

# PSY371HIS- HIGHER COGNITIVE PROCESSES

## CONTACT INFORMATION

**Course Instructor:** Professor John Vervaeke

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**Email policy:** Please keep all email to no more than five sentences. I will respond within 48 hours to email, but 72 hours during peek periods, i.e., one week before exam and before essay due dates. I will **not** read email on Saturday or Sundays and these days do not count towards the 48 or 72 hour return time. Please put your course code into the subject line. I will **not** respond to email that does not have a course code in the subject line

## INTRODUCTION

Welcome to PSY 371 Higher Cognitive Processes. In this course we will examine those cognitive processes that are quintessentially the most human. These are those cognitive processes that contribute to our sense of personhood and our personal identity. We identify the most with our capacities for reflection, rationality, self-regulation and self-transcendence. Studying these processes is challenging because they are simultaneously quite abstract and personally and culturally relevant. One way to study these processes would be to survey them, e.g., discusses self-regulation one week or rationality another week. One weakness with this approach is that it misses how tightly these higher cognitive processes causally interact and structurally integrate with each other. This course proposes to study them in a more integrated fashion that captures their cultural and personal relevance while also having an established psychological research tradition. This course will study higher cognitive processes under the aegis of a psychological investigation of wisdom.

## LEARNING OBJECTIVES

In this course you will learn about the experimental and theoretical methods of Cognitive Psychology. You will learn central concepts and constructs used in the study of higher cognitive processes drawn from both the philosophical heritage and current psychological theorizing and experimentation. You will learn to think critically about experiments, theoretical explanations, and the important relationship between theory and data. You will come to a better understanding of the phenomena of higher cognition through a critical examination of the explanations of those phenomena offered by Cognitive Psychology and related disciplines such as Cognitive Science and Neuroscience.

## **OVERALL STRATEGY**

Make sure to do the readings every week. Please note that I will not always be directly lecturing on the readings. I will not test you directly on the readings, but instead, I will expect you to incorporate their contents, as you deem relevant in answering exam questions or in preparing essays. Consider reading recommended readings as you prepare for your essays. Attending lectures is very important, as I will often discuss material not directly in the readings. I recommend coming to see me during office hours to discuss your essay topics and structural outline for you essays.

## **LECTURE AND READING SCHEDULE**

**Note, all readings are recommended reading. I will not be explicitly testing you on them. All of the books are available for immediate electronic purchase. All of the books are quite inexpensive except for the Ferrari anthology. All of the articles are available through your UofT library access. I strongly recommend getting the books and all the articles.**

Week 1 (Jan 11): Introduction. Why study wisdom as a higher cognitive process. Beginning the philosophical background: the Axial Revolution and Socrates. Read Hall Chapters 1 and 2. Read Levonson & Aldwin in Ferrari & Westrate.

Week 2 (Jan 18): Philosophical background continued Plato: inner conflict and a structural theory of wisdom. Read Hall Chapters 1 and 2. Read Walsh. Read Grossman and Kross. Read Sanders and Jeste in Ferrari & Westrate.

Week 3 (Jan 25): Philosophical background: Aristotle: a developmental approach to wisdom – modern dynamical approaches . Read Sternberg (2002) chapters 2,4,5, 7, 11. Read Takahasi in Ferrari & Westrate. Read Ferrari, Westrate and Petro in Ferrari & Westrate.

Week 4 (Feb 1): Finishing the philosophical background – the Stoic, the therapeutic approach, and CBT. Beginning the Psychology of Foolishness: Dweck.

Week 5 (Feb 8): The psychology of foolishness- Perkins and self-organization. Michel and Ayduk – the role of self-regulation. Read Hall chapters 4, 5, and 10.

Week 6 (Feb 15): Rationality, intelligence and cognitive style: the first rationality debate. Hall Chapters 7,8 and 11. Pinker chapter 1-4, Stanovich and West 2000 **First essay due Feb 15<sup>th</sup>. Submit online.**

Week 7 (Feb 22) **No lectures during reading week.**

Weeks 8 (Mar 1) and 9 (Mar 8).. The second, third, and fourth rationality debates. Grossman et. al. (2013.), Pinker chapters 5-9, Read Reidl and Vervaeke pre-print. Read L.A. Paul 2015, Read Callard 2017, Mercier and Sperber 2019.

