# **Penn Positive Psychology Center Annual Report**

June 30, 2021

Martin Seligman, Director Peter Schulman, Executive Director

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This is a report on the activities of the Positive Psychology Center (PPC). The PPC was officially created November 7, 2003 and is thriving intellectually and financially. It is a leading center in the world for research, education, application and the dissemination of Positive Psychology. It is widely recognized in both the scholar community and public press. The PPC is financially selfsustaining and contributes substantial overhead to Penn.

The mission of the PPC is to promote empirical research, education, training, applications, and the dissemination of Positive Psychology. Positive Psychology is the scientific study of the strengths that enable individuals and communities to thrive. This field is founded on the belief that people want to lead meaningful and fulfilling lives, to cultivate what is best within themselves, and to enhance their experiences of love, work, and play.

#### SIGNIFICANT ACCOMPLISHMENTS

## Adapting to Remote Activities and the Pandemic:

Our Center effectively adapted to remote activities and the pandemic in at least four notable ways. (1) We offered a variety of practical pandemic resources to Penn, to our sponsors, and to the nation. (2) We adapted our Master of Applied Positive Psychology program (MAPP) for a virtual environment, with positive results. (3) We quickly transitioned our revenue-generating Penn Resilience Program to virtual delivery. We modified our instructional design, curricula, and program delivery for a virtual environment. Our sponsors and clients have been highly satisfied with the results. (4) There was a high demand from various Penn departments for our resilience training to help them cope with the challenges of the pandemic. To meet that need, we developed and delivered a series of six virtual resilience workshops to more than 600 Penn staff, faculty, and students.

There are more details on each of these activities in the following pages.

### **New Grants:**

We received seven new grants:

• The Primals Project: Seeding Catalytic Investigations in Psychology, February 2021 to July 2024, Templeton Religion Trust (PI Seligman, Co-PI Clifton).

Primal world beliefs (primals) concern the general character of the world as a whole, e.g., the world is dangerous, the world is beautiful, etc. Clifton and colleagues (2019) recently introduced this largely overlooked category of beliefs in a foundational paper and identified several areas for further research, which this grant is exploring. Primals are thought to influence numerous psychological outcomes, such as life satisfaction, depression, trust, gratitude, optimism, and political ideology.

• Penn Resilience Program for Law Enforcement Personnel, January 2020 to March 2022 (PI Seligman), grant continuation (started 2018) from International Association of Chiefs of Police (IACP), under prime award from the U.S. **Department of Justice (DOJ).** 

The goal of this DOJ initiative is to enable law U.S. law enforcement to cope effectively with adversity and stress, build stronger community relations, and lead safe and fulfilling lives personally and professionally. This is the continuation of work started in 2018. In the first grant, we customized and delivered resilience training for law enforcement in three pilot sites, including a train-the-trainer program to teach law enforcement how to deliver the program to law enforcement personnel. The goal of this second grant is largescale and sustainable dissemination of the resilience skills more broadly to law enforcement around the U.S. Several police departments will serve as resilience training "hubs", delivering resilience training to other police departments.

• Penn Resilience Program for City of Philadelphia First Responders, July 2020 to June 2021 (PI Seligman).

We are delivering a train-the-trainer resilience program to members of the City of Philadelphia Fire Department, so they can teach the resilience skills to City of Philadelphia first responders.

The Arts and the Science of Well-Being: A Multi-Disciplinary Collaboration for Understanding, Assessing, and Cultivating Human Flourishing, August 2020 to June 2022, National Endowment for the Arts: Includes designation as an NEA Research Lab (PI Pawelski).

The purpose is to advance the understanding, assessment, and cultivation of well-being by catalyzing a transformative movement in the humanities and a sustained strategic collaboration between them and the social sciences. Activities include retreats with subject matter experts, assessment development, empirical research, a book series, a website for dissemination, and a capstone conference.

Access, Use, and Customization of AWARE Research Platform for a COVID-19 Study, May 2020 to May 2021, National Institute on Drug Abuse (NIH), (PI Ungar).

The PPC's World Well-Being Project is supporting researchers at the National Institute on Drug Abuse to collect and analyze phone sensor and survey data from hundreds or thousands of participants. Physical distancing and sheltering-in-place are creating challenges for people with substance use disorders, especially those in treatment for opioid use disorder. The goal is to better understand these challenges, particularly for minority populations, which are disproportionately affected by COVID-19.

- CAREER: Leveraging neuroscience to predict and improve science learning in early elementary school, 2021-2026, National Science Foundation (PI Mackey).
- Evaluating the impact of early cognitive enrichment on brain development, 2021-2023, William Penn Foundation (PI Mackey).

#### **Fundraising:**

• We raised significant funds from three donors in partnership with Penn's Office of Advancement, for Positive Psychology Center activities.

#### **Outreach: Pandemic Resources for Penn and Beyond:**

Positive Psychology Center (PPC) faculty and staff have provided various wellness resources to help people navigate the challenges of the COVID-19 pandemic:

• Free Online Resilience Course for Penn and the Public. Spearheaded by Dr. Karen Reivich, the PPC worked with LPS to arrange the release of Dr. Reivich's online Coursera Resilience Skills course at no charge for the public, for a one-year period, from April 6, 2020 until April 27, 2021. This highly rated and popular course is also part of the five-course specialization Foundations of Positive Psychology.

- o In the one year this free course was available, about 44,000 people enrolled and the average rating was **4.9 out of 5.0** (1,938 ratings). https://www.sas.upenn.edu/news/penn-lps-launches-resilience-coursera-course
- o Penn Medicine featured this resilience course in its April 29, 2020 announcement from the Office of the CEO for its 40,000+ employees, to help this community cope with the pandemic.
- o A message to all Penn faculty and staff on August 31, 2020 from the **Penn** Provost (Wendell Pritchett), Executive Vice President (Craig Carnaroli), Vice President for Human Resources (Jack Heuer), and Vice Provost for Faculty (Laura Perna), included a link to this online resilience course.
- Several Penn articles and newsletters have featured this online resilience course, including the April 10, 2020 Penn SAS News, April 16, 2020 Penn Today, May 4, 2020 Daily Pennsylvanian, and May 6, 2020 Graduate Student Center Weekly Newsletter. https://www.thedp.com/article/2020/05/penn-psychology-resilience-coronavirushttps://penntoday.upenn.edu/news/six-tips-stay-calm-positive-and-resilient-tryingtimes
- The PPC has offered practical wellness resources for the **Penn community**:
  - Throughout FY21, the Center's Penn Resilience Program team, under the leadership of Dr. Karen Reivich, delivered about 40 virtual workshops to more than 600 Penn faculty, staff and students through several departments, including the Senior Administrative Leadership Speaker Series (Craig Carnaroli), Penn Athletics Wharton Leadership Academy (Rudy Fuller), Penn Provost Centers (Ufuoma Pela), Human Resources Work-Life Program (Karen Kille), Human Resources staff (Jack Heuer), Penn Development and Alumni Relations (Gretchen Ekeland), Penn Graduate School of Education (Emma Grigore), Penn Division of Public Safety (Maureen Rush), and Penn Law School (John Hollway).
  - o In the spring of 2020, Dr. Seligman offered a four-session, virtual, live, interactive course on "Hope and Resilience" for 20 Penn undergraduates. The students rated the course as very educational and useful. The students had direct (virtual) contact with Dr. Seligman.
  - o In the March 13, 2020 Penn Today, Dr. Martin Seligman presented a practical exercise for handling pandemic uncertainty. https://penntoday.upenn.edu/news/tips-to-help-stay-calm-amid-coronavirus-COVID19-uncertainty

