**SHACKMAN UPDATED readings**

* ****Please check Canvas for the most up-to-date list of readings

**SECTION I: FOUNDATIONAL ISSUES IN THE SCIENTIFIC STUDY OF TEMPERAMENT & PERSONALITY**

**Module 1: Introductions, course mechanics, and fundamental questions roundtable**

Required

* The Syllabus!!

**Module 2: Is T&P impactful?**

Required

* Shackman et al. Psychol Bull 2016 *[pages 1279-1280]*
* Moffitt et al. PNAS 2011 *[do not worry about the technical details of the analyses]* –or- Moffitt et al. Amer Sci 2013 *[pop sci summary of Moffitt et al. PNAS 2011; reviewed in lecture]*
* Duckworth PNAS 2011 *[brief scientific commentary on Moffitt]*
* Barker Time 2014 *[brief popular press summary of work linking conscientiousness and neuroticism to diverse outcomes]*

Optional

* Caspi et al Nature Hum Behav 2016 *[self-control and implications for public policy]*
* Starr Science 2018 *[short popular science piece on Mofitt, Caspi, and the continuing scientific value of the Dunedin study]*

**Module 3: How is T&P defined? What are the fundamental dimensions of T&P?**

Required

* Caspi et al Ann Rev Psychol 2005 *[you are welcome to skip the sections on Behavioral Genetics & Social Development]*
* Wikiwand “Big 5” 2018 *[Wiki entries; provides a quick 'nuts-and-bolts' summary of the Big 5 and ways of measuring them]*

Optional

* Jarrett Brit Psychol Soc Res Digest 2018 *[pop sci commentary on recent work suggesting that ‘grit’ is little more than C/SC]*
* Srivastava 2016 *[blog post - provides a quick 'nuts-and-bolts' summary of the Big 5 and ways of measuring them; written in a conversational style]*
* Kendler & Halberstadt Molec Psychiatry 2013 *[incredibly compelling case study of adult twins, focused on the interactive effects of personality and experience on psychopathology, divorce, and other important real-word outcomes across the lifespan]*
* Dahl NY Mag 2017 *[short popular science article on the science of personality change]*
* Goldsmith et al Child Dev 1987 *[seminal roundtable discussion of childhood temperament]*
* Shiner et al Child Dev 2012 *[updated roundtable discussion of childhood temperament]*
* Clark & Watson chapter 2008 *[classic perspective]*
* Zentner & Shiner chapter 2012 *[classic perspective with a focus on development]*
* Soto & John J Personality & Soc Psychol 2016 *[updated Big 5 Inventory]*

**Module 4: How should we measure T&P?**

Required

* Block Psychol Bull 1995a *[critical review of the history and discovery of the Big 5/OCEAN]*
* Tomarken Psychol Assessment 1995 *[psychometrics for psychophysiologists and neurobiologists]*
* Wikiwand “Psychometrics” 2018 *[Wiki entries; provides a quick 'nuts-and-bolts' summary of reliability]*
* Wikiwand “Factor Analysis” 2018 *[Wiki entries; provides a non-technical summary of factor analysis]*

Optional

* *Myers-Briggs test is nearly worthless*
	+ Ahmed Financial Times 2016
	+ Stromberg & Caswell Vox 2015
	+ Wikipedia
	+ Pittenger CPJPAR 2005
	+ Cunningham Washington Post 2012
	+ Capraro & Capraro Educ and Psychol Measurement 2002
	+ Druckman & Bjork National Academy of Sci/National Res Council Report 1991
	+ Costa & McCrae & Costa J Personality 1989
* Funder Psychol Inquiry 1994 *[short, entertaining essay on the strengths and weaknesses of trait theory]*
* Epstein Psychol Inquiry 1994 *[short, entertaining essay on the limitations of the Big 5 and similar descriptive models of T&P]*
* McRae Psychol Inquiry 2010 *[Updated rebuttal of Block; I found this to be very compelling]*
* John, Naumann & Soto Handbook of Personality 2008 *[definitive defense of the Big 5 and FFM]*
* Hedge et al Behav Res 2017 *[reliability paradox: why robust tasks don’t produce reliable traits]*
* Munafò et al Nature Human Behaviour 2017 *[very readable discussion of the ‘reproducibility crisis’ in the social/biomedical sciences with specific recommendations for on-going and future research]*