Weeks 10 (Mar 15) and 11 (March 22). Psychological theories of wisdom. Read McKee and Barber, Meeks and Jeste, Schwartz and Sharpe, Baltes and Staudinger, Staudinger (2008), Ardelt (2004), and Sternberg (1998). Also read in Ferrari & Westrate: Gluck & Bluck , Ardelt, Achenbaum & Oh, and Sternberg. Pinker Chapters 10&11. **Cognitive Bias report due March 15<sup>th</sup>. Submit online**

Week 12 (March 29) and 13 (April 5): Wisdom as enhanced relevance realization within a cognitive meta-style of rationally self-transcending rationality. Read Vervaeke and Ferraro in Ferrari & Westrate. Read Bruineberg & Rietveld. Read Grossman et. al. 2020. **Second essay due March 29<sup>th</sup>. Submit online**

### **Books:**

Hall, Stephen. Wisdom: From Philosophy to Neuroscience.

Ferrari and Westrate, editors, The Scientific Study of Personal Wisdom

Pinker, Steven Rationality

Merchey, Jason Wisdom: a very valuable virtue that cannot be bought.

### **Books that can help with the cognitive bias report:**

Pillai, 2018 *Cognitive Biases: A Pocket Reference Book*  
Priest, Biased: 50 Powerful Cognitive Biases That Impair Our Judgment.  
Musashi, The 25 Cognitive Biases.

### **Articles to be found.**

Andersen, Miller & Vervaeke (2022) Predictive processing and relevance realization, exploring convergent solutions to the frame problem.

Ardelt, M (2004) Wisdom as Expert Knowledge System: A Critical Review of a Contemporary Operationalization of an Ancient Concept.

Baltes, P and Staudinger U, (2000) Wisdom: A Meta-heuristic (pragmatic) to Orchestrate Mind and Virtue Towards Excellence.

Bruineberg & Rietveld (2014). Self-organization, free energy minimization, and optimal grip on a field of affordance.

Callard, A. (2017) Liberal Education and the Possibility of Valuational Progress.

Grossman & Kross (2014). Exploring Solomon's Paradox: Self-distancing Eliminates the Self-Other Asymmetry in Wise Reasoning About Close Relationships in Younger and Older Adults.

Grossman, Na, Varnum, Kitayama & Nisbett (2013) A Route to Well-being: Intelligence vs Wise Reasoning

Grossman et al. (2020) The Science of Wisdom in a Polarized World: Knowns and Unknowns.

Kozhevnikov, M (2007.) Cognitive Styles in the Context of Modern Psychology: Toward an Integrated Framework of Cognitive Styles

McKee, P and Barber, C (1999) On Defining Wisdom

Meeks, T and Jeste, D (2009) Neurobiology of Wisdom: A Literature Overview

Mercier H. & Sperber, D (2019). *Precis of The Enigma of Reason*

Paul, L.A. (2015). *Precis of Transformative Experience*

Reidl, A & Vervaeke, J (pre-print). Rationality and Relevance Realization.

Schwartz B, and Sharpe K (2006) Practical Wisdom: Aristotle Meets Positive Psychology.

Staudinger , U (2008) A Psychology of Wisdom: History and Recent Developments

Sternberg, R. (1999) A Balance Theory of Wisdom.

Walsh, R. (2015) Wise ways of seeing: Wisdom and Perspectives

### **FURTHER BOOKS THAT MIGHT BE USEFUL FOR BACKGROUND WORK FOR THE ESSAYS.**

Stanovich, 2009 What intelligence tests miss

Sternberg, 2003 Wisdom, Intelligence, and Creativity Synthesized.

Sternberg (ed) 1990 Wisdom: Its Nature Origins, and Development.

Sternberg and Jordan 2005 A Handbook of Wisdom: Psychological Perspectives.