- On May 19, 2020, Dr. Martin Seligman and Dr. Aaron Beck had a fireside video chat "Revelations and Tools for Uncertain Times," hosted by the Penn Master of Applied Positive Psychology Alumni Association. https://www.mappmagazine.com/articles/lunch-with-psychology-giants-beck-andseligman-revelations-and-tools-for-uncertain-times To watch the full video: https://www.youtube.com/watch?v=jk-uPg1rJmI&t=3s
- On July 15, 2020, Dr. Karen Reivich delivered an interactive, virtual presentation on the Penn Resilience Program for about 100 Penn senior administrative leadership for the speaker series sponsored by Penn Executive Vice President Craig Carnaroli.
- o On June 3, 2021, Dr. Karen Reivich gave a one-hour virtual presentation for Penn Alumni on "Developing Resilience: Surviving to Thriving".
- o In the fall of 2020, Dr. Karen Reivich was featured in the SAS In These Times Podcast (Season 1, Episode 6): Beyond the COVID-19 Crisis: Recovery. https://web.sas.upenn.edu/in-these-times/beyond-the-covid-19-crisis/
- In the December 9, 2020 Penn Today, Drs. Karen Reivich and James Pawelski were featured in the article "Four strategies to find joy in a very different holiday season: Experts from Penn's Positive Psychology Center suggest tweaking traditions, acknowledging the situation's highs and lows, and seeking help from people in your life." https://penntoday.upenn.edu/news/Penn-Positive-Psychology-experts-offer-four-strategies-find-joy-holiday-season
- In July 2020, Dr. Karen Reivich and the Positive Psychology Center produced a video, "Resilience: Strategies of Optimistic Thinking" for Penn's Division of Public Safety". https://vimeo.com/438684773/afb52085a7
- On April 7, 2021, Dr. Karen Reivich and Charles "Chaz" Howard led a virtual discussion on Building the Pillars of a Purposeful Life for the Penn community, sponsored by the Wharton Wellness Speaker Series. https://groups.wharton.upenn.edu/WWB/rsvp\_boot?id=110852
- In the April 16, 2020 Penn Today, Dr. James Pawelski and Dr. Karen Reivich offered practical tips to stay resilient in the pandemic in the article "Six tips to stay calm, positive, and resilient in trying times". https://penntoday.upenn.edu/news/six-tips-stay-calm-positive-and-resilient-tryingtimes
- o For Penn's Alumni Weekend (May 16, 2020), Dr. Angela Duckworth discussed grit and resilience in the time of COVID-19. The recorded video is available: https://www.facebook.com/watch/live/?v=227753268524096&ref=watch\_permalink
- The February 19, 2021 Penn Today featured Dr. Karen Reivich in "Finding beauty in everything, through a camera lens: Karen Reivich of Penn's Positive Psychology Center turned to photography to reconnect to herself during the

- pandemic. It helped her discover a new way of seeing the world." https://penntoday.upenn.edu/news/Penn-positive-psychologist-finds-beautyeverywhere-through-camera-lens
- o On May 26, 2021, Dr. Michael Baime, director of the Penn Program for Mindfulness, delivered a free virtual workshop on mindfulness meditation and managing emotions for the Penn community. This was sponsored by Penn's Division of Human Resources for Mental Health Awareness Month. https://penntoday.upenn.edu/events/minding-your-emotions
- o Dr. Karen Reivich gave a virtual, interactive presentation to the Penn women's softball team on "Optimism", January 29, 2021.
- o Dr. Karen Reivich gave a virtual, interactive presentation to the Penn field hockey team on "Optimism in a Time of Uncertainty," April 24, 2020.
- PPC faculty have been featured in **national media**, providing wellness advice for navigating the pandemic.
  - o In January 2021, Dr. Martin Seligman was featured in the American Psychological Association (APA) Speaking of Psychology Podcast: Positive Psychology in a Pandemic with Martin Seligman. https://www.apa.org/research/action/speaking-of-psychology/positive-psychology
  - o Dr. Karen Reivich was interviewed by the **New York Times** for a special series on cultivating resilience during the pandemic, released June 15, 2020. https://www.nytimes.com/2020/06/15/health/resilience-trauma-emdrtreatment.html?referringSource=articleShare
  - o Dr. Angela Duckworth was featured on the May 21, 2020 CNN Global Town Hall: Coronavirus Facts and Fears, hosted by Anderson Cooper and Dr. Sanjay https://www.cnn.com/videos/health/2020/05/22/entire-may-21-coronavirus-townhall-part-6-sot-vpx.cnn
  - o Drs. Angela Duckworth, Lyle Ungar, and Ezekiel Emanuel wrote an article for the **New York Times** that appeared May 27, 2020, "There are 3 Things We Have to Do to Get People Wearing Masks: Persuasion works better than compulsion. https://www.nytimes.com/2020/05/27/opinion/coronavirus-masks.html
  - o On December 21, 2020, Drs. Karen Reivich and James Pawelski were interviewed by Wisconsin Public Radio in the article "How to find joy this holiday season: How to find happiness and stay resilient in the face of a still-new reality during this unique holiday season". https://www.wpr.org/finding-joy-holiday-season
  - o On October 27, 2020, Dr. Karen Reivich was featured in the CPA Conversations Podcast: Stand Up to Societal Challenges by Bolstering Your Resilience.

## https://soundcloud.com/cpaconversations/stand-up-to-societal

- o On August 24, 2020, Dr. Karen Reivich was interviewed by HerMoney.com for the article "Five Lessons COVID-19 Has Taught Us About Resilience". https://hermoney.com/connect/love/5-lessons-covid-19-has-taught-us-aboutresilience/
- Dr. James Pawelski co-hosted with Larry King a "Coping with COVID" interview series with leading researchers and practitioners on the science of well-being, cosponsored by the International Positive Psychology Association. https://www.ippanetwork.org/2020/04/21/pvcwc/?fbclid=IwAR2IJ1d YnTXwgo EmONgV3GuXABhRx958a5gHewnGvtF4N6AWiUBAiY3zJA https://www.positivevoices.com/copingwithcovid/
- In a video series co-hosted by Dr. James Pawelski and Larry King, they interviewed researchers about coping during the pandemic. In a June 11, 2020 event, they spoke with actor Kevin Bacon about philanthropy, arts and culture's role in well-being, and the importance of open dialogue. https://penntoday.upenn.edu/news/talking-positive-psychology-COVID19-Larry-King-James-Pawelski https://www.92y.org/class/art-of-positive-conversation.aspx
- o The PPC's big data World Well Being Project created a real-time COVID-19 wellness map. This map is a free, interactive tool that displays well-being in the U.S. by county, based on Census data and billions of tweets. https://penntoday.upenn.edu/news/language-tweets-offers-insight-communitylevel-well-being-COVID-map https://map.wwbp.org/

#### **New Course:**

- In the spring of 2021, Dr. James Pawelski taught a new course for 61 first-year undergraduates, with Dr. Justin McDaniel. This is an Integrated Studies Program (ISP) course called INTG002: Happiness and Despair. This course explores: What is happiness? What is despair? What does it mean for life to go well? How can happiness and despair be more under our control? Researchers in the field of Positive Psychology use a variety of scientific methods to study aspects of well-being such as positive emotions, satisfaction with life, strengths and virtue, and meaning and purpose. Religion offers older answers to these questions. Divine revelations, religious laws, and spiritual practices have traditionally established the criteria for a life well lived. Do science and religion agree on what it means to live life well? The most important question is how each of us will apply what we learn about happiness and despair, and about religious and scientific approaches to life in our own quest to live life well.
- In the spring of 2020, Dr. Angela Duckworth offered a new course for undergraduates, called Grit Lab: Fostering Passion and Perseverance. Her course, part of the SNF Paideia Program, teaches Penn undergrads how to develop more passion and perseverance for long-term goals.

## https://penntoday.upenn.edu/news/lesson-grit-angela-duckworth

The aim of Grit Lab is three-fold: (1) to help students identify their next step in life, (2) equip them with generalizable knowledge about the science of passion and perseverance, and (3) help other young people learn via written and video documentation of the students' journey. At the heart of this course were cutting-edge scientific discoveries about how to foster passion and perseverance for long-term goals.

# Online Certificate through LPS: Applied Positive Psychology (APOP):

The Applied Positive Psychology (APOP) certificate launched in January 2019 with support from the Positive Psychology Center, as a part of Penn's College of Liberal and Professional Studies (LPS) online Bachelor of Applied Arts and Sciences (BAAS). This online, accredited degree offers a variety of degree concentrations and certificate "clusters" that are designed to meet the needs of working adults and non-traditional students who wish to pursue a liberal arts education with career enhancement in mind.

The APOP four-course certificate launched with its first courses in Spring 2019 and total course enrollments to date are 697. There is also a six-course "Level 2" certificate. The six courses are:

- 100: Introduction to Positive Psychology
- 120: Human Flourishing: Strengths and Resilience
- 200: Positive Psychology at Work
- 220: Flourishing with Others: Building Thriving Relationships
- 290: Understanding the Science of Positive Psychology
- 320: Morality and the Good Life

APOP develops tools and practices to enhance human flourishing. Students are introduced to the field of Positive Psychology and learn practical strategies that support personal, organizational, and community well-being. The courses teach the theoretical and empirical foundations of human flourishing, how well-being is measured, and what activities increase human flourishing in various contexts and settings.

