

**BRYANA A. S. THIERET**  
[ORCID](#) | [Google Scholar](#) | [ResearchGate](#)  
bathie20@stlawu.edu  
(240) 409-9493

## **EDUCATION**

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St. Lawrence University, Canton NY  
Bachelor of Science, Anticipated May 2024  
Major: Psychology and Statistics

## **ACADEMIC HONORS & AFFILIATIONS**

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St. Lawrence University Summer Fellowship 2023 - \$2,900.00 to conduct research  
Susan Beucher Cady Prize Recipient 2023  
2022 Stanley J. Weiss Memorial for Experimental Psychology Grant - \$1,000.00  
Scholar, Ronald E. McNair Post-Baccalaureate Achievement Program  
Scholar, NSF Liberal Arts Science Program Scholarship - \$6,750.00 per year  
Recipient, Sesquicentennial Merit Scholarship - \$24,000.00 per year

## **RESEARCH INTERESTS**

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Early-Life Stress Animal Models	Statistical Analyses using RStudio
Impulsive Action and Choice Behavior	Data Visualization through ggplot2
Effects of Adverse Childhood Events	Frequentist and Bayesian approaches

## **RESEARCH EXPERIENCE**

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### **Independent Senior Year Research**

#### ***Impulsivity in Early-Life Stress Paradigms***

St. Lawrence University, Faculty Mentor: Dr. Adam E. Fox, September 2023 – Present  
Reanalyzing individual data sets with the same statistical criteria from maternal separation, LBN, and scarcity models measuring impulsivity. This research is to better understand the mixed results found in early-life stress models when measuring impulsivity. Individual statistical analyses will be conducted through RStudio (Quarto) and will be used to show the process of elimination and choice of final model.

### **SLU Fellowship Summer Research**

#### ***Reversing the Effects of The Limited Bedding and Nesting Paradigm Through Environmental Enrichment***

St. Lawrence University, Faculty Mentor: Dr. Adam E. Fox, January 2023 – Present  
Role: Lead Student Researcher

Created a research proposal and IACUC proposal to conduct research exploring if the long-term effects of the LBN paradigm, a model for chronic early-life stress, can be reversed through environmental enrichment. This research was later approved and funded through the SLU Fellowship summer research committee. In the summer we conducted a rotarod task, elevated plus maze, and delay discounting task. In the fall we did a temporal bisection task, and DRL schedule. I will analyze all data collected using multilevel modeling to account for repeated measures testing done.

**Student Researcher**

***Pre-crastination and Delay Discounting in rats***

Learning and Behavior course with Lab, St. Lawrence University, Professor: Dr. Adam E. Fox,  
January 2023 – May 2023

Role: Teaching Assistant

Clicker trained two rats to roll a marble from a holder divot into a “goal” divot. This required patience and multiple training sessions weekly.

**Student Researcher**

***Pre-crastination and Delay Discounting***

Experimental Analysis of Behavior Lab, St. Lawrence University, Faculty Mentor: Dr. Adam E. Fox, January 2023 – May 2023

Role: Lab Member Assisting on Senior Year Project

Helped to set up, instruct, and collect data for the replication of the Bucket Study at St. Lawrence University.

**Student Researcher**

***Impact of High-Fat Diet and Exercise on Impulsive Choice and Action in Wistar rats***

Experimental Analysis of Behavior Lab, St. Lawrence University, Faculty Mentor: Dr. Adam Fox, January 2023 – May 2023

Role: Lab Member Assisting on Senior Year Project

Helped to exercise the rats in powered wheels and weigh and feed specific diets of Crisco and regular rodent chow.

**Student Researcher**

***Timing and Delay Discounting in Attention-Deficit Hyperactivity Disorder: A Translational Approach***

St. Lawrence University, Faculty Mentor: Dr. Adam Fox, February 2023 – March 2023

Role: Programmer and Data Analyst

Coded multiple programs in Python that extracted data from MED-PC txt sheets for a delay discounting task where impulsive action needed to be analyzed within the task. I first created a program to take all events and corresponding time categorized by rat, session (1-3), delay (5, 10, 15, 20, 30, 40), and group (SHR, WKY, WI). I then created another program to find response rate categorized the same way as mentioned above. Lastly, I created a program to find response gradients across each delay by group. With these data files I created graphs in RStudio using ggplot2 to visually show the findings.

**McNair Scholars Program Research**

***Impulsivity and Learning in the Limited Bedding Paradigm as a Model for Chronic Early-Life Stress***

St. Lawrence University, Faculty Mentor: Dr. Adam Fox, December 2021 – November 2022

Role: Lead Student Researcher

Researcher of project which entailed creating a proposal for the limited bedding and nesting (LBN) paradigm and discussed questions and concerns of the research with the IACUC. Over the summer a rotarod task, open-field task, 3-chamber social task, elevated

plus maze, marble burying task, and y maze were conducted. In the Fall, lever press learning, delay discounting, and Differential Reinforcement of Low Rates (DRL) schedule were done to evaluate rate of learning and impulsive choice and action. Results after analyses showed LBN rats displayed less social behavior in the 3-chamber social task, learned at a slower rate compared to the controls, and lever pressed less on the fixed interval 8 schedule. There were no differences in preference for the smaller-sooner reinforcer over the larger-later in the delay discounting task. Impulsive action in the DRL task showed at the 5-second delay higher bursts of lever pressing compared to the control group but was reversed showing slower response to lever press for both 15 and 30 s delays.

