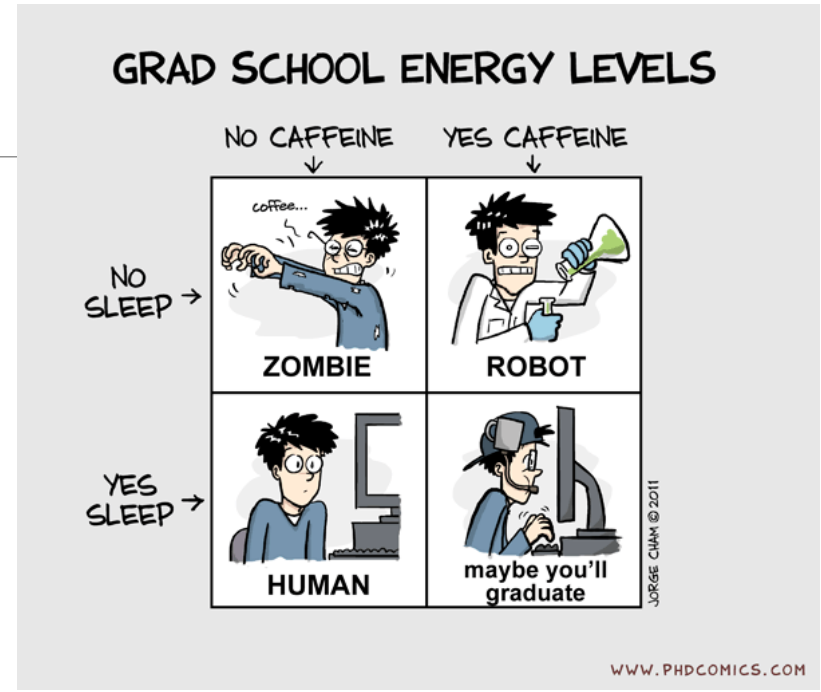
- Ask someone you view as “successful” to discuss a time they struggled or failed
- Learn more about role models

Develop support network

- Family, friends, pets
- Someone trained to help (e.g., therapist, psychologist)

Schedule time for healthy habits (e.g., exercise, sleep)

Celebrate successes



Support Networks: You Are Not Alone!