Varela, F Ethical Know-how: Action, Wisdom and Cognition

## **EVALUATION**

**Essay 1:** 2000 word essay on the psychological study of some aspect of foolishness. **Due February 15th.** Worth 20%. The essay is an argumentative theoretical essay in which one will critically review the theoretical arguments and empirical data of relevant existing research, and from that construct an integrative argument as to the most plausible conclusion that can be drawn from the critical-integrative review. Foolishness is any form of behaviour that is crucially driven by self-deceptive and self-destructive cognition that is nevertheless cognitively and/or meta-cognitively accessible to modification, i.e., that can be addressed through learning and learning to learn. Foolishness is compulsive and resistant to change, but is nevertheless open to change in a way in which the cognitive agent plays a significant causal role in its own change. 10 independent (of course texts, which can still can be used as sources), from peer reviewed psychology journal, neuroscience journals, and cognitive science journals of the past 10 years is a minimum number of sources that must be used. Books may be used as sources if their authors have published on the topic of their book in peer reviewed journals. Proper APA format including abstract and reference list is mandatory. The abstract must be at least 200 words, which do **not** count towards the word limit.

Here is the rubric that will be used for the essay:

1) 10 marks for choosing and framing a topic.

- 2) 10 marks for coming up with a clear and challenging thesis.
- 3) 20 marks for critically reviewing relevant empirical research
- 4) 20 marks for critically reviewing relevant theoretical debate
- 5) 30 marks for an integrative argument for your thesis.
- 6) 10 marks for proper APA format, abstract and overall style

There is a potential penalty of 10% if relevant class material is not appropriately addressed. This does not apply if you choose a topic for which there has not been lecture material.

**Cognitive Bias Report:** This is worth **10%** and is due on **March 15<sup>th</sup>**. Pick a particular cognitive bias, research it and then keep a journal where you record at least three instances of it occurring in your life. For the report write a 300-word explanation of the bias with appropriate scholarly references. Then write a total of 300-500 words in total for the three instances. Try to describe the context, how you caught yourself in the bias, what your motivational state was, what the phenomenology of the bias was, and what changed in you when you caught the bias. Finally write a 300 word explanation of the relevance of your report to the course. Make sure you have a proper APA bibliography for any sources that you use in the report.

Here is the rubric for the report:

- 1) 25% for a clear and well researched explanation of the cognitive bias.
- 2) 25% for a clear and reflective description of each of the biases.
- 3) 25% for a clear and well-argued explanation of the course relevance of your report.
- 4) 25% for proper citation and bibliography.

**Essay 2:** 3000 word essay on the psychological study of some aspect of wisdom. **Due March 29<sup>th</sup>**. Worth 30%. The essay is an argumentative theoretical essay in which one will critically review the theoretical arguments and empirical data of relevant existing research, and from that construct an integrative argument as to the

most plausible conclusion that can be drawn from the critical-integrative review. This essay can be handled in two ways. The first is as a response to your first essay in which after examining a form of foolishness you will investigate the psychology of forms of ameliorating the foolishness. However, wisdom is more than overcoming foolishness it is also the affordance of flourishing, and therefore you need to discuss how the mechanisms of amelioration could be developed in order to enhance and improve statistically normal human cognition and behaviour. The second way you can do the wisdom essay is by critically reviewing the existing psychological theories of wisdom and providing an integrative argument as to what the best overall psychological account of wisdom is. For this paper you should note how each theory attempt to address how wisdom overcomes foolishness and affords flourishing. 15 independent (of course texts, which can still can be used as sources), from peer reviewed psychology journal, neuroscience journals, and cognitive science journals of the past 10 years is a minimum number of sources that must be used. Books may be used as sources if their authors that have published on the topic of their book in peer reviewed journals. Proper APA format including abstract and reference list is mandatory. The abstract must be at least 200 words, which do **not** count towards the word limit.

Here is the rubric that will be used for the essay:

- 1) 10 marks for choosing and framing a topic.
- 2) 10 marks for coming up with a clear and challenging thesis.
- 3) 20 marks for critically reviewing relevant empirical research
- 4) 20 marks for critically reviewing relevant theoretical debate
- 5) 30 marks for an integrative argument for your thesis.
- 6) 10 marks for proper APA format, abstract and overall style

There is a potential penalty of 10% if relevant class material is not appropriately addressed. This does not apply if you choose a topic for which there has not been lecture material.

