PSYC 398
Experience Sampling: From Lab to daily life.
Fall Semester 2023
Number of credits: 3
Learning Hours: 3 hours each week
In person

Welcome

This course involves a series of lectures, labs and practical exercises that will help you understand how scientists like me use experience sampling as a tool for understanding how human cognition is organised. To take full advantage of this class, it is important that you plan your work load. Key dates (first day of class, tuition due date, last day to add/drop courses) are important to this goal as these help you plan your studies properly. Please find them at Important Dates.

1.0 Land Acknowledgment

I will begin this syllabus by acknowledging that Queen's is situated on traditional Anishinaabe and Haudenosaunee territory. We are grateful to be able to live, learn and teach on these lands. By acknowledging this traditional territory, we recognize its history and its significance for the Indigenous Peoples who lived and continue to live, upon it.

2.0 Diversity and Inclusion

In this class, it is my goal to ensure that students from all backgrounds have a great learning experience, and that everyone feels valued, respected, and welcome. The class will represent a diversity of individuals, identities, beliefs, backgrounds and experiences. The diversity of experiences that the students bring to this class will be viewed as a resource, strength and benefit. **With this in mind, students are encouraged to speak up and participate during class meetings by sharing their opinions and their questions. In these interactions please show respect for other members of the class.**

Learning Outcomes

To complete this course you will demonstrate your ability to:

- Describe how scientists use to experience sampling as a tool for understanding the human mind.
- Describe the different features of human cognition that experience sampling are useful for understanding.

- Critically evaluate the validity of claims that are made based on studies which use experience sampling studies of human cognition.
- Develop oral and presentation skills.
- Develop writings skills.
- Summarize and communicate research findings in this research domain
- Generate new research questions that can be addressed using experience sampling

Course description

In this class I hope to help you be able to understand how studying cognition using experience sampling can help understand how our thoughts and feelings work, and how this process affords flexible and adaptive behaviour. In the class we will consider studies that show experience sampling is useful because (i) it allows us to understand states of cognition which are not directly related to external events (e.g. the common experience that our mind has wandered from the task at hand), (ii) it provides a method that allows us to examine cognition as it happens in the real world and (iii) because it can help understand the complicated relationship between brain activity and patterns of ongoing thought. To achieve this goal the course is organised into three sections, each of which deal with one of these questions.

PART 1: EXPERIENCE SAMPLING AS A TOOL FOR UNDERSTANDING INTERNAL ATTENTIONAL STATES (WEEKS 2-5).
Many aspects of day-to-day cognition entail people thinking about events that are not present in the immediate environment. Common examples of these are experiences like mind-wandering. As these types of thought are not generated in response to external stimuli, these types of experience are often studied using experience sampling because this approach can reveal features of these experiences that cannot be easily studied using standard experimental approaches (e.g. tasks).

PART 2: EXPERIENCE SAMPLING AS A TOOL FOR UNDERSTANDING COGNITION IN THE REAL WORLD (WEEKS 6-9)
Many features of human cognition that emerge naturally in the real world are hard to study in the laboratory. Experience sampling can be easily used to study real world cognition via smart phones to provide in the moment descriptions of how people think in different day to day situations. This method allows experience sampling to provide a window into cognition in a situation where it normally occurs.

PART 3: EXPERIENCE SAMPLING AS A TOOL TO UNDERSTAND BRAIN ACTIVITY
Although there are now many different ways that scientists can understand brain activity in real time, our understanding of how brain activity gives rise to cognition still contains many open questions. Experience sampling can help close these gaps because this method can be used in

conjunction with the methods from cognitive neuroscience to provide insight into the different features of cognition that particular features of brain activity are related to.

Weekly organisation

Each week there are two sessions for this course. We will use these sessions in a flexible manner but will broadly breakdown into classes where we discuss the utility of experience sampling techniques as a method for understanding cognition. We will also have practical session that help you understand how to In these sessions you will also participate in studies in which experience sampling is used so that you get a sense of how the method works, and we will analyze these data for the practical sessions. There is no text book for this class but for each week I have selected a paper that accompanies the lecture. As part of your assessment each week you will need to submit a three sentence summary of something that you found interesting about this paper.