# **Online Certificate on Coursera: Foundations of Positive Psychology:**

Under the leadership of Dr. Martin Seligman, the Positive Psychology Center and the College of Liberal and Professional Studies produced a five-course online specialization on the Coursera platform called Foundations of Positive Psychology, which launched March 2017. Students learn about the theories, research, and applications of Positive Psychology.

The five courses are taught by Positive Psychology Center personnel, including:

- Positive Psychology: Martin Seligman's Visionary Science, taught by Dr. Seligman.
  - o Total Learners as of May 10, 2021: 69,051.
  - $\circ$  Student rating = 4.9 out of 5.0 (4,329 ratings).

- Positive Psychology: Resilience Skills, taught by Dr. Karen Reivich.
  - o Total Learners as of May 10, 2021: 51,828.
  - $\circ$  Student rating = 4.9 out of 5.0 (1,616 ratings).
- Positive Psychology: Applications and Interventions, taught by Dr. James Pawelski.
  - o Total Learners as of May 10, 2021: 29,995.
  - $\circ$  Student rating = 4.8 out of 5.0 (1,655 ratings).
- Positive Psychology: Character, Grit, and Research Methods, taught by Dr. Angela Duckworth.
  - o Total Learners as of May 10, 2021: 18,393.
  - $\circ$  Student rating = 4.3 out of 5.0 (943 ratings).
- Positive Psychology Specialization Project: Design Your Life for Well-Being, taught by Dr. Martin Seligman.
  - o Total Learners as of May 10, 2021: 16,361.
  - $\circ$  Student rating = 4.8 out of 5.0 (613 ratings).

#### Awards:

- On September 2, 2020, Dr. Allyson Mackey was named a Global Scholar in the CIFAR Azrieli Global Scholars Program. This program supports outstanding earlycareer researchers through mentorship, a global network, professional skills development, and funds for research support for two years. Thirteen early-career researchers with exceptional leadership potential joined four CIFAR research programs. Dr. Mackey joined the Child and Brain Development Program. https://www.cifar.ca/cifarnews/2020/08/12/meet-the-2020-2022-cohort-of-cifar-azrieliglobal-scholars
- In March 2021, Dr. Allyson Mackey received a National Science Foundation Career award for her work combining approaches in neuroscience, psychology, and education to predict and improve science learning in early elementary school students. Mackey's work focuses on understanding how early experiences shape the brain and how brain development supports learning, with the aim of developing strategies for improved learning in STEM (Science, Technology, Engineering, and Math). https://www.sas.upenn.edu/news/allyson-mackey-receives-nsf-award-study-earlyscience-learning
  - o Dr. Mackey's research was featured in the January 28, 2021 Penn Today: "Children persist less when parents take over: According to research from Penn psychologists, kids ages 4 to 7 persevere longer when allowed to struggle through a challenging activity than if a grown-up steps in." https://penntoday.upenn.edu/news/children-persist-less-when-parents-take-over
- Leona Brandwene was a recipient of the 2021 award for Distinguished Teaching in Professional Graduate Programs in the School of Arts and Sciences. https://www.college.upenn.edu/teaching-awards
- Penn President Amy Gutmann, Wharton Dean Geoffrey Garrett, and Penn Arts & Sciences Dean Steven J. Fluharty announced the establishment of the Rosa Lee and Egbert Chang Professorship at the University of Pennsylvania, generously funded by

Nancy Yang, W'92 in honor of her parents. Professor Angela Duckworth is the inaugural recipient, effective July 2020.

https://powerofpenn.upenn.edu/the-power-of-

resiliency/?utm source=kfg&utm medium=email&utm campaign=issue 17

## **Resilience Training Contracts:**

- **Resilience Training Contracts**. Since 2007, we have delivered more than 300 Penn Resilience Programs to more than 60,000 people. Many of these programs are train-thetrainer programs in which we train people how to teach resilience skills to others, using a structured curriculum. Attendees of these programs have gone on to teach these skills to more than a million people around the world. These train-the-trainer programs are an effective model for large-scale and sustainable teaching of the resilience skills.
- Penn Resilience Program for Law Enforcement Personnel. In May 2020, under a U.S. Department of Justice grant, the International Association of Chiefs of Police (IACP) issued a supplemental award to the Penn PPC for an additional 2.25 years, due to the successful results in the first award. The goal of this second grant is a scalable and sustainable dissemination of the resilience skills more broadly to U.S. law enforcement personnel.

In 2018, the Penn PPC received the first two-year grant to customize and deliver resilience training for law enforcement in three U.S. pilot sites, including a train-thetrainer program to teach law enforcement how to deliver the program to other law enforcement. The goal of this initiative is to enable them to cope effectively with adversity and stress, build stronger community relations, and lead safe and fulfilling lives personally and professionally. The average participant satisfaction ratings have been very positive.

- **Penn Resilience Program for Health Care.** We have continued to support health care professionals, to address the growing concerns around burnout and other mental health issues facing physicians and other health care professionals, which were exacerbated during the pandemic. We have or will soon deliver resilience programs for:
  - o Royal College of Surgeons in Ireland: Leadership
  - o University of Michigan Medical School: Leadership Development Team
  - o Penn School of Medicine: Faculty and Physicians
  - Yale School of Medicine: Physicians
  - o Sentara Healthcare: Executives
  - o Children's Hospital of Philadelphia Foundation: Leadership and Staff
- New and Ongoing Resilience Training Clients. We continue to develop new clients and service existing clients, including:
  - o Corporate-sponsored community outreach:
    - Penn Resilience Programs for hemophilia patients and their caregivers, sponsored by Genentech
    - Penn Resilience Programs for Oklahoma City public school high school students, sponsored by the Oklahoma City Thunder

- Corporations:
  - Indeed
  - Oklahoma City Thunder (NBA team)
  - BAE (British Aerospace)
- Education:
  - Western Governors University
  - Oklahoma State University
  - UK public schools
- Law enforcement / Government:
  - U.S. Department of Justice
  - International Association of Chiefs of Police
  - City of Philadelphia Fire Department
  - Pennsylvania State Police
  - World Bank
- Wharton Executive Education programs:
  - Client Psychology for Certified Financial Planners
  - Client Psychology Program for Citi Global Sales Managers
  - Client Psychology Program for Merrill Lynch Financial Advisors
  - Securities Industry Institute
  - Athlete Development Professional Certification Program
- Resilience Programs for Penn Staff, Faculty, and Students. We are delighted to bring our programs to the Penn community. These programs have received positive feedback and word-of-mouth has increased demand, especially during the pandemic. During the pandemic, we delivered about 40 virtual programs to more than 600 Penn staff, faculty, and students, including:
  - o Penn Executive Vice President (Craig Carnaroli): For senior administrative leadership speaker series, July 2020.
  - o Penn Athletics Wharton Leadership Academy (PAWLA: Rudy Fuller): For Penn student-athletes in FY21.
  - o Penn Provost Centers (Ufuoma Pela): For staff in FY21.
  - o Penn Human Resources Work-Life Program (Karen Kille): Available to all faculty and staff in FY21 who sign-up.
  - o Penn Division of Human Resources (Jack Heuer): For staff in FY21.
  - o Penn Development and Alumni Relations (Gretchen Ekeland): For staff in FY21.
  - o Penn Graduate School of Education (Emma Grigore): For staff in FY21.
  - o Penn Law School (John Hollway): For law school students in FY21.
  - o Penn School of Medicine (Lisa Bellini, Deborah Driscoll). For faculty and physicians in FY18-20.
  - o Penn Professional and Liberal Education (Nora Lewis): For staff in FY19.
  - o Penn Athletics (Rudy Fuller): For coaches in FY19.
  - o Penn Athletics (Rudy Fuller): Two-semester course for student athletes in FY19.
  - o Penn Division of Human Resources (Jack Heuer): For staff in FY17-18.
  - o Penn Wharton MBA Staff (Paula Greenberg): For staff in FY17 and FY19.
  - o Penn Rodin College House (Kathryn McDonald): For undergraduate students in FY19 and FY20.
  - o Penn Division of Finance (Paul Richards): For staff in FY18.