### **Final exam**

The final exam is worth 40% of your final mark. The format of the exam is 5 questions. You will answer 3 of the 5 questions. The answers are long essay answers in which you will need to state, develop, and defend a thesis that constitutes your answer to the question. Make sure to incorporate relevant lecture

material into your answers. You may strengthen your answers by including material from your reading or essays, but please indicate clearly that you are doing so. The questions will cover longer thematic arcs, lines of argumentation, and theoretical development that run across several lectures at a time and can connect to several readings.

For the answers the rubric will be the following:

- a) clear statement and explanation of your thesis 10 marks
- b) use of relevant empirical evidence 10 marks
- c) use of relevant course concepts and themes 10 marks
- d) argument for the thesis 10 marks
- e) defense of the thesis 10 marks
- f) logical structure, clarity of style, and good organization of ideas 10 marks.

## **COURSE POLICIES**

**Lateness:** 5% per day up to a maximum of 50% for the essays and report, no lateness allowed for final exam except for medical reasons.

### **Academic Integrity**

All suspected cases of academic dishonesty will be investigated following procedures outlined in the [Code of Behaviour on Academic Matters](https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019) (<https://governingcouncil.utoronto.ca/secretariat/policies/code-behaviour-academic-matters-july-1-2019>). If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, please reach out to me. Note that you are expected to seek out additional information on academic integrity from me or from other institutional resources. For example, to learn more about how to cite and use source material appropriately and for other writing support, see the U of T writing support website at <http://www.writing.utoronto.ca>. Consult the Code of Behaviour on Academic Matters for a complete outline of the University's policy and expectations. For more information, please see [A&S Student Academic Integrity](https://www.artsci.utoronto.ca/current/academic-advising-and-support/student-) (<https://www.artsci.utoronto.ca/current/academic-advising-and-support/student->



[academic-integrity](#)) and the [University of Toronto Website on Academic Integrity \(https://www.academicintegrity.utoronto.ca\)](#).

## **Missed Essays**

### **Missed Assignments/Special Medical Circumstances**

If you become ill and it affects your ability to do your academic work, consult me right away. Normally, I will ask you for documentation in support of your specific medical circumstances. This documentation can be an Absence Declaration (via ACORN) or the University's Verification of Student Illness or Injury (VOI) form. The VOI indicates the impact and severity of the illness, while protecting your privacy about the details of the nature of the illness. If you cannot submit a VOI due to limits on terms of use, you can submit a different form (like a letter from a doctor), as long as it is an original document, and it contains the same information as the VOI (including dates, academic impact, practitioner's signature, phone and registration number). For more information on the VOI, please see <https://registrar.utoronto.ca/policies-and-guidelines/verification-of-illness-or-injury/> For information on Absence Declaration Tool for A&S students, please see <https://www.artsci.utoronto.ca/current/academics/student-absences> If you get a concussion, break your hand, or suffer some other acute injury, you should register with Accessibility Services as soon as possible. Please note that students can only use the Absence Declaration on ACORN *once per semester*. Documentation must be given to me within one week of missing a term test, in any of the forms mentioned above.

**LATENESS PENALTY: 5% per day up to a maximum of 50% off.**

**If you miss the final exam there is nothing that the TAs or I can do for you. You must contact your registrar immediately.**

## **Classroom Behaviour**

Please be respectful of your fellow classmates. Do not do anything that may disturb them such as carrying on a conversation, texting, playing games, checking social media, etc. Such behaviour is unacceptable.

## **Laptop and phone usage**

Technology can support student learning, but it can also become a distraction, to you and those around you. Out of respect for your fellow learners in this class, please refrain from using laptops and/or phones for entertainment or non-class related purposes (e.g. social media, email, surfing the web) during class and do not

display any material on a laptop or phone which may be distracting or offensive to your fellow students. If you know you tend to use laptops or phones for other purposes in class, please sit at the very back of the classroom so that those around you will not be distracted.

### **Lecture recordings and course materials**

Lecture recordings and course materials (including notes) are **not** to be shared in any way beyond enrolled students. Lectures and course materials are the intellectual property of the instructor and should be respected as such. You are not allowed to put course materials into the public domain, sell the materials, or give materials to a person or company that is using them to earn money. The University will support me in asserting and pursuing my rights, and my copyrights, in such matters.