**Module 5: How are traits and states related? (Part 1)**

Required

* Chap 4 in Matthews, Deary & Whiteman 2009 *[pp. 85-89; pp. 107-end]*
* Shackman et al. chapter 2018 *[pages 67-68]*

Optional

* Fleeson JPSP 2001
* Fleeson JPSP 2009

**Module 6: How are traits and states related? (Part 2)**

Required

* Shackman et al. Psychol Bull 2016 *[pages 1280-1283]*

Optional

* Fox et al PlosOne 2008 *[please do not worry about the technical aspects of FDG-PET imaging]*
* Kaczkurkin et al Biol Psychiatry 2016 *[please do not worry about the technical details; you are welcome to skip the material focused on developmental and sex differences]*

**Module 7: What do traits do? (Part 3)**

Required

* Davidson Cog and Emo 1998 *[please read Sections I and II only]*
* Gable, Reis & Elliot JPSP 2000 *[please do not worry about technical details of the analytic strategy; focus on Studies 2-3]*

Optional

* Shackman et al. Psychol Bull 2016

**SECTION II: THE NATURE AND NURTURE OF TEMPERAMENT AND PERSONALITY**

**Module 8: Intermediate phenotypes and brain imaging tools, Part 1**

Required

* Ariely & Berns Nature Rev Neurosci 2010 *[you only need to read Box 2 on page 288; feel free to read more!]*
* Schwartz et al. Amer Psychol 2016 *[you only need to read pp. 59-61; feel free to read more!]*
* https://miykael.github.io/nipype-beginner-s-guide/neuroimaging.html

Optional

* Lillienfeld Behav Res Ther 2014 *[cautionary note on the use of biological measures and the search for biomarkers]*
* Logothetis Nature 2008 *[please do not worry about the finer details; for those interested in delving more deeply into brain imaging techniques]*
* Slides available at <http://www.fmri4newbies.com>

**Module 9: Intermediate phenotypes and brain imaging tools, Part 2**

Required

* The Neuroskeptic 2014, *Psychiatry: End of the Road for “Endophenotypes”?*
* Wager & Woo Sci Transl Med 2015 *[brief commentary highlighting the potential value of developing sensitive and specific imaging biomarkers]*
* Shackman & Fox Trends in Cog Sci 2018 *[brief comment on biomarkers]*

Optional

* Hur, Tillman, Fox & Shackman Behav & Brain Sci in press *[brief comment on the value of biomarkers and clinical neuroscience]*
* Roiser The Psychol 2015 *[brief, entertaining piece on the value of neuroscience for developing novel intervention strategies]*
* Woo et al Nature Neurosci 2017 *[fMRI biomarkers: opportunities and challenges]*
* Lilienfeld & Treadway Ann Rev of Clinical Psychol 2016 *[thoughtful commentary on the promise and potential pitfalls of developing intermediate phenotypes]*
* Hedge et al Behav Res 2017 *[reliability paradox: why robust tasks don’t necessarily yield reliable intermediate phenotypes]*
* Iacono et al International J of Psychophysiol 2017 *[highly recommended, very readable, and up-to-the-minute commentary on the opportunities and challenges of endophenotypes]*
* Fried Expert Review of Neurotherapeutics 2017 *[highly readable, relatively short description of clinical heterogeneity and low reliability of clinical diagnoses, with implications for developing intermediate phenotypes/endophenotypes]*
* Rodgers Encyclopedia of Behavioral Neuroscience 2010 *[very readable, thoughtful critique of widely used animal models of fear and anxiety]*