- o Penn Wharton Computing (Scott McNulty): For Leadership and staff in FY18.
- Penn Office of Audit, Compliance, and Privacy (Greg Pellicano). For staff in FY18.
- o Penn School of Social Policy and Practice (Regine Metellus): For staff in FY18.
- Penn Business Services Division (Marie Witt): For leadership team and their staff in FY17.
- Penn Division of Public Safety (Maureen Rush): For police officers and staff in FY16
- o Online resilience course through PLE for Penn staff (click here for press coverage).
- See more resilience programs under **Training Contracts** below.

#### **Outreach Activities:**

- **Popular Websites**. The PPC has two popular websites to educate people around the world about the Positive Psychology Center and the field of Positive Psychology:
  - o <a href="https://ppc.sas.upenn.edu">https://ppc.sas.upenn.edu</a>
    - Google Analytics from May 10, 2010 to May 9, 2021:
    - **370,506** Users
      - Google's definition: "Users who have initiated at least one session during the date range."
    - 829,417 Pageviews
      - Google's definition: "Pageviews is the total number of pages viewed. Repeated views of a single page are counted."
  - o <a href="https://www.authentichappiness.sas.upenn.edu/">https://www.authentichappiness.sas.upenn.edu/</a>
    - Google Analytics from May 10, 2010 to May 9, 2021:
    - 1,077,596 Users
    - 11,852,690 Pageviews
    - **397,674** new registered users (6,207,047 since launch in 2004)
    - Heaviest usage is for the online surveys which provide feedback.

## • Presentations and Press for Penn Community:

- On June 1, 2021, Dr. Martin Seligman gave a virtual presentation on "Positive Psychology, Agency and Human Progress" for the RCSI MyHealth Series. <a href="https://www.rcsi.com/dublin/news-and-events/events/event/2021/rcsi-myhealth-positive-psychology-agency-human-progress">https://www.rcsi.com/dublin/news-and-events/events/event/2021/rcsi-myhealth-positive-psychology-agency-human-progress</a>
- o In March 2021, the Stephen A. Levin Family Dean's Forum featured Dr. Angela Duckworth and David Epstein in a virtual discussion on "Range vs. Grit" for the Penn community. https://vimeo.com/529134450
- On June 4, 2020, Dr. James Pawelski participated in a virtual discussion, "The Arts, Neuroaesthetics, and Human Flourishing", sponsored by the Wharton Neuroscience Initiative.
- United Nations Global Happiness Council. Dr. Seligman was appointed the Education Chair of the Global Happiness Council (GHC), under the United Nation's Sustainable

Development Solutions Network (SDSN). GHC is a global network of leading academic specialists in happiness and key practitioners in areas ranging from psychology, economics, urban planning, civil society, business and government. The GHC identifies best practices at the national and local levels to encourage advancement of the causes of happiness and well-being.

Council members oversee the work of six thematic groups (education, workplace, personal happiness, public health, city design and management) who each produce a chapter of policy recommendations in the Global Happiness Policy Report, published annually and presented at the World Government Summit (WGS) in support of the Global Dialogue for Happiness. This report provides evidence and policy advice to participating governments on best practices to promote happiness and well-being. The work of the Council complements the World Happiness Reports and other research on the measurement and explanation of happiness. The aim of the GHC is to survey and share best practice policies drawn from the research literature and government experiences around the globe.

- The International Positive Psychology Network (IPPA). http://www.ippanetwork.org/ Dr. Martin Seligman played the lead role in creating IPPA, with contributions from Dr. James Pawelski. IPPA has thousands of members and it's three-part mission is to promote the science and practice of Positive Psychology to enable individuals and institutions to thrive; to facilitate collaboration among researchers, teachers, students, and practitioners of positive psychology around the world and across academic disciplines; and to share the findings of positive psychology with a broad audience. IPPA will virtually host the Seventh World Congress in July 2021. IPPA hosted the Sixth World Congress on Positive Psychology in June 2019 in Melbourne, Australia and there were more than 1,200 registrants. The Positive Psychology Center staffed a booth at that conference to promote Penn's Online Applied Positive Psychology Certificate program (APOP), Penn's Master of Applied Positive Psychology program (MAPP) and the online Foundations of Positive Psychology Coursera Certificate. Speakers from the PPC included Dr. Martin Seligman, Dr. James Pawelski, among others.
- The International Positive Education Network (IPEN). IPEN was created by Dr. Martin Seligman and Lord James O'Shaughnessy to bring together teachers, parents, academics, students, schools, colleges, universities, charities, companies and governments to promote a new approach to education: academics + character + wellbeing. The goals are to support collaboration, change education practice and reform government policy. IPEN hosted the Second World Positive Education Conference in June 2018 in Fort Worth, Texas and there were more than 600 registrants. The Positive Psychology Center staffed a booth at this conference to promote the MAPP program and the online Foundations of Positive Psychology Coursera Certificate. Speakers from the PPC included Dr. Martin Seligman, Dr. James Pawelski, and Dr. Angela Duckworth. IPEN has thousands of members. http://ipen-festival.com/

#### **PPC PERSONNEL**

Martin Seligman, Ph.D., Director of PPC and Zellerbach Family Professor of Psychology

Peter Schulman, Executive Director

Angela Duckworth, Ph.D., Christopher H. Browne Distinguished Professor of Psychology

Allyson Mackey, Ph.D., Assistant Professor of Psychology

Paul Rozin, Ph.D., Professor of Psychology

James Pawelski, Ph.D., Professor of Practice, Director of Education

Karen Reivich, Ph.D., Director of Training Programs

John Hollway, J.D., Associate Dean and Executive Director of the Quattrone Center for the Fair Administration of Justice, Penn Law School

Howard Blumenthal, Senior Scholar, <a href="http://www.hblumenthal.com">http://www.hblumenthal.com</a>

Michael Baime, MD, Clinical Associate Professor of Medicine, Penn School of Medicine,

Director, Penn Program for Mindfulness

David Yaden, Ph.D., Visiting Scholar

# **Master of Applied Positive Psychology Program (MAPP):**

James Pawelski, Ph.D., Director of Education and Senior Scholar

Leona Brandwene, Associate Director

Aaron Boczkowski, Program Coordinator

Laura Taylor, Program Assistant Coordinator

Nicole Stottlemyer, Assistant Coordinator, Positive Education Programs

# **Humanities and Human Flourishing Project:**

James Pawelski, Ph.D., Principal Investigator

Sarah Sidoti, Project Manager

Yerin Shim, Ph.D., Postdoctoral Fellow

Damien Crone, Ph.D., Postdoctoral Fellow

Katherine Cotter, Ph.D., Postdoctoral Fellow

Michaela Ward, Research Manager

## **Resilience and Positive Psychology Training Programs:**

Karen Reivich, Ph.D., Director of Training Programs

Peter Schulman, New Business Development, Customer Service, Operations Oversight

Judy Saltzberg, Ph.D., Instructor and Curriculum Developer

Robert Szybist, MAPP, Instructor and Project Director, PRP for Law Enforcement

Jennifer Knapp, Senior Project Manager

Brittney Schlechter, Curriculum Development Manager

Catherine Thompson, Project Manager

Anand Petigara, Project Manager

Laura Vriend, Assistant Project Coordinator

#### **Primals Grant:**

Jeremy Clifton, Ph.D., Primals Project Director

Rive Cadwallader, Project Manager

# **Agency and the History of Human Progress**

Martin E.P. Seligman, Ph.D., Project Director

Noah Love, Research Coordinator

# **World Well Being Research Grant:**

Lyle Ungar, Ph.D., Project Director

Anneke Buffone, Lead Research Scientist / Postdoctoral Research Fellow

Johannes Eichstaedt, Postdoctoral Fellow

Salvatore Giorgi, Research Programmer

Rupa Jose, Postdoctoral Fellow

Tingting Liu, Postdoctoral Fellow

Garrick Sherman, Data Scientist

## **Graduate Student with Dr. Seligman:**

Max Genecov

# Dr. Allyson Mackey's Research: Brain Plasticity and Development:

Austin Boroshok, Graduate Student

Lourdes Delgado Reyes, Postdoctoral Fellow

Julia Leonard, Postdoctoral Fellow

Cassidy McDermott, Graduate Student

Anne Park, Graduate Student

Sophie Sharp, Research Coordinator

Ursula Tooley, Graduate Student

## Dr. Angela Duckworth's Research: Grit, Self-Control, and Character Development:

Sean Talamas, Executive Director

Paolo Terni, Director, Senior Research Support

Emma Satlof-Bedrick, Director, Research Partnerships

Chayce Baldwin, Research Coordinator

## **Information Technology Support Staff:**

Tammer Ibrahim, IT Systems Administrator

Ani Leonhart, IT Systems Support Specialist

Undergraduate Student Assistants: Numerous Penn student research assistants help with various projects.

