A Few Notes on Achieving and Maintaining Mental Wellness as a Stanford PhD Candidate

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The 5 to 8 years students spend in graduate school can be extremely challenging on their mental health. Approximately one-third of Ph.D. students are at risk of developing psychiatric disorders, such as depression, and one in two experience psychological distress [1]. At one top-3 engineering school, 47 percent of Ph.D. students qualify as depressed, and 10 percent of graduate students have contemplated suicide [2].

It's concerning that, beyond my own wellness and development challenges, it appears we provide inadequate support for the development of not just highly intelligent but also mentally healthy individuals, even at our top institutions.

This living document is a compilation of some of my thoughts on the matter. I've had so many excellent conversations around the topic, especially with Nora Brackbill, who is working on a Stanford d.school project around resilience with her collaborator Vivian Feig. Themes start to emerge which are worth writing down. Since it's fairly informal, I ask forgiveness in advance for playing fast and loose with citations.

These notes are personal. They're my sometimes-haphazard attempt to navigate the morass of noncognitive challenges in graduate school using the tools of my trade: scientific inquiry, design thinking, and engineering. They're strongly influenced by my subjective experience. I don't claim to be an expert, have insight beyond my own challenges, or even have original ideas. I write this in the hope that, in the off chance that these ideas help someone else, my efforts might save someone from unnecessary pain and trauma.

A note on mindset: I want to clearly state my attitude towards graduate school. I am not proposing that graduate school is broken and we need to fix it. I'm not interested in playing a blame game. Graduate school is very difficult, we're attempting to push beyond the limits of human understanding and that's not *easy.* We don't go to grad school because it's easy but because it's hard. My mindset is this: we should teach and support our graduate students in learning how to build mental resilience in the face of challenges.

A note on the reading lists: I've included lists of books. Each of these authors also have talks, courses, podcast appearances, and many excellent collaborators. I encourage the reader to also use these reading lists as the proverbial breadcrumbs to follow into the authors' various areas of expertise!

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Areas of Study that Can Help

Mental wellness is a hot topic. I'll make a very handwavey statement and claim that the first ~100 years of psychology tended to treat mental wellbeing using a disease model: you were either mentally ill or well. Lots of great work happened in this era, but it sucks on so many levels to go through the process of becoming unwell and having to claw your way back to health.

In the late 90s, Psychology started to shift towards a wellness rather than disease model, although some fringe psychologists have been pushing wellness since the late 60s. Now, in 2018, we're getting to the point where mass public discussion around mental wellness gives us the opportunity to put some of these great ideas into practice.

This mental wellness movement is quite similar to the physical fitness movement! These days, people will go so far as to shame each other into going to the gym. Perhaps soon we will also be pushing each other to go to practice our mental wellness.

Here are some areas I've found helpful and insightful in mental wellness.

Positive Psychology

Positive psychology is the academic endeavour of understanding mental wellness. It's rooted in psychology, and concerns itself with "optimal performance". From what I can tell as an outsider, the field investigates the conditions and processes that lead to optimal performance and maximal happiness.

Some of positive psychology has entered the mainstream. You might have heard of the concept of "flow" and "flowstate", or what us Californians call "being in the zone", originally named by Mihály Csíkszentmihályi in 1975. It's a giant field of study, encapsulating many of the other categories. Before I start misrepresenting ideas, I'll stop and leave further investigation to the reader.

Reading List:

- Flow: The Psychology of Optimal Experience, by Csikszentmihalyi
- Drive: The Surprising Truth About What Motivates Us, by Pink

- Talent is Overrated: What Really Separates World-Class Performers from Everybody Else, by Colvin
- How To Stay Sane, by Perry

Sports Psychology

Sports psychology helps athletes to "keep their head in the game". It's common for top athletes and sports teams to employ sports psychologists. These individuals are the ones that turns up and go "Hey buddy, seems like you kinda lost focus after you fumbled in the second round. Let's talk about techniques to recover from failure and regain focus". This example is one of many roles a sports psychologist take on in helping athletes achieve optimal performance. Here's an anecdote: Michael Jordan, Kobe Bryant and Shaq all have extensive and ongoing training from sports psychologists, including rigorous meditation courses. Michael Jordan credits his sports psychologist George Mumford with transforming his on-court leadership [3].

Could we have a "sports psychologist" for a research lab? The cost might be prohibitive, but could we infuse some of these ideas into the graduate program?

George Mumford and the Lucid iOS App

The aforementioned George Mumford, and Graham Betchart, built an iOS app to train athletes in sports psychology. The app consists of daily ~5 minute audio-led exercise similar to mindfulness meditation, and on-demand audio pep talks. Although grad students are not the target market, I've found their work applicable to doing research.