**Module 10: The Nature & Nurture of T&P (Part 1): Behavioral Genetics and Heritability**

Required

* Visscher et al Nat Rev Genetics 2008 *[seminal review; please do not worry about the more technical details]*
* Kendler Mol Psych 2013 *[short, entertaining essay on genetics, free will, chance, and psychiatric disease]*
* Wikiwand “Genetics” 2018 *[Wiki entries; provides a quick 'nuts-and-bolts' summary of heritability and genetics]*
* Fisher Twitter 2018 *[heritability in 5 easy tweets]*

Optional

* Plomin et al. Perspectives on Psychol Sci 2016
* Sauce & Matzel Psychol Bull 2018 *[very readable review focused on the paradox of high malleability in the face of high heritability in the context of IQ; highly recommended]*

**Module 11: The Nature & Nurture of T&P (Part 2): Molecular Genetics**

Required

* Sullivan et al Amer J Psychiatry 2018 *[moderately technical summary of psychiatric genetics, from its historical origins in mid-20th C twin studies of schizophrenia to contemporary GWAS consortia, and onward with a description of the most fruitful avenues for future research; do not worry about the technical details, just the overall gist and most important take-home points].*
	+ ***You may find these Glossaries useful***
		- Briley et al Euro J of Personality 2018
		- NCBI Genetics Glossary 2018
* Wikiwand “Genetics” 2018 *[Wiki entries; provides a quick 'nuts-and-bolts' summary of heritability and genetics]*
* Resnick Vox 2018 *[popular science story on the strengths, weaknesses, and potential applications of GWAS to medicine and drug discovery]*

Optional

* Couzin-Frankel Science 2014 *[science writer’s personal story about getting genetic testing for familial breast cancer]*
* Ritter Associated Press 2017 *[very short news piece on commercial genetic testing, with a focus on the impact it had on the NIH Director’s lifestyle choices]*
* Pinker NY Times Magazine 2009 *[science writer’s personal story about getting genetic testing]*
* Mitchell Eur J Neurosci 2018 *[short, very readable introduction to neurogenetics, challenges and opportunities]*
* Mukherjee New Yorker 2016b *[science writer’s story about his family and psychiatric genetics]*
* Chabris et al. Curr Dir Psychol Sci 2015 *[very accessible overview of GWAS]*
* Topol Cell 2014 *[very readable discussion of personal genomics]*

**Module 12: The Nature & Nurture of T&P (Part 3): Neurogenetics and Epigenetics**

Required

* Meaney Ann Rev Neurosci 2001 *[please do not worry about the technical details; seminal review paper by a key pioneer]*
	+ ***You may find the Glossaries useful***
		- Briley et al Euro J of Personality 2018
		- NCBI Genetics Glossary 2018
* Hughes Nature 2014 *[brief non-technical commentary on Dias & Ressler Nature Neurosci 2014]*
* Mukherjee New Yorker 2016b *[science writer’s story about his family, twins, and epigenetics]*

Optional

* Dias & Ressler Nature Neurosci 2014 *[please do not worry about the technical details]*
* Grabitz et al J Cog Neurosci 2017 [logical and methodological issues affecting genetic studies of humans reported in top neuroscience journals]
* Sullivan Biol Psychiatry 2017 [short, entertaining commentary on the demise of candidate gene studies]

**SECTION III: NEUROTICISM / NEGATIVE EMOTIONALITY**

**Module 13: Neuroticism/Negative Emotionality and Psychopathology**

Required

* Barlow et al Clin Psychol Sci 2013
* Shackman et al Psychol Bull 2016 *[page 1280]*
* Smith Nature 2014 *[infographic on the global burden of neuropsychiatric disease]*
* Wheaton 2018 *[blogpost on Wil’s personal experience with anxiety, depression, and getting better over time]*
* Lipka Chronicle of Higher Educ 2018 *[short popular science/academic media piece on anxiety symptoms and disorders among undergraduate and graduate students]; please watch the accompanying video at* [*https://www.chronicle.com/article/Facing-Anxiety/241968*](https://www.chronicle.com/article/Facing-Anxiety/241968) *]*