# **PPC ADVISORY BOARD**

The advisory board for PPC and the MAPP program includes:

David Brainard

Associate Dean for the Natural Sciences, SAS

Director, Vision Research Center

RRL Professor of Psychology

Nora Lewis

Vice Dean, Professional and Liberal Education

Susan Meyer

Professor of Philosophy

Michael Platt

Professor of Neuroscience, James S. Riepe University Professor Professor of Neuroscience, Professor of Psychology, Professor of Marketing Lyle Ungar

Professor of Computer and Information Science

## **FINANCIAL SUPPORT**

Following is an overview of the current and recent research grants and training contracts.

# **Research Grant Funding**

# PI MARTIN SELIGMAN RESEARCH GRANTS:

The Primals Project: Seeding Catalytic Investigations in Psychology, February 2021 to July 2024, Templeton Religion Trust (PI Seligman, Co-PI Clifton).

Penn Resilience Program for Law Enforcement Personnel, January 2018 to March 2022 (PI Seligman), Subaward from International Association of Chiefs of Police (IACP), under prime award from the U.S. Department of Justice.

Penn Resilience Program for City of Philadelphia First Responders, July 2020 to June 2021 (PI Seligman).

Positive Soldier Health (Robert Wood Johnson Foundation, PI: Seligman).

World Well Being Project (WWBP): Measuring well-being using big data, social media, and language analyses (Templeton Religion Trust, PI Seligman).

Advancing the Science of Imagination: Toward an "Imagination Quotient" (Templeton Foundation/Imagination Institute, PI Seligman).

## PI JAMES PAWELSKI RESEARCH GRANTS:

The Humanities and Human Flourishing: A Multi-Disciplinary Collaboration for Understanding, Assessing and Cultivating Well-Being (Templeton Religion Trust, PI Pawelski).

The Arts and the Science of Well-Being: A Multi-Disciplinary Collaboration for Understanding, Assessing, and Cultivating Human Flourishing (National Endowment for the Arts: Includes designation as an NEA Research Lab. PI Pawelski).

# **PI LYLE UNGAR RESEARCH GRANTS:**

Access, Use, and Customization of AWARE Research Platform for a COVID-19 Study, National Institute on Drug Abuse (NIH), (PI Ungar).

# PI ANGELA DUCKWORTH RESEARCH GRANTS:

Using Behavioral Science to Help Students Thrive (Walton Family Foundation, PI Duckworth).

Situational Strategies for Self-Control (John F. Templeton Foundation, PI Duckworth).

Research Network on the Determinants of Life Course Capabilities and Outcomes (National Institute on Aging, co-PI Duckworth).

# PI ALLYSON MACKEY RESEARCH GRANTS AND FUNDING:

CAREER: Leveraging neuroscience to predict and improve science learning in early elementary school (National Science Foundation, PI Mackey).

The hidden costs of COVID-19 on child development and health: Investigating pathways linking inactivity, adrenarche, and brain development among disadvantaged children (CIFAR, PIs Mackey, Samuel Urlacher, and Thomas McDade).

Evaluating the impact of early cognitive enrichment on brain development (William Penn Foundation, PI Mackey).

CIFAR Azrieli Global Scholar in Child & Brain Development (CIFAR, PI Mackey).

Exploring the Effects of a Curiosity Intervention on Learning, Cognition, Motivation, and Brain Connectivity (Jacobs Foundation, PI Mackey and Bonawitz).

A Feasibility Study of Novel Technologies to Minimize Motion-induced Biases in Functional and Structural MRI of Young, Opioid-affected Cohorts (National Institute on Drug Abuse, PIs Mackey and Tisdall).

Between Encoding and Retrieval: Behavioral and Neural Indices of Reactivation in Children's Memory Development (National Institute of Child Health and Human Development, PI: Olson, Mackey Co-Investigator).

## **Resilience Training Contracts**

Resilience Programs for Penn Staff, Faculty, and Students. We are delighted to bring our programs to the Penn community. These programs have received positive feedback and word-of-mouth has increased demand, especially during the pandemic. During the pandemic, we have delivered about 40 virtual programs to more than 600 Penn staff, faculty, and students, so they can benefit from these evidence-based programs. We have been delivering programs to:

- Penn Executive Vice President (Craig Carnaroli): For senior administrative leadership speaker series, July 2020.
- Penn Athletics Wharton Leadership Academy (PAWLA: Rudy Fuller): For Penn student-athletes in FY21.

- Penn Provost Centers (Ufuoma Pela): For staff in FY21.
- Penn Human Resources Work-Life Program (Karen Kille): For faculty and staff in FY21.
- Penn Division of Human Resources (Jack Heuer): For staff in FY21.
- Penn Development and Alumni Relations (Gretchen Ekeland): For staff in FY21.
- Penn Graduate School of Education (Emma Grigore): For staff in FY21.
- Penn Law School (John Hollway): For law school students in FY21.
- Penn School of Medicine (Lisa Bellini, Deborah Driscoll). For faculty and physicians in FY18-20.
- Penn Professional and Liberal Education (Nora Lewis): For staff in FY19.
- Penn Athletics (Rudy Fuller): For coaches in FY19.
- Penn Athletics (Rudy Fuller): Two-semester course for student athletes in FY19.
- Penn Division of Human Resources (Jack Heuer): For staff in FY17-18.
- Penn Wharton MBA Staff (Paula Greenberg): For staff in FY17 and FY19.
- Penn Rodin College House (Kathryn McDonald): For undergraduate students in FY19 and FY20.
- Penn Division of Finance (Paul Richards): For staff in FY18.
- Penn Wharton Computing (Scott McNulty): For Leadership and staff in FY18.
- Penn Office of Audit, Compliance, and Privacy (Greg Pellicano). For staff in FY18.
- Penn School of Social Policy and Practice (Regine Metellus): For staff in FY18.
- Penn Business Services Division (Marie Witt): For leadership team and their staff in FY17.
- Penn Division of Public Safety (Maureen Rush): For police officers and staff in FY16.
- Online resilience course through PLE for Penn staff (click here for press coverage).

**Programs for Non-Penn Clients**: Since 2007, we have delivered more than 300 Penn Resilience and Well-Being Programs to more than 60,000 people. Many of these programs are train-the-trainer programs in which we train people how to teach resilience and well-being skills to others, using a structured, modularized curriculum. Attendees of these programs have gone on to teach these skills to more than a million people around the world. This train-the-trainer program is an effective model for large-scale, sustainable dissemination of the resilience skills.

These programs have been delivered to a variety of populations, including law enforcement, Army soldiers, health care, education, a professional sports team, and corporations. These training programs have been a success as judged by the participant satisfaction ratings and repeat contracts with sponsors. Average participant satisfaction ratings for all our clients have, without exception, been very good or excellent.

Penn Resilience Program for Law Enforcement Personnel, January 2018 to March 2022 (PI Seligman), Subcontract from International Association of Chiefs of Police (IACP), under prime award from the U.S. Department of Justice.

Penn Resilience Program for Hemophilia Patients and their Caregivers, December 2018 to December 2021 (PI Seligman), Sponsored by Genentech USA, Inc.

**NOTE**: These Wellness Programs have been delivered to more than 1,400 hemophilia patients and their caregivers, so far.

Penn Resilience and Well-Being Train-the-Trainer Program for Medical Students at the Royal College of Surgeons in Ireland, June 2020. (Rescheduled to June 2021 due to pandemic.)

Penn Resilience and Well-Being Train-the-Trainer Program for Western Governors University, May 2021 to April 2022 (PI Seligman).

Penn Resilience Program for City of Philadelphia First Responders, July 2020 to June 2021 (PI Seligman).

Penn Resilience Program for Indeed, Inc., May 2021 to March 2022 (PI Seligman).

Penn Resilience Program for Oklahoma City Thunder, September 2014 to August 2020 (PI Seligman).