Reading List:

- The Mindful Athlete, by Mumford
- The Inner Game of Tennis, by Gallwey
- The Score Takes Care Of Itself, by Walsh

Mindfulness and Meditation

Turns out those Buddhist monks sitting in monasteries staring at the wall for months were onto something! Eastern spiritual teachers have developed the act of meditation and the mindset of mindfulness - paying attention moment to moment, on purpose and in the present moment, nonjudgmentally [4]. Western science, particularly neuroscience, is proving these methods using rigorous studies and developing protocols to increase our mental wellness.

I've found meditation incredibly powerful. The act itself forms a cornerstone of my own mental wellness, and the area of study has introduced me to worthwhile perspectives and communities. No longer a niche idea of hippies and gurus from the 60s, the benefits of meditation is on strong scientific footing. There are many highly qualified scientists investigating this exciting area. I personally find Prof. Richard J. Davidson an eloquent speaker and high caliber scientist - he has almost 100,000 citations, with his most-cited paper demonstrating how mindfulness meditation alters the immune system and brain. [5]

Jon Kabat-Zinn and the Mindfulness Based Stress Reduction @ Stanford

Mindfulness Based Stress Reduction or MBSR is an 8-week course in meditation. This odd-sounding course was pioneered by Prof. Jon Kabat-Zinn in the late 1970s at the University of Massachusetts Medical Center. The name obfuscates the fact that Kabat-Zinn built a medical and scientific protocol around Buddhist meditation.

Here's a cute way Dan Harris describes his insight in creating this course. We know the placebo effect can be very powerful. Simply the *idea* of getting a cure can actually make someone healthier. Jon Kabat-Zinn built one of the first protocols to harness this power. Furthermore, building a protocol around meditation allowed scientists to start performing rigorous, large-scale, repeatable trials on meditators. It's reasonable to claim that the MBSR program is responsible for starting the scientific inquiry into meditation.

To Stanford's credit, there's a massive "BeWell" initiative happening on campus. As part of this effort, Stanford offers a Mindfulness Based Stress Reduction course. The course at Stanford teaches students a daily 45-minute meditation exercise. The course also provides a community of meditators and leads students through exercises in a classroom setting. All medical school residents at Stanford now take some form of MBSR training. I recommend this course for all graduate students.

Windhover Contemplative Center @ Stanford
In 2014, Windhover opened on campus. This center is a place for meditation, contemplation, silent yoga and community events around mental wellness. I've spent many many hours meditating at Windhover. It's a beautiful space and worth utilizing. https://windhover.stanford.edu/

Headspace app
Former Monk Andy Puddicombe and his team at Headspace have built a phenomenal iOS guided meditation app. It contains 10 minute mental exercises on a large variety of topics with beautifully animated explanations of meditation techniques. I use it every morning. I particularly enjoy their daily streak counter, which motivates me to meditate on days I otherwise would skip.

10% Happier Podcast
ABC News Anchor Dan Harris runs a superb podcast, 10% Happier. He interviews the who's-who of the mental wellness and meditation world. I discovere many of the authors and ideas in this document through his podcast. You can also use his podcast as a list of key players in the field and explore from there.

Reading list:

- Full Catastrophe Living, Jon Kabat-Zinn
- Altered Traits: Science Reveals How Meditation Changes your Mind, Brain, and Body. Daniel Goleman and Richard J Davidson
- The Science of Enlightenment, Shinzen Young
- Seeking the Heart of Wisdom, by Goldstein and Kornfield
- Going to pieces without falling apart, by Epstein
- 10% Happier by Harris
- Meditation for Fidgety Skeptics by Harris
- The Headspace Guide to Meditation and Mindfulness by Puddicombe

Talk Therapy and Building A Relationship with a Counselor or Therapist

Psychologists, Therapists and Counselors can provide multiple building blocks for wellness. These include, amongst others:

- Some life coaching
- Some guided introspection towards self-understanding and self-awareness
- Some emotional support

- Some grounding through routine and weekly regularity
- Some scaffolding

In some ways, simply the act of actively talking about achieving and maintaining mental wellness helps students build resilience and a lifestyle that supports them. I value the long term relationship I've built with a therapist. My therapist, being in the Stanford Healthnet network, has many undergraduate and graduate student clients, so provides useful grounding in the graduate experience ("it's not just you" from an authority on the matter is a surprisingly powerful statement in addressing difficult emotions!).

The long term relationship we build with a therapist seems crucially important. We tend to fall into the same mental traps over and over again. It doesn't help much to have a single intervention - mental wellness doesn't improve monotonically! The power of therapy comes from the repeated reminders and reassurances when we start moving in a mentally unwell direction.