Optional

* Nutt Washington Post 2018 *[university students are forming mental health clubs]*
* Nutt Washington Post 2018 *[rising rates of depression and anxiety disorders among US youth]*
* CDC Suicide Update 2018 *[current suicide statistics in the US]*
* Reilly Time Magazine 2018 *[anxiety and depression in undergraduates and the growing burden on counseling centers]*
* Denizet-Lewis NY Times Magazine 2017 *[anxiety and depression in teens]*
* Schrobsdorff Time Magazine 2016 [anxiety and depression in teens]
* Morrison Vox 2014 [short essay describing one patient’s experience living with generalized anxiety]
* Orlando et al. Houstonia 2015
* ACHA-National College Health Assessment 2015 *[national survey of undergraduate mental health]*
* Craske et al Nature Disease Primers 2017 *[quick end-to-end primer on the anxiety disorders]*
* Otte et al Nature Disease Primers 2016 *[quick end-to-end primer on major depressive disorder]*
* Clark et al Psychol Sci in the Public Interest 2017 *[comprehensive review of historical and contemporary perspectives on classifying and diagnosing mental illness, with substantial implications for research, clinical practice, public policy, and patient experience; highlights the truth and consequences of different iterations of DSM and RDoC, including the ‘smoke-filled back room’ decisions that led to DSM-5; this is not for the fainthearted, but should be rewarding for those willing to invest the time. EXCELLENT SOURCE MATERIAL FOR FLASH TALKS!]*

**Module 14: Behavioral Inhibition and Psychopathology**

Required

* Fox et al Ann Rev Psychol 2005
* NY Times Magazine article on behavioral inhibition

Optional

* Oler, Fox, Shackman & Kalin 2016 *[mechanistic studies in monkeys and their relevance to understanding BI and social anxiety disorder]*
* Fox & Walker 2015 *[for those hungry to learn more about BI]*
* Kagan et al. Science 1988 *[seminal BI study]*
* Schwartz et al. Science 2003 *[please do not worry about technical aspects of fMRI; seminal BI study]*
* Clauss & Blackford J Amer Acad Child & Adol Psychiatry 2013 *[do not worry about technical aspects of the meta-analysis; for those interested in delving more deeply into BI]*
* Mihalopoulos et al. J Child Psychol & Psychiatry 2015 *[detailed analysis of what makes a cost-effective targeted prevention program]*

**Module 15: Role of the Extended Amygdala in Negative Emotionality, Behavioral Inhibition, and Psychopathology**

Required

* Shackman et al J Exp Psychopathol 2016
* Feinstein et al Curr Biol 2011
* Adolphs Ann NY Acad Sci 2010

Optional

* Feinstein et al 2016 *[this chapter provides a more detailed description of work with Patient SM, including additional descriptions of her real-world trials and tribulations]*
* Fox & Shackman Neurosci Letters in press
* Davis et al Neuropsychopharm 2010 *[seminal review]*
* Fox et al PNAS 2015 *[please do not worry about the technical details]*
* Etkin & Wager Amer J Psychiatry 2007 *[seminal meta-analysis]*
* Davis & Whalen Mol Psychiatry 2001 *[seminal review]*

**Module 16: Splitting Negative Emotionality into its Key Constituents (Part 1)**

Required

* Grupe & Nitschke Nature Rev Neurosci 2013
* La Rosa Buzzfeed 2014 *[entertaining set of what-if and worry-related memes]*

Optional

* MacLeod & Grafton Beh Res & Ther 2016 *[updated review of ABM; make the point that ‘target engagement,’ that is reductions in attentional biases, are an essential ingredient for positive therapeutic effects]*
* Mogg & Bradley Behav Res & Ther 2016 *[comprehensive review of ABM work and anxiety-attention more generally]*
* Mogg, Waters & Bradley Clin Psychol Sci 2017 *[skeptical analysis of the ABM literature with thoughtful methodological recommendations for future work]*