Penn Resilience Program for Oklahoma City Thunder Community Outreach with Oklahoma City High School Students, January 2018 to June 2020 (PI Seligman).

Penn Resilience and Well-Being Program for Senior Leaders at British Aerospace (BAE), 2020.

Penn Resilience and Well-Being Train-the-Trainer Program for Western Governors University, 2020.

Penn Resilience Program for Western Governors University, 2019 (PI Seligman).

Penn Resilience Program for Oklahoma State University, 2019 (PI Seligman).

Penn Resilience Program for Alcon Vision, 2019 (PI Seligman).

Penn Resilience Program for University of Michigan Medical School, 2019 (PI Seligman).

Penn Resilience and Well-Being Program for Sales Managers at Investors Group, 2019.

Penn Resilience Program for Sentara Healthcare, June 2018 (PI Seligman).

Penn Well-Being Program for the World Bank, June 2018 (PI Seligman).

Penn Resilience Program for Royal College of Surgeons in Ireland, Nov 2017 (PI Seligman).

Positive Psychology Program for Delta Galil Executives, August 2017 (PI Seligman).

Penn Resilience Program for UAE Ministry of Happiness, March 2017 (PI Seligman).

Penn Resilience Program for U.S. Department of Defense, Washington Headquarters Services, FY17 (PI Seligman).

Penn Resilience Program for Deloitte Senior Leaders, September 2016.

Penn Resilience Program for University of Texas System, May 2015 to August 2016 (PI Seligman).

Penn Resilience Program for St. Catherine's School Educators (Australia) FY16 (PI Seligman).

Penn Resilience Program for Deloitte Clinicians, FY16 (PI Seligman).

Penn Resilience Program for Kimberly-Clark Professional Global Marketing & Sales Team, FY16 (PI Seligman).

Penn Resilience Program for U.S. Army, Sept 2014 through Sept 2016 (PI Seligman).

U.S. Army Resilience Training of Soldiers 2012 through Sept 2014 (PI Seligman).

U.S. Army Resilience Training of Soldiers in 2011 (PI Seligman).

U.S. Army Resilience Training of Soldiers in 2010 (PI Seligman).

U.S. Army Resilience Curriculum Development and Training Soldiers in 2009 (PI Seligman).

#### **EDUCATION: GRADUATE AND UNDERGRADUATE**

Admits

50(est.)

The Master of Applied Positive Psychology (MAPP). The MAPP program has completed its sixteenth year and this program has been successful in academic and financial terms. During pandemic, we quicky transitioned to virtual delivery of this program, with positive results. The number and quality of applicants and matriculates has been consistently high and the students have given the program high marks in their evaluations. Following are the number of applicants and admissions each year:

	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13
Applications	106	111	123	166	163	181	178	236
Admits	34	36	41	38	45	36	36	36
	2013/14	2014/15	2015/16	2016/17	2017/18	3 2018/19	2019/20	2020/21
Applications	198	166	162	209	178	189	182	187
Admits	39	32	38	39	42	47	49	43
	2021/22							
Applications	223							

In line with the PPC's stated mission of promoting education, PPC faculty, post-doctoral fellows and graduate students teach the following undergraduate and graduate-level courses through the School of Arts and Sciences and the College of Liberal and Professional Education:

# **Martin Seligman**

• MAPP 600: Intro to Positive Psychology (graduate level)

#### **Angela Duckworth**

- Psych 005: Grit Lab: Fostering Passion and Perseverance (undergraduate level)
- MAPP 712: Positive Education (graduate level) Guest Speaker

#### James Pawelski

- MAPP 602: Foundations of Positive Interventions (graduate level)
- MAPP 710: Humanities and Human Flourishing (graduate level)
- INTG 002: Happiness and Despair

#### Leona Brandwene

- MAPP 603: Perspectives on Well-being (graduate level)
- MAPP 714: Applying Positive Interventions in Institutions (graduate level)

#### Karen Reivich

• MAPP 708: Positive Psychology and Individuals (graduate level)

#### **Judith Saltzberg**

- MAPP 708: Positive Psychology and Individuals (graduate level)
- MAPP 800: Capstones (graduate level)

#### Laura Taylor

- MAPP 602: Foundations of Positive Interventions (graduate level) Assistant Instructor
- MAPP 710: Humanities and Human Flourishing (graduate level) Assistant Instructor

#### Michael Baime

• MAPP 603: Approaches to Well-being (graduate level) – Guest Speaker

#### **David Yaden**

- MAPP 601: Research Methods and Evaluation (graduate level)
- MAPP 708: Positive Psychology and Individuals (graduate level) Guest Speaker

## **Johannes Eichstaedt**

• MAPP 600: Intro to Positive Psychology (graduate level) – Guest Speaker

#### Chris (John) Feudtner

• MAPP 714: Applying Positive Interventions in Institutions (graduate level) – Guest Speaker

#### **Faisal Khan**

- MAPP 600: Intro to Positive Psychology (graduate level) Assistant Instructor
- MAPP 708: Positive Psychology and Individuals (graduate level) Assistant Instructor

# Tamara Myles

• MAPP 708: Positive Psychology and Individuals (graduate level) – Assistant Instructor

#### Jodi Wellman

• MAPP 708: Positive Psychology and Individuals (graduate level) – Assistant Instructor

#### **RESILIENCE TRAINING PROGRAMS**

Since 2007, we have delivered more than 300 Penn Resilience Programs to more than 60,000 people. Many of these programs are train-the-trainer programs in which we train people how to teach resilience skills to others, using a structured curriculum. Attendees of these programs have gone on to teach these skills to more than a million people around the world. These train-the-trainer programs are an effective model for large-scale and sustainable dissemination of the resilience skills.

These programs have been delivered to a variety of populations – educators (K-12 and college), U.S. Army soldiers, health care professionals, mental health professionals, law enforcement personnel, a professional sports team, and corporate executives and their employees.

These training programs have been a success as judged by the participant satisfaction ratings and repeat contracts with sponsors. Participant satisfaction ratings for all our clients have been very good or excellent.

Here is a brief background on our resilience programs: Resilience is teachable. From 1990 to 2007, Dr. Martin Seligman and his colleagues, Dr. Jane Gillham, Dr. Karen Reivich, and Peter Schulman, received over \$10 million dollars in a series of federal grants from the National Institute of Mental Health (NIMH) and the U.S. Department of Education to conduct research and development on resilience programs with three different populations – middle school students, high school students, and college students. This series of large scale, longitudinal, controlled studies demonstrated that individuals who attended the resilience programs had significantly less depression, anxiety and conduct problems, and higher well-being and optimism than those in the control group. These empirical results have been published in peer-reviewed journal publications, documenting the benefits of these programs.

Drs. Seligman, Reivich, and Gillham are leaders in their fields. Dr. Seligman is well-known for his ground-breaking work in depression, helplessness, and Positive Psychology, and Dr. Reivich and Dr. Gillham are leaders in the field of depression prevention and school-based intervention research. The Penn Positive Psychology Center team has more than 30 years of experience developing and delivering resilience programs using a train-the-trainer model.

In 2007, we started offering our resilience programs as a fee-for-service. Dr. Karen Reivich (Director of Positive Psychology and Resilience Training) and Peter Schulman (Executive

Director) have led all aspects of these programs. They have developed a large cadre of resilience trainers to deliver these programs, which has enabled Penn to deliver many large-scale training programs.