### **Student Researcher**

#### ***Timing and Impulsive Choice in the FMR1 Knockout Rat***

Experimental Analysis of Behavior Lab, St. Lawrence University, Faculty Mentor: Dr. Adam Fox, January 2022 – August 2022

Role: Lab Member Assisting on Senior Year Project (January 2022 – May 2022), Lead Student Researcher (June 2022 – August 2022)

In the Spring of 2022, we conducted a time perception task, delay discounting task, and Water Morris Maze in FMR1 Knockout (KO) rats as a model for Fragile X Syndrome. I put rats in and removed rats from operant chambers, weighed and fed rats to 85% of their free-feeding weight, took apart and cleaned operant chambers, replaced broken parts in operant chamber, analyzed data from operant chamber tasks through RStudio, helped conduct Water Morris Maze, and worked with other lab members to make sure each rat was run in the operant chambers and fed each day. Later in the Summer of 2022, a progressive ratio task and short-term memory task were completed. Overall, we found that the KO group was more impulsive compared to the control and less sensitive to differences in perception of time. In addition, KO rats were more accurate in the short-term memory task compared to control animals.

### **Student Researcher**

#### ***The Relationship between Early Life Adversity, Impulsive Choice and Risky Choice***

Experimental Analysis of Behavior Lab, St. Lawrence University, Faculty Mentor: Dr. Adam Fox, June 2022 – August 2022

Role: Lab Member Assisting on Lab Project

Created a survey through Qualtrics that evaluated adverse childhood experiences, benevolent childhood experiences, impulsivity, and overall risk-taking behavior. The survey was distributed through Amazon Mechanical Turk to see if there is a significant difference in impulsivity between individuals who have experienced adverse childhood events and those who have not.

### **Volunteer Research Assistant**

#### ***Integrating Choice and Interest During Academic Demands in Children with Autism Spectrum Disorder to Decrease Escape Maintained Problem Behavior***

St. Lawrence University, Faculty Mentor: Dr. Adam Fox, March–May 2022

Role: Observational Data Collector

Observational data collector counting disruptive behaviors for children with autism spectrum disorder in a local elementary special ed classroom. Research investigated reducing escape and disruptive behavior in academic settings by implementing rewards that the children were specifically interested in receiving. Multiple children were evaluated presenting different escape and disruptive behaviors such as screaming, crying, eloping, aggression, dropping, self-harm, and more.

## PEER-REVIEWED CONFERENCE PRESENTATIONS

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Thieret, B. A. S. & Fox, A. E. (2023, August 3-5). *Learning and Memory in The Limited Bedding and Nesting Paradigm* [Poster presentation]. American Psychological Association Annual Conference, D.C., United States.

<https://www.xcdsystem.com/apa/program/pbf12ke/index.cfm?pgid=760>

Thieret, B. A. S., DeCoteau, W. E. & Fox, A. E. (2023, May 25-29). *Choice, timing, motivation, and memory in the FMRI KO rat* [Poster presentation]. Association for Behavior Analysis International Annual Conference, Denver, CO, United States.

[https://www.abainternational.org/events/program-details/event-detail.aspx?sid=82739&by=ByArea#s206G\\_106](https://www.abainternational.org/events/program-details/event-detail.aspx?sid=82739&by=ByArea#s206G_106)

Thieret, B. A. S. & Fox, A. E. (2023, May 25-26). *Learning in the Limited Bedding and Nesting Paradigm* [Poster presentation]. Society of Quantitative Analysis of Behavior Conference, Denver, CO, United States.

<https://www.sqab.org/conference#:~:text=viewing%20and%20download-,here,->

Thieret, B. A. S., Wilson, K., Bergeron, J., Fox, A. E. (2023, March 2-4). *Impulsive Choice and Action in the Limited Bedding and Nesting Paradigm* [Poster presentation]. Eastern Psychological Association Annual Conference, Boston, MA, United States.

[https://www.easternpsychological.org/files/DOCUMENTLIBRARY/EPA-Program\\_1-30-2023\\_FINAL.pdf](https://www.easternpsychological.org/files/DOCUMENTLIBRARY/EPA-Program_1-30-2023_FINAL.pdf)

Fox, A. E., Thieret, B. A. S., DeCoteau, W. E. (2023, March 2-4). *Characterizing Operant Behavior in the FMRI Knockout Rat* [Altered States]. Eastern Psychological Association Annual Conference, Boston, MA, United States.

[https://www.easternpsychological.org/files/DOCUMENTLIBRARY/EPA-Program\\_1-30-2023\\_FINAL.pdf](https://www.easternpsychological.org/files/DOCUMENTLIBRARY/EPA-Program_1-30-2023_FINAL.pdf)

Cooper, A., Thieret, B., Tobias-Wallingford, H., DeCoteau, W. E., Fox, A. E. (2022, May 26-28). *Timing and Impulsive Choice in the FMRI Knockout Rat* [Poster presentation]. Society of Quantitative Analysis of Behavior Conference, Boston, MA, United States.

<https://www.sqab.org/programs/2022.pdf>

## PUBLICATION

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Fox, A. E., Nicholson, A. M., Singha, D., Thieret, B. A. S., Ortiz, M., Visser, E. J. (2023). Timing and delay discounting in attention-deficit hyperactivity disorder: A translational approach. *Developmental Psychobiology*, 65(5). <https://doi.org/10.1002/dev.22399>

## **PAPERS IN PREPARATION**

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**Impulsive Choice and Action in the Limited Bedding and Nesting Paradigm as a Model for Chronic Early-Life Stress**

Authors: Bryana A. S. Thieret, Jessica Chapman, Adam E. Fox

This research conducted between June and December 2022.

**The Behavioral Effects of Extra Enrichment on Limited