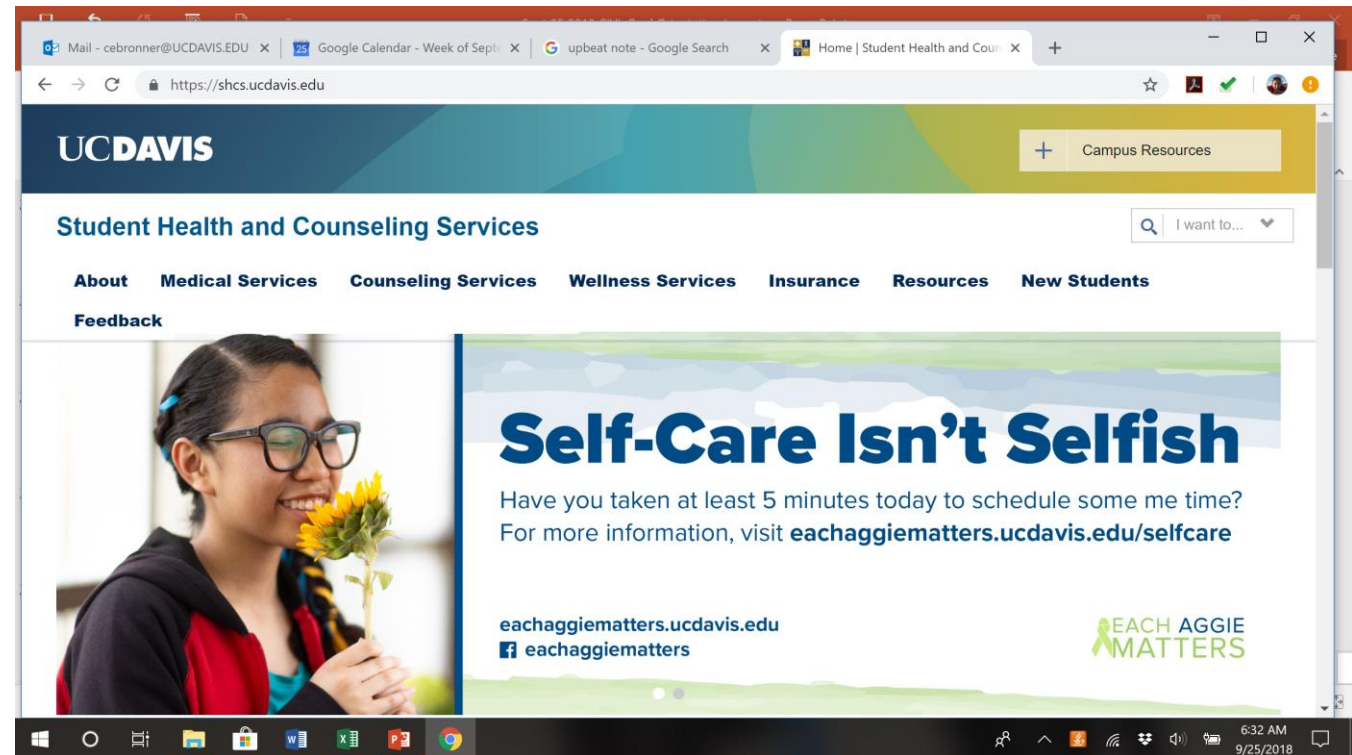
Other graduate students

Faculty

University counseling centers and support groups

Professional organizations

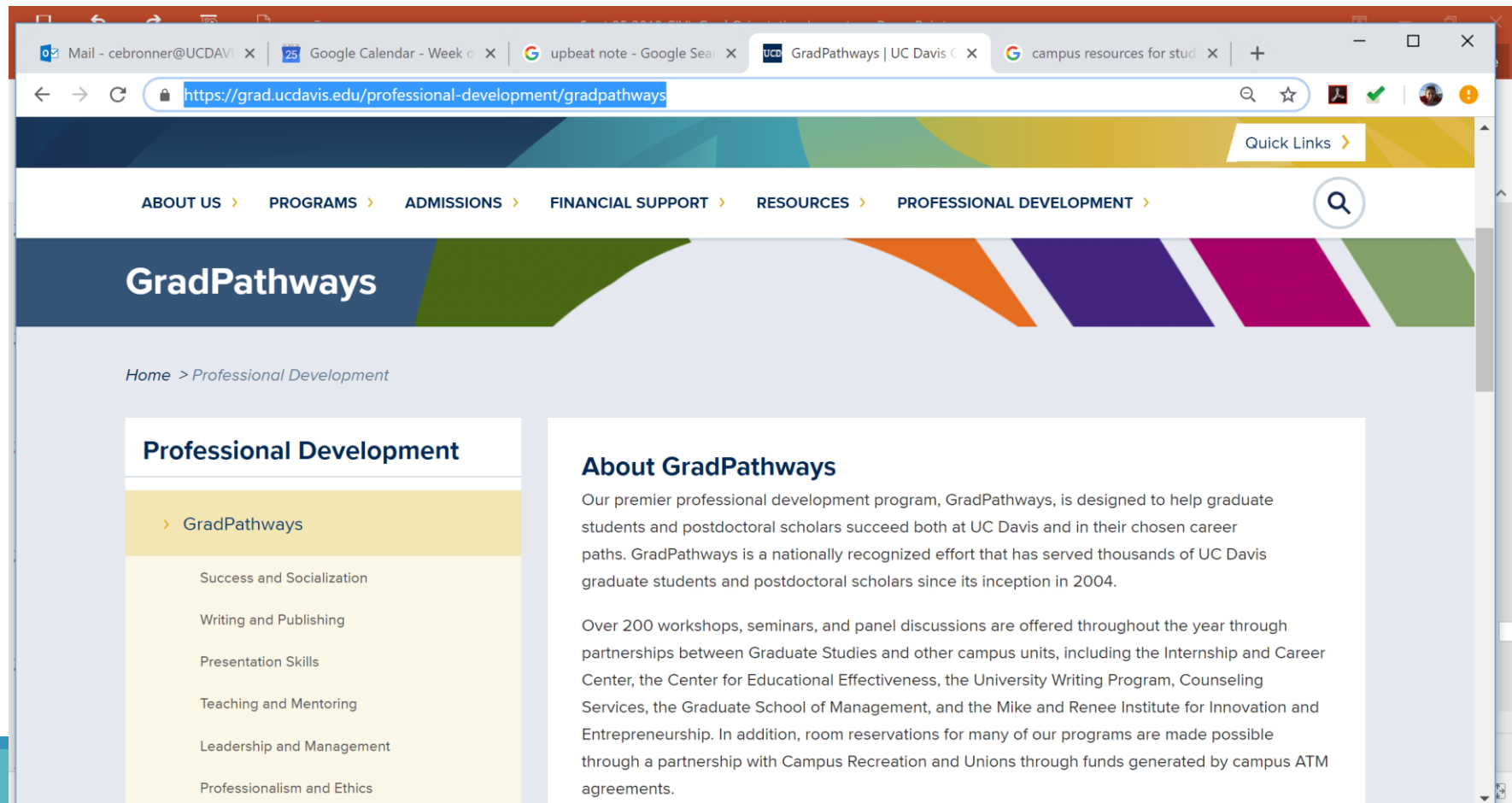
External Resources



<https://shcs.ucdavis.edu/>

Resources: Grad Pathways

<https://grad.ucdavis.edu/professional-development/gradpathways>



The screenshot displays the GradPathways website interface. At the top, a browser window shows the URL <https://grad.ucdavis.edu/professional-development/gradpathways>. The website features a navigation bar with the following menu items: ABOUT US >, PROGRAMS >, ADMISSIONS >, FINANCIAL SUPPORT >, RESOURCES >, and PROFESSIONAL DEVELOPMENT >. A search icon is located to the right of the navigation bar. Below the navigation bar is a large banner with the text "GradPathways" and a colorful geometric pattern. The main content area includes a breadcrumb trail: Home > Professional Development. On the left, a sidebar titled "Professional Development" lists several options: GradPathways (highlighted), Success and Socialization, Writing and Publishing, Presentation Skills, Teaching and Mentoring, Leadership and Management, and Professionalism and Ethics. The main content area features a section titled "About GradPathways" with the following text: "Our premier professional development program, GradPathways, is designed to help graduate students and postdoctoral scholars succeed both at UC Davis and in their chosen career paths. GradPathways is a nationally recognized effort that has served thousands of UC Davis graduate students and postdoctoral scholars since its inception in 2004." Below this, it states: "Over 200 workshops, seminars, and panel discussions are