Evaluation

The course work combines continuous assessment based on attendance and the reading, practical work that is done in the class, student presentations and essay on conceptual questions that the class deals with. These are described in detail below:

Course Attendance:	10%
Weekly post on reading:	10%
Presentations:	20%
Practical's:	30%
Essays:	30%

Attendance

This is an interactive course and so part of your mark comes from your attendance and contribution. This an essential requirement and we will work with students with disabilities to support them in fulfilling it. You will get .5 point for every class attended this will be capped at a maximum of 10%.

Weekly post on course reading

You will be expected to read the material covered in class each week. To this end you will be required to make a three sentence post on the reading covered each week (up to a maximum of 10). You will receive a mark for each post that is submitted in time. The content of these posts will not be marked as long as they cover information relevant to the class. This an essential requirement and we will work with students with disabilities to support them in fulfilling it

Presentations

You will give two pre-recorded presentations in this course. The first one will take place in Week 5 and you will each give a short five minute presentation on a paper that is relevant to the course (i.e. uses experience sampling) and that you have chosen. The second presentation will take place in Week 12 and you will give a short description of an experience sampling study that you would like to perform. In these talks you should focus on being clear and concise. You don't have to use power point to give the talks but you may find that it is easier to give a clear talk. For these talks you will have 5 minutes to present and you will penalised if you do not complete the talk in this time window, so make sure you practice. This an essential requirement and we will work with students with disabilities to support them in fulfilling it.

Essays

You will also complete three essays (one for each section in the class). These essays will be 500 words long and will address a specific question relevant to each section. This an essential requirement and we will work with students with disabilities to support them in fulfilling it. Each essay will receive a maximum of 5 marks based on the rubric below:

Each essay is 500 words long and marked out of 5
- 1 points for submission on time.
- 2 point for correct grammar and presentation of references.
- Up to 2 points for originality and style.

Essay I. Why is experience sampling useful for understanding private states?

Essay II. Why is experience sampling helpful for understanding cognition in the real world?

Essay III. Why is experience sampling useful for making sense of brain activity?

Practical Exercises

You will also complete three practical sessions (one for each section in the class). These exercises will reflect a specific method relevant to each section of the course. This an essential requirement and we will work with students with disabilities to support them in fulfilling it. Each practical is worth 10 points.

These are the topics that each practical will cover:

Practical I. What is the relationship between mind-wandering and lecture comprehension

Practical II. What are the association between patterns of thought and activities in daily life

Practical III. Functional connectivity and meta-analytic investigation of the default mode network

READING LIST AND COURSE SCHEDULE

Section	Week	Practical	Lecture	Reading	Course work
	1	Welcome!	Studying cognition using experience sampling	Smallwood et al., 2021, *IScience*	
Experience sampling to understand private mental states	2	Data collection: Ongoing experience during videos	The wandering mind– experience sampling as a tool for understanding internal experience.	Smallwood & Schooler (2015). *Annual Review of Psychology.*	
	3	Extracting the experience sampling data	Mind-wandering and executive failure – experience sampling and cognitive control	McVay & Kane (2010). *Psychological Bulletin.* Smallwood (2010) Reply to McVay and Kane. *Psychological Bulletin.*	
	4	Linking experience to comprehension	Mind-wandering, lapses and mindless reading	Smallwood, McSpadden & Schooler (2008) *Memory and Cognition.*	Essay I
	5	Finalising Practical I	Finalising Practical I	NO READING	Practical I
Experience Sampling to understand thinking in the real world	6	Setting up Samply	The importance of measuring cognition in the real world	Kingstone (2020). *Canadian Journal of Experimental Psychology*	Presentations I
	7	Extraction of mind logger data and collation into a group sheet	Similarities and differences between cognition in the lab and daily life	Ho et al., (2020). *Neuroimage*	
	8	Comparing thought patterns in different activities	Links between thinking in the real world and ongoing activities	McKeown et al., (2020) *Proceedings of the National Academy of Sciences*	Essay II
Experience sampling to understand brain activity	9	Finalising Practical II	Resting state and the default mode network	Smallwood et al., (2021) Nature Reviews Neuroscience	Practical II
	10	Introduction to functional connectivity	The neural basis of introspective states	Konu et al., (2020) *Neuroimage*	Presentation 2
	11	Introduction to Meta-analysis	Experience Sampling: Beyond Internal states	Turnbull et al., (2019) *Nature Communications*	Essay III
	12	Finalising Practical III	Finalising Practical III	NO READING	Practical III