## **RESEARCH PUBLICATIONS 2020-2021**

#### **Martin E.P. Seligman Publications:**

- Yaden, D. B., Giorgi, S., Kern, M. L., Adler, A., Ungar, L. H., Seligman, M. E. P., & Eichstaedt, J.C. (in press). Beyond beliefs: Multidimensional Aspects of Religion and Spirituality in Language. *Psychology of Religion and Spirituality*.
- Giorgi, S., Nguyen, K.L., Eichstaedt, J.C., Kern, M.L., Yaden, D.B., Seligman, M.E.P., Ungar, L.H., Schwartz, H.A., & Park, G. (submitted). Fine-grained Assessment of Regional Personality through Twitter. *Journal of Personality*.
- Rashid, T., Summers, R. F. & Seligman, M.E.P. (in press) Positive Psychology Model of Mental Function and Behavior. In A. Tasman, M. B. Riba, T.G. Schulze, C.H. Ng, C.A. Alfonso, D. Lecic-Tosevski, S. Kanba, R.D. Alarcon, & D.M. Ndetei. (Eds.) *Tasman's Psychiatry* (5th ed.). Cham, Switzerland: Springer Nature Switzerland AG.
- Kubzansky L.D., Boehm J.K., Allen A.R., Vie L.L., Ho T.E., Trudel-Fitzgerald C., Koga H.K., Scheier L.M., & Seligman M.E.P. (2020). Optimism and risk of incident hypertension: A target for primordial prevention. *Epidemiology and Psychiatric Sciences*, 29, 1-9. https://doi.org/10.1017/S2045796020000621
- Seligman, M.E.P. (2020). Agency in Greco-Roman philosophy. *Journal of Positive Psychology*. https://www.tandfonline.com/doi/full/10.1080/17439760.2020.1832250
- Eichstaedt, J.C., Kern, M.L., Yaden, D.B., Schwartz, H.A., Giorgi, S., Park, G., Hagan, C.A., Tobolsky, V., Smith, L.K., Buffone, A., Iwry, J., Seligman, M.E.P., & Ungar, L.H. (2020). Closed and Open Vocabulary Approaches to Text Analysis: A Review, Quantitative Comparison, and Recommendations. *Psychological Methods*. https://psyarxiv.com/t52c6/
- Chopik, J.C., Kelley, W.L., Vie, L.L., Oh, J., Bonett, D.G., Lucas, R.E., & Seligman, M.E.P. (2020). Development of character strengths across the deployment cycle among U.S. Army soldiers. *Journal of Personality*, 89 (1), 23-34. http://dx.doi.org/10.1111/jopy.12564

# **James Pawelski Publications**:

- Tay, L., & Pawelski, J. O. (Eds.) (in press). *The Oxford handbook of the Positive Humanities*. New York: Oxford University Press.
- Pawelski, J. O. (in press). The Positive Humanities: Culture and human flourishing. In L. Tay and J.O. Pawelski (Eds.), *The Oxford Handbook of the Positive Humanities*. Oxford University Press.
- Shim, Y., Jebb, A. T., Tay, L., & Pawelski, J. O. (in press). Arts and humanities interventions for flourishing in healthy adults: A mixed studies systematic review. *Review of General Psychology*.
- Tay, L., & Pawelski, J. O. (in press). Introduction: The role of the arts and humanities in human flourishing. In L. Tay and J. O. Pawelski (Eds.), *The Oxford Handbook of the Positive Humanities*. Oxford University Press.
- Thapa, S., Vaziri, H., Shim, Y., Tay, L., & Pawelski, J. O. (Under review.). Development and validation of the mechanisms of engagement in the arts and humanities scales.

- Thapa, S., Yaden, D., Tay, L., Ng, V., McDaniel, J., Pawelski, J., (under review). Living Deliberately: Well-being over time in an experiential course on monasticism.
- Waters, L., Cameron, K., Nelson-Coffey, S. K., Crone, D. L., Kern, M. L., Lomas, T., Oades, L., Owens, R. L., Pawelski, J. O., Rashid, T., Warren, M. A., White, M. A., & Williams, P. (Under review). Collective wellbeing and posttraumatic growth during COVID-19: How positive psychology can help families, schools, workplaces and marginalized communities.
- Yaden, D. B., Batz-Barbarich, C. L., Ng, V., Vaziri, H., Pawelski, J. O., & Tay, L. (Under review.). A meta-analysis of religion/spirituality and life satisfaction.
- Shim, Y., Jebb, A. T., Tay, L., & Pawelski, J. O. (in press). Arts and humanities interventions for flourishing in healthy adults: A mixed studies systematic review. *Review of General Psychology*.
- Pawelski, J. O. (2020). The elements model: Toward a new generation of positive interventions. *Journal of Positive Psychology*, 15, 675-679. doi:10.1080/17439760.2020.1789710
- Pawelski, J. O. (2020). Today, tomorrow, and the day after tomorrow: A case study for the psychology of joy. *Journal of Positive Psychology*, 15, 107-111. doi: 10.1080/17439760.2019.1695142

#### **Angela Duckworth Publications:**

- Southwick, D. A., Tsay, C. J., & Duckworth, A. L. (in press). Grit at work. Research in *Organizational Behavior*. https://doi.org/10.1016/j.riob.2020.100126
- Duckworth, A. L., & Gross, J. J. (2020). Behavior change. Organizational Behavior and Human *Decision Processes*, 161, 39-49. https://doi.org/10.1016/j.obhdp.2020.09.002
- Spann, C. A., Yu, A., Galla, B. M., Duckworth, A. L. & D'Mello, S. K. (in press). Is academic diligence domain-specific or domain-general? An investigation of the math, verbal, and spatial Academic Diligence Tasks with middle schoolers. *Learning and Individual Differences*.
- Galla, B. M., Tsukayama, E., Yu, A., Park, D., & Duckworth, A. L. (2020). The mindful adolescent: Developmental changes in nonreactivity to inner experiences and its association with emotional well-being. *Developmental Psychology*, 56(2), 350-363. doi:10.1037/dev0000877
- Gardner, M., Hutt, S. J., Kamentz, D., Duckworth, A. L. & D'Mello, S. K. (2020). How does high school extracurricular participation predict bachelor's degree attainment? It is complicated. *Journal of Research on Adolescence*. doi:10.1111/jora.12557
- Gruber, J., Mendle, J., Lindquist, K. A., Schmader, T., Clark, L. A., Bliss-Moreau, E., Modupe, A., Atlas, L., Barch, D. M., Feldman Barrett, L., Borelli, J. L., Brannon, T. N., Bunge, S.A., Campos, B., Cantlon, J., Carter, R., Carter-Sowell, A. R., Chen, S., Craske, M. G., Cuddy, A. J. C., ... Williams, L. A. (2020). The future of women in psychological science. Perspectives on Psychological Science. <a href="https://doi.org/10.1177/1745691620952789">https://doi.org/10.1177/1745691620952789</a>
- Kirgios, E. L., Mandel, G. H., Park, Y., Milkman, K. L., Gromet, D. M., Kay, J. S., & Duckworth, A. L. (2020). Teaching temptation bundling to boost exercise: A field experiment. *Organizational Behavior and Human Decision Processes*, 161, 20-35. https://doi.org/10.1016/j.obhdp.2020.09.003
- Mehr, K. S., Geiser, A. E., Milkman, K. L., & Duckworth, A. L. (2020). Copy-paste prompts: A new nudge to promote goal achievement. *Journal of the Association for Consumer Research*, 5(3), 329-334. doi:10.1086/708880

- Park, D., Tsukayama, E., Yu, A., & Duckworth, A. L. (2020). The development of grit and growth mindset in adolescence. *Journal of Experimental Child Psychology*, 198, 104889. doi:10.1016/j.jecp.2020.104889
- Porter, T., Molina, D. C., Blackwell, L., Roberts, S., Quirk, A., Duckworth, A. L., & Trzesniewski, K. (2020). Measuring mastery behaviors at scale: The Persistence, Effort, Resilience and Challenge-Seeking task (PERC), *Journal of Learning Analytics*, 7(1), 5-18. doi:10.18608/jla.2020.71.2
- Rege, M., Hanselman, P., Solli, I. F., Dweck, C. S., Ludvigsen, S., Bettinger, E., Crosnoe, R., Muller, C., Walton, G., Duckworth, A. L., & Yeager, D. S. (2020). How can we inspire nations of learners? Investigating growth mindset and challenge-seeking in two countries. *American Psychologist*. <a href="https://doi.org/10.1037/amp0000647">https://doi.org/10.1037/amp0000647</a>
- Spann, C. A., Yu, A., Galla, B. M., Duckworth, A. L. & D'Mello, S. K. (2020). Is academic diligence domain-specific or domain-general? An investigation of the math, verbal, and spatial academic diligence tasks with middle schoolers. *Learning and Individual Differences*. 80, Article 101870, doi:10.1016/j.lindif.2020.101870
- Zamarro, G., Nichols, M., Duckworth, A. L., & D'Mello, S. K. (2020). Validation of survey effort measures of grit and self-control in a sample of high school students. *PLOS One*, 15(7), e0235396. doi:10.1371/journal.pone.0235396