offered throughout the year through partnerships between Graduate Studies and other campus units, including the Internship and Career Center, the Center for Educational Effectiveness, the University Writing Program, Counseling Services, the Graduate School of Management, and the Mike and Renee Institute for Innovation and Entrepreneurship. In addition, room reservations for many of our programs are made possible through a partnership with Campus Recreation and Unions through funds generated by campus ATM agreements."

Student Support Centers on Campus

Center for Chicanx and Latinx Academic Student Success - <https://cclass.ucdavis.edu/>

Center for African Diaspora Student Success - <https://cadss.ucdavis.edu/>

Center for Advocacy, Resources, and Education (CARE) - <https://care.ucdavis.edu/>

Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual + Resource Center - <https://lgbtqia.ucdavis.edu/>

Student Disability Center - <https://sdc.ucdavis.edu/>

Veterans Success Center - <https://opportunity.ucdavis.edu/centers/vsc>

Women's Resource and Research Center - <http://wrrc.ucdavis.edu/>

Student Organizations at UC Davis

American Water Works Association (BBQ on Friday) - <http://awwaucdavis.weebly.com/>

Black Engineers Association (associated with NSBE) - <http://beaucdnsbe.weebly.com/>

Chicano and Latino Engineers and Scientists Society (associated with SHPE) - <http://caless.engineering.ucdavis.edu/>

Engineers Without Borders - <https://ewbucd.weebly.com/>

Geotechnical Graduate Student Society - <https://cee.engr.ucdavis.edu/ggss/>

Graduate Student Association

oSTEM - <https://www.facebook.com/ostematucdavis/>

Society of Women Engineers - <http://sweucd.org/>

Others...