READING LIST (in order of lectures)

Smallwood, J., Turnbull, A., Wang, H. T., Ho, N. S., Poerio, G. L., Karapanagiotidis, T., ... & Jefferies, E. (2021). The neural correlates of ongoing conscious thought. *IScience*, *24*(3), 102132.

Smallwood, Jonathan, and Jonathan W. Schooler. "The science of mind wandering: empirically navigating the stream of consciousness." *Annual review of psychology* (2015): 487-518.

McVay, Jennifer C., and Michael J. Kane. (2010) "Does mind wandering reflect executive function or executive failure? Comment on Smallwood and Schooler (2006) and Watkins (2008)." *Psychological Bulletin*
Smallwood, Jonathan. "Why the global availability of mind wandering necessitates resource competition: Reply to McVay and Kane (2010)." *Psychological Bulletin*

Smallwood, Jonathan, Merrill McSpadden, and Jonathan W. Schooler. "When attention matters: The curious incident of the wandering mind." *Memory & Cognition* 36.6 (2008): 1144-1150.

Kingstone, Alan. "Everyday human cognition and behaviour." *Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale* 74.4 (2020): 267.

Ho, N., et al., (2020) "Facing up to the wandering mind: Patterns of off-task laboratory thought are associated with stronger neural recruitment of right fusiform cortex while processing facial stimuli." *Neuroimage* 214 (2020): 116765

Mckeown, B., et al. "The impact of social isolation and changes in work patterns on ongoing thought during the first COVID-19 lockdown in the United Kingdom." *Proceedings of the National Academy of Sciences*

Turnbull, Adam, et al. "Age-related changes in ongoing thought relate to external context and individual cognition." *Consciousness and cognition* 96 (2021): 103226.

Martinon, Léa M., et al. "The disentanglement of the neural and experiential complexity of self-generated thoughts: A users guide to combining experience sampling with neuroimaging data." *NeuroImage* 192 (2019): 15-25.

Konu, Delali, et al. "A role for the ventromedial prefrontal cortex in self-generated episodic social cognition." *NeuroImage* 218 (2020): 116977.

Turnbull, Adam, et al. "Left dorsolateral prefrontal cortex supports context-dependent prioritisation of off-task thought." *Nature communications* 10.1 (2019): 1-10.

Suggested Time Commitment

In this course, you should expect to invest on average 8 to 10 hours per week. This will include the time you spend in class or lab/tutorial, studying course material, and completing weekly homework or preparing for your larger assignments and exams. You are encouraged to use a term at a glance and a weekly study schedule (visit SASS) that distributes the 8-10 hours per week and avoid 'cramming'. This way you will be more likely to complete the course successfully and remember what you learned longer.

Building a Classroom Community

University is a place to share, question, and challenge ideas. Each student brings a different set of lived experiences. You can help to create a safer, more respectful classroom community for learners by following these guidelines:

- Make a personal commitment to learn about, understand, and support your peers.
- Assume the best of others and expect the best of them.
- Recognize and value the experiences, abilities, and knowledge each person brings to the course.
- Acknowledge the impact of oppression on other people's lives and make sure your words and tone are respectful and inclusive.
- Encourage others to develop and share their ideas.
- Pay close attention to what your peers say/write before you respond. Think through and re-read what you have written before you post online or send your comments to others.
- Be open to having your ideas challenged and challenge others with the intent of facilitating growth.
- Look for opportunities to agree with one another, building on and intentionally referencing peers' thoughts and ideas; disagree with ideas without making personal attacks, demeaning, or embarrassing others.