**Module 17: Splitting Negative Emotionality into its Key Constituents (Part 2)**

Required

* Shackman et al Nature Rev Neurosci 2011
* Cavanagh & Shackman J Physiol Paris 2015 *[please do not worry about the finer details of the meta-analysis]*

**SECTION IV: EXTRAVERSION / POSITIVE EMOTIONALITY & CONSTRAINT / SELF-CONTROL**

**Module 18: Positive Emotionality, Self-Control, and Dopamine (Part 1): Depression and Anhedonia**

Required

* Kringelbach & Berridge Sci Amer 2012
* Smith & Marshall Nature Disease Primers 2016 *[infographic on depression]*
* Husain & Roiser Nature Rev Neurosci 2018 *[contemporary science of depression and anhedonia; do not sweat the technical sections on computational models]*

Optional

* Nutt Washington Post 2018 *[university students are forming mental health clubs]*
* Nutt Washington Post 2018 *[rising rates of depression and anxiety disorders among US youth]*
* CDC Suicide Update 2018
* Woolston Nature 2018 *[interviews with graduate students who have battled depression and anxiety]*
* Brosh Hyperbole-And-A-Half 2013 *[amazing blogpost on the author’s experience with depression]*
* Sohn Nature 2018 *[stories of surviving and thriving with depression]*
* Fleming Intell Life Mag 2015 *[journalist hangs out with Kent Berridge for a week; discusses mindfulness, HH the Dalai Lama, scientific progress, and more!]*
* Berridge & Robinson Brain Res Rev 1998 *[seminal early review]*
* Berridge & Robinson Neuron 2015 *[seminal recent review]*
* The Neurocritic DBS RCT 2015 *[popular science blog post on failed randomized clinical trials of deep brain stimulation for major depression]*
* Scult Sci Amer 2016 *[short blog post on the neural circuitry of reward and neurofeedback training]*
* Otte et al Nature Disease Primers 2016 *[quick end-to-end primer on major depressive disorder]*
* Berridge & Robinson Amer Psychol 2016 *[updated mini-review]*
* Zald & Treadway Ann Review Clin Psychol 2017 *[comprehensive recent review]*
* Rizvi et al Neurosci and Biobehav Reviews 2016 *[comprehensive review of paper-and-pencil and behavioral measures of anhedonia]*
* Pizzagalli Ann Rev Clin Psychol 2014

**Module 19: Positive Emotionality, Self-Control, and Dopamine (Part 2): Substance Abuse, Impulse Control Disorders, and Everyday Temptation**

Required

* Lopez et al. Psychol Sci 2014 *[please do not worry about the technical aspects of fMRI or EMA]*
* Hare et al. Sci 2009 *[please do not worry about any of the more technical aspects of this complex neuroeconomics study]*
* Munro Nature 2015 *[infographic on the psychoneurobiology of addiction]*
* Yong The Atlantic 2016 *[brief popular press piece on the neurobiology of impulsivity and risk aversion]*

Optional

* Meurk International J of Drug Policy 2016 *[how do addicts think about addiction]*
* Kotov et al. Psychol Bull 2010 *[meta-analysis of associations between T&P and psychopathology; covered in lecture and worth skimming]*
* Knutson & Greer Philo Trans Royal Soc B 2008 *[review work linking the VS/NAcc to wanting and positive emotionality]*
* Berridge & Robinson Brain Res Rev 1998 *[seminal review]*
* Berridge & Robinson Neuron 2015 *[seminal recent review]*
* Duckworth et al. Perspectives on Psychol Sci 2016 *[highly recommended review focused on strategies for enhancing self-control in the real world; e.g. dieting, planning for retirement, quitting substances, etc.]*
* Lake Slate 2014 *[short popular press piece on the stigma associated with substance abuse and mental illness]*