Other Campus Resources

For Students

Alcohol & Drug Abuse Prevention & Treatment (ADAPT)	530.752.6334
Cal Aggie Escort Services (Night Services)	530.752.1727
Campus Violence Prevention Program (CVPP)	530.752.3299
Cross Cultural Center	530.752.4287
Educational Opportunity Program (EOP)	530.752.9711
The House: Peer-to-Peer Counseling Services	530.752.2790
Lesbian, Gay, Bisexual, Transgender Resource Center	530.752.2452
Sexual Harassment Anonymous Call Line	530.752.2255
Student Disability Center	530.752.3184
Student Health and Wellness Center (SHWC)	530.752.2349
Transfer, Reentry, Veterans Center:	Transfer - 530.752.2200
	Veterans - 530.752.2020
Women's Resources & Research Center (WRRC)	530.752.3372

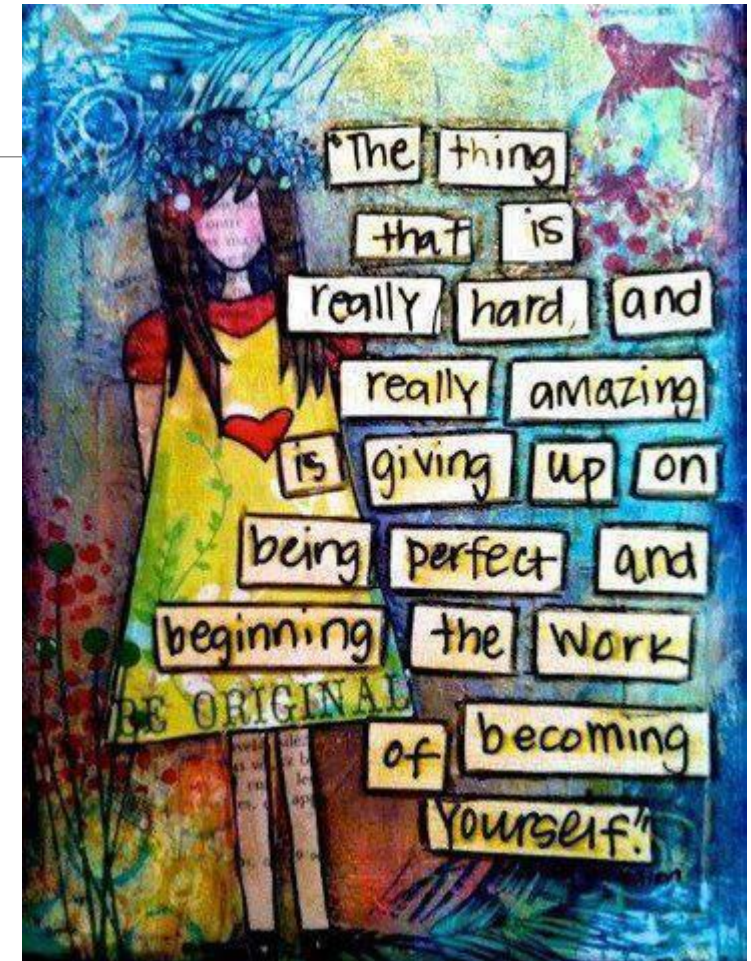
Failure is OK, just Fail Forward

Learn more from failures than successes

Remember that a project failing doesn't indicate that you are a failure.

Restarting/rebooting is OK

Perfect is boring



Quote by Anna Quindlen;
Image from "A Mighty Girl"

Some Words of Wisdom from Marianne Williamson

It is our light, not our darkness that frightens us.