Fostering Accessibility

All of us have a shared responsibility for fostering accessibility and promoting meaningful inclusion of those with disabilities. The Accessibility Hub at Queen's University's Human Rights & Equity Office offer a host of tutorials that provide us all with practical tips for:

- creating accessible documents, e.g., to submit to your teaching team or share with peers in peer feedback activities/in a presentation,
- emails, e.g., while communicating with group members or your teaching team, and
- meeting practices (e.g., in tutorials/labs/seminars or virtual meetings.

Name/Pronoun

If, for whatever reason, you wish to change how your name appears in onQ and/or on class lists, please follow these steps. You may also use this process to add your pronouns to the appearance of your name.

1. Log into SOLUS.
2. Click on Personal Information tab.
3. Click on the Names tab

4. Click on the Add New Name tab
5. Choose Preferred from the Name Type drop down menu
6. Enter the name you would like to appear in onQ and/or on class lists.
7. Click Save.

Please allow 24 to 48 hours for your name to be registered within the system. If you have further questions or concerns, please contact ITS at Queen's University.

Grading Scheme and Grading Method

All components of this course will receive numerical percentage marks. The final grade you receive for the course will be derived by converting your numerical course average to a letter grade according to Queen's Official Grade Conversion Scale:

Queen's Official Grade Conversion Scale

Grade	Numerical Course Average (Range)
A+	90-100
A	85-89
A-	80-84
B+	77-79
B	73-76
B-	70-72
C+	67-69
C	63-66
C-	60-62
D+	57-59
D	53-56
D-	50-52
F	49 and below

Questions about the Course and Contacting the Teaching Team
If you have questions about the class please contact the teaching team (Professor or TA). If you have questions about accommodations please see below.

Course Announcements
All course announcements will be made on the on-Q site associated with the class and via email to the class.

Accommodations for Disabilities
Queen's University is committed to achieving full accessibility for people with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all their academic activities. The

Senate Policy for Accommodations for Students with Disabilities was approved at Senate in November 2016. If you are a student with a disability and think you may need academic accommodations, you are strongly encouraged to contact the **Queen's Student Accessibility Services (QSAS)** and register as early as possible. For more information, including important deadlines, please visit the QSAS website.

Academic Consideration for Students in Extenuating Circumstances
Academic consideration is a process for the university community to provide a compassionate response to assist students experiencing unforeseen, short-term extenuating circumstances that may impact or impede a student's ability to complete their academics. This may include but is not limited to:

- Short-term physical or mental health issues (e.g., stomach flu, pneumonia, COVID diagnosis, vaccination, etc.)
- Responses to traumatic events (e.g., Death of a loved one, divorce, sexual assault, social injustice, etc.)
- Requirements by law or public health authorities (e.g., court date, isolation due to COVID exposure, etc.)

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances. For more information, please see the Senate Policy on Academic Consideration for Students in Extenuating Circumstances.

Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. Arts and Science undergraduate students can find the Faculty of Arts and Science protocol and the portal where a request can be submitted. Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

If you need to request academic consideration for this course, you will be required to provide the name and email address of the instructor/coordinator. Please use the following contact information:

<div align="center">Tara Karasewich –psyc.accom@queensu.ca</div>

Students are encouraged to submit requests as soon as the need becomes apparent and to contact their Professors/Course Coordinators as soon as possible once Consideration has been granted. Any delay in contact may limit the Consideration options available.

For more information on the Academic Consideration process, what is and is not an extenuating circumstance, and to submit an Academic Consideration request, please see our website.

Academic Integrity

Turnitin Statement
This course uses Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely to detect plagiarism.
Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. Turnitin compares submitted files against its extensive database of content, and produces a similarity report and a similarity score for each assignment. A similarity score is the percentage of a document that is similar to content held within the database. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to select the authenticity of work as a part of a larger process.

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