Stanford offers the Counseling and Psychological Services program through Vaden Health Center. A minor issue is the stigma connected to using CAPS, which I think is dissipating. A major issue is that CAPS seems to work on a disease model of wellness, with brief interventions and limited-run sessions for students experiencing acute difficulties. Fortunately CAPS will refer you to outside counseling (if you insist that you'd like to build a long term relationship with a therapist). Stanford's mental health coverage is excellent - 90% of cost in-network - no doubt the result of hard work by students including Stanford' mental health focused student organizations.

Finding and Matching with a Therapist

Finding a therapist you're compatible with can be a bit like dating. There's a few dimensions along which you want to be compatible. And you also need to have a little faith and put in the work to build a relationship. Here's a few of the dimensions you should consider: (1) What type of therapist do you need, (2) Does your therapist match your internal image of who you want, (3) Do you two have a comfortable rapport?

(1) Identifying the Type of Therapist you Need

Therapists specialize in different areas. It's important to find a therapist who specializes in the area you can use help in. Here's a few examples:

- If you've going through a breakup, or your parents are going through a divorce, you can likely benefit from someone who specializes in grief and loss.
- If you're struggling with continual negative or destructive thought patterns, you might benefit from a cognitive behavioral therapist.
- If you're struggling with addictions or eating disorders, again, people who specialize in this can help.

Emotional Intelligence and Nonviolent Communication

Graduate school involves a lot of communication and collaboration. I definitely underestimated the importance of high quality communication - verbally with peers and in writing with the broader community. The stereotype of the academic as a socially-awkward and non-communicative nerd is completely wrong. Great graduate students tend to be great communicators, and tend to manage collaboration and conflicts well. We will do well to support developing these skills in all graduate students.

We can look towards the area of Emotional Intelligence for insights. Emotional Intelligence, or EQ, studies how to handle interpersonal relationships judiciously and empathetically. Nonviolent communication, often called NVC, is a specific strategy and set of techniques for managing emotionally challenging communication.

Reading List:

- Emotional Intelligence, Daniel Goleman
- Emotional Intelligence 2.0, Travis Bradberry & Jean Greaves
- Nonviolent Communication, Rosenberg.
- Crucial Conversations, Patterson, Grenn, McMillian, Switzler

Substance Use, Addiction and Habit Formation

Substance use is rife in graduate school (possibly a continuation and intensification of substance abuse in undergraduate life). I have less to say about the specifics of these communities and areas of study, but I believe there's useful understanding here. Specifically, what strategies do substance abuse experts use to support our friends that have built damaging relationships with substances.

For example, building community is a well-known strategy that provides support and an outlet for the emotions that drive some of us to substance use.

Podcast: Alex Wood Quits Everything
I love this podcast. So many great stories from people overcoming addiction.

Why is Grad School Challenging: Noncognitive Factors

Noncognitive factors are "soft skills" - those personal strategies and tactics that enable you to interact effectively and harmoniously with people. I hypothesize that it is the noncognitive factors that make graduate school a challenging place to stay mentally healthy.

Here's a partial, quick and dirty list of noncognitive challenges I think we experience in graduate school:

Isolation
Grad school can be lonely and isolating work. Just see PhD Comics and the Lego Grad Student.

Lack of coaching
It's a cliche in the graduate world that the first place to assign blame is the graduate student's advisor. This is, of course, false. That being said, graduate school expects a professor to play the role of mentor, advisor and coach. As a mentor, professors must respond to your questions around completing the PhD. As an advisor, they must be a resource and guide in the subject matter you're studying. As a coach, they must be an expert in the processes of graduate school and work with you to achieve success. Playing all these roles well (and all the many other roles expected of professors) doesn't always happen. I've observed that the role of coach is often the weakest, at least in engineering.

Lack of management

The startup and business world around Stanford provides an interesting counterpoint. Good companies tend to have structures in place to empower employees when they start becoming discontent. This takes the form of good management: people who are paid to check in on your progress and passions and help you work in areas and with people where you can do well. Of course, corporations have many many shortcomings as well, but there are systems for raising non-cognitive concerns.

Here's an anecdote. I felt mismatched in my first role out of graduate school. I mentioned this to my boss. He quickly responded with helping me create a few more options. Within a week, the VP of Engineering and the CTO sat down with me and talked me through options, empowered me to make a decision, and facilitated the transition to a new role. Graduate school tends to have fewer resources dedicated to these concerns.

General support of weirdness
Graduate school supports people behaving in extraordinary ways. Like the arts, it gives license to people to be creative, understanding that this sometimes looks like abnormal behavior. This is one of the best aspects of grad school. But it can mask factors that hurt our mental wellness.

Very wide spread of mental strength
Grad school includes fresh-out-of-undergraduate teen prodigies, through battle-hardened professionals returning to science. I think this spread in itself is a great thing for mental wellness, but it raises challenges for a one-size-fits-all mental wellness system.

And others…!

References

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