### **Re-marking policy - timeline and protocol**

If you would like to make a case for receiving a different mark on a graded assignment, please note that you have two weeks from the date an assignment is returned to you to submit the assignment for remarking. Absolutely no assignments will be re-graded beyond this time limit. Material submitted for remarking must be accompanied by a one-page written explanation detailing your reasons for why you think you should receive a different grade. Be as specific as possible (e.g. correction of addition errors in calculating a grade, a specific point or step that the grader missed, etc.). Note that in agreeing to resubmit your work for remarking, you are agreeing to a re-evaluation of the entirety of your work; your grade may go up, go down or stay the same.

### **Accommodations:**

#### **Religious accommodation:**

As a student at the University of Toronto, you are part of a diverse community that welcomes and includes students and faculty from a wide range of backgrounds, cultural traditions, and spiritual beliefs. For my part, I will make every reasonable effort to avoid scheduling essays, examinations, or other compulsory activities on religious holy days not captured by statutory holidays. Further to University Policy, if you anticipate being absent from class or missing a major course activity (like a test, or in-class assignment) due to a religious observance, please let me know as early in the course as possible, and with sufficient notice (at least two to three weeks), so that we can work together to make alternate arrangements.

#### **Learning Disability or Accommodation Requirement**

Students with diverse learning styles and needs are welcome in this course. If you have an acute or ongoing disability issue or accommodation need, you should

register with Accessibility Services (AS) ([accessibility.utoronto.ca](http://accessibility.utoronto.ca)) at the beginning of the academic year. Without registration, you will not be able to verify your situation with your instructors, and instructors will not be advised about your accommodation needs. AS will assess your medical situation, develop an accommodation plan with you, and support you in requesting accommodation for your course-work. Remember that the process of accommodation is private: AS will not share details of your condition with any instructor, and your instructors will not reveal that you are registered with AS.

### **Accommodation for Personal Reasons**

There may be times when you are unable to complete course work on time due to non-medical reasons. If you have concerns, speak to me. It is also a very good idea to speak with an advisor in your College Registrar's office; they can support you in requesting extensions or accommodations, and importantly, connect you with other resources on campus for help with your situation.

### **ACADEMIC RESOURCES**

#### **Accessibility Needs:**

(See above, under Learning Disability or Accommodation Requirement)

#### **English Language Learners (ELL) Program**

<https://www.artsci.utoronto.ca/current/academic-advising-and-support/english-language-learning>

ELL offers a range of programs/workshops/resources to assist all Arts & Science students who wish improve their English language skills (including reading, listening, speaking, and writing). Please see their website for more information about these resources.

Programs include:

- the Communication Cafe, which meets weekly at five different times and locations for the first seven weeks of each term for practice with oral skills like class discussion and presentations
- Reading eWriting, an online program that helps students engage course readings more effectively.

## Writing Help

As a student here at the University of Toronto, you are expected to write well. The university provides its students with a number of resources to help them achieve this. For more information on campus writing centres and writing courses, please visit <http://www.writing.utoronto.ca/>.

- More than 60 Advice files on all aspects of academic writing are available at <http://advice.writing.utoronto.ca>
- There is also a series of workshops on different aspects of writing that may be especially helpful for your essays. Check out the dates at: <http://writing.utoronto.ca/writing-plus/>
- **NOTE: Writing Centres offer ONE-ON-ONE consultations – use the schedule at <http://www.writing.utoronto.ca/> to book your appointments for the semester now, as they get filled up quickly!**

## Resources for Writing in APA Style

- Free online resources from APA (e.g., FAQs, tutorials, etc.):
  - <http://www.apa.org/pubs/apastyle/>

## Additional Student Life Resources <http://www.studentlife.utoronto.ca/>

In addition to Accessibility Services, there are many other programs, services, and resources that are available to U of T students to help with every aspect of “Student Life” This includes family resources, academic support, extracurricular activities, and more. Resources of particular interest may include:

- Health & Wellness: <https://studentlife.utoronto.ca/department/health-wellness/>
- Academic Success: <https://studentlife.utoronto.ca/department/academic-success/>.