## **Allyson Mackey Publications:**

- Tooley, U.A., Bassett, D.S., & Mackey, A.P. (in press). Environmental influences on the pace of brain development. *Nature Reviews Neuroscience*.
- Cieslak, M., Cook, P.A., He, X., Yeh, F.C., Dhollander, T., Adebimpe, A., Aguirre, G.K., Bassett, D.S., Bourque, J., Cabral, L., Davatzikos, C., Detre, J., Earl, E., Elliott, M.A., Fadnavis, S., Fair, D., Foran, W., Fotiadis, P., Garyfallidis, E., Giesbrecht, B., Gur, R.C., Gur, R.E., Kelz, M., Keshavan, A., Larsen, B., Luna, B., Mackey, A.P., Milham, M., Oathes, D.J., Perrone, A., Pines, A., Roalf, D.R., Richie-Halford, A., Rokem, A., Sydnor, V.J., Tapera, T.M., Tooley, U.A., Vettel, J.M., Yeatman, J., Grafton, S.T. & Satterthwaite, T.D. (accepted in principle). *QSIPrep: An integrative platform for preprocessing and reconstructing diffusion MRI. Nature Methods*.
- Park, A. T., Tooley, U.A., Leonard, J.A., Boroshok, A.L., McDermott, C.L., Tisdall, M.D. & Mackey, A.P. (2021). Early childhood stress is associated with blunted development of ventral tegmental area functional connectivity. *Developmental Cognitive Neuroscience*. <a href="https://doi.org/10.1016/j.dcn.2020.100909">https://doi.org/10.1016/j.dcn.2020.100909</a>
- Leonard, J. A., Martinez, D. N., Dashineau, S. C., Park, A. T., & Mackey, A. P. (2021). Children Persist Less When Adults Take Over. *Child Development*. https://doi.org/10.1111/cdev.13492
- Tooley U.A., Mackey A.P., Ciric, R., Ruparel, K., Moore, T.M., Gur, R.C., Gur, R.E., Satterthwaite, T.D., & Bassett, D.S. (2020). Influence of Socioeconomic Status on Functional Brain Network Development. *Cerebral Cortex*. 30(1):1-19.

# **Jeremy Clifton Publications:**

Graziosi, M., Yaden, D. B., Clifton, J. D. W., Mikanik, N., & Niemic, R. M. (2020). A strengths-based approach to chronic pain. *Journal of Positive Psychology*. DOI: 10.1080/17439760.2020.1858337

- Clifton, J. D. W. (2020). Happy in a crummy world: Implications of primal world beliefs for increasing well-being through positive psychology interventions. *Journal of Positive Psychology*. https://doi.org/10.1080/17439760.2020.1789703.
- Clifton, J. D. W. (2020). Testing if primal world beliefs reflect experiences—At least some experiences identified *ad hoc. Frontiers in Psychology, 11*, 1145. https://doi.org/10.3389/fpsyg.2020.01145.
- Stahlmann, A. G., Hofmann, J., Ruch, W., Heinz, S., & Clifton, J. D. W. (2020). The higher-order structure of primal world beliefs in German-speaking countries: Adaptation and initial validation of the German Primals Inventory (GPI-66). *Personality and Individual Differences*, 163, 110054.
- Clifton, J. D. W., & Kim, E. S. (2020). Healthy in a crummy world: Implications of primal world beliefs for health psychology. *Medical Hypotheses*, *135*, 109463. https://doi.org/10.1016/j.mehy.2019.109463.
- Clifton, J. D. W. (in press). Measuring primal world beliefs. In W. Ruch, A. B. Baker, L. Tay, and F. Gander (Eds.), *Handbook of positive psychology assessment*. European Association of Psychological Assessment Book Series.
- Clifton, J. D. W., & Kerry, N. (2020). Conservatives do not see the world as more dangerous and decades of research suggesting otherwise can be explained [Manuscript submitted for publication]. Department of Psychology, University of Pennsylvania.
- Clifton, A. B. W., Stahlmann, A. G., Hofmann, J., Chirico, A., & Clifton, J. D. W. (2020). Improving cross-cultural equivalence through scale-specific translation guides: An example case of the Primals Inventory [Manuscript submitted for publication]. Department of Psychology, University of Pennsylvania.
- Clifton, J. D. W., & Meindl, P. (2021). Parents intuit—incorrectly—that teaching their children that the world is a bad place is likely best for them. [Manuscript submitted for publication]. Department of Psychology, University of Pennsylvania.
- Clifton, J. D. W., & Yaden, D. B. (2021). Brief measures of the four highest-order primal world beliefs [Manuscript submitted for publication]. Department of Psychology, University of Pennsylvania.

# **World Well-Being Project Publications:**

- Andy AU, Guntuku SC, Adusumalli S, Asch DA, Groeneveld PW, Ungar LH, Merchant RM. (2021). Predicting Cardiovascular Risk Using Social Media Data: Performance Evaluation of Machine-Learning Models, *JMIR Cardio*, 5(1), doi: 10.2196/24473 PMID: 33605888
- Jaidka, K., Chhaya, N., Mumick, S., Killingsworth, M., Halevy, A., & Ungar, L. (2020, May). Beyond Positive Emotion: Deconstructing Happy Moments Based on Writing Prompts. In Proceedings of the International AAAI Conference on Web and Social Media (Vol. 14, pp. 294-302).
- Guntuku, S.C., Schwartz, H.A., Kashyap, A., Gaulton, J.S., Stokes, D.C., Asch, D.A., Ungar, L.H. and Merchant, R.M. (2020). Variability in Language used on Social Media prior to Hospital Visits. *Scientific Reports*, 10(1), pp.1-9.
- Zamani, M., Schwartz, H. A., Eichstaedt, J., Guntuku, S. C., Ganesan, A. V., Clouston, S., & Giorgi, S. (2020). Understanding Weekly COVID-19 Concerns through Dynamic Content-Specific LDA Topic Modeling. *In Proceedings of the Fourth Workshop on Natural Language Processing and Computational Social Science* (pp. 193-198).

- Shah, D.S., Schwartz, H.A., Hovy, D. (2020). Predictive Biases in Natural Language Processing Models: A Conceptual Framework and Overview. *In Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics* (pp. 5248--5264).
- Lynn, V., Balasubramanian, N., & Schwartz, H. A. (2020). Hierarchical Modeling for User Personality Prediction: The Role of Message-Level Attention. In *Proceedings of the 58th Annual Meeting of the Association for Computational Linguistics* (pp. 5306-5316).
- Jaidka, K., Guntuku, S. C., Lee, J. H., Luo, Z., Buffone, A., & Ungar, L. H. (2020). The rural-urban stress divide: obtaining geographical insights through Twitter. *Computers in Human Behavior*, 114, 106544.
- Jaidka, K., Giorgi, S., Schwartz, H. A., Kern, M. L., Ungar, L. H., & Eichstaedt, J. C. (2020). Estimating geographic subjective well-being from Twitter: A comparison of dictionary and data-driven language methods. *Proceedings of the National Academy of Sciences*, 117(19), 10165-10171.
- Li M, Hickman L, Tay L, Ungar L, Guntuku SC. Studying Politeness across Cultures using English Twitter and Mandarin Weibo. *Proceedings of the ACM on Human-Computer Interaction*. 2020 Oct 14; 4(CSCW2):1-5.
- Ward, G., de Neve, J.-E., Ungar, L. H., Eichstaedt, J. C. (2020). (Un)Happiness and Voting in U.S. Presidential Elections. *Journal of Personality and Social Psychology*.
- Guntuku, S. C., Sherman, G., Stokes, D. C., Agarwal, A. K., Seltzer, E., Merchant, R. M., & Ungar, L. H. (2020). Tracking Mental Health and Symptom Mentions on Twitter During COVID-19. *Journal of General Internal Medicine*, 1-3.
- Eichstaedt, J. C., Kern, M. L., Yaden, D. B., Schwartz, H. A., Giorgi, S., Park, G., Hagan, C. A., Tobolsky, V., Smith, L. K., Buffone, A., Iwry, J., Seligman, M. E. P., Ungar, L. H. (2020). Closed- and Open-Vocabulary Approaches to Text Analysis: A Review, Quantitative Comparison, and Recommendations. *Psychological Methods*.
- Abebe, R., Giorgi, S., Tedijanto, A., Buffone, A. & Schwartz, H.A. (2020). Quantifying Community Characteristics of Maternal Mortality Using Social Media. In *The World Wide Web Conference*. bibtex