We ask ourselves, who am I to be brilliant, gorgeous, talented, and fabulous?

Actually, who are you not to be?

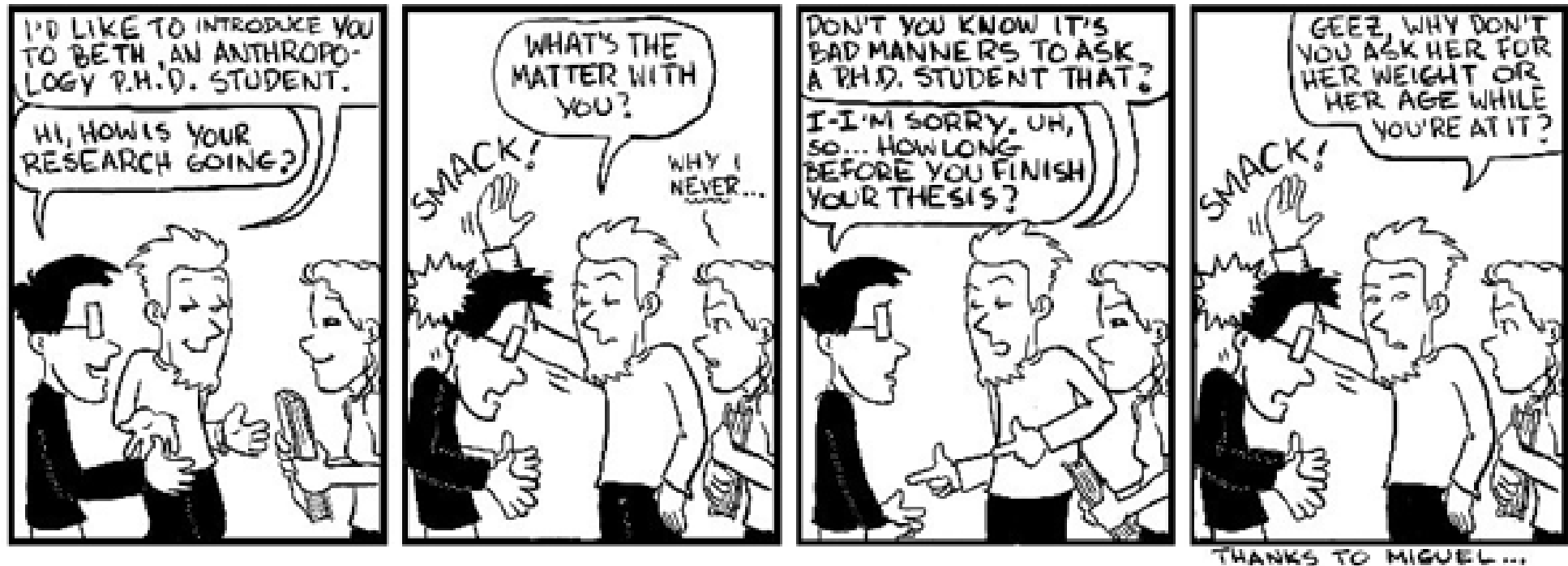
Your playing small doesn't serve the world.

There is nothing enlightened about shrinking so that other people won't feel insecure around you...

As we let our light shine, we unconsciously give other people permission to do the same.

As we are liberated from our own fear, our presence automatically liberates others.

Remember Proper Etiquette



JORGE CHAM ©THE STANFORD DAILY

Articles of Interest

<http://www.sciencemag.org/careers/2008/02/no-youre-not-impostor>

<http://www4.ncsu.edu/unity/lockers/users/f/felder/public/Columns/Impostor.html>

1978: http://paulineroseclance.com/pdf/ip_high_achieving_women.pdf

<http://paulineroseclance.com/pdf/-Langford.pdf>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5594221/>

https://www.researchgate.net/profile/Jasmine_Vergauwe/publication/270879652_Fear_of_Being_Exposed_The_Trait-Relatedness_of_the_Impostor_Phenomenon_and_its_Relevance_in_the_Work_Context/links/54b901440cf269d8cbf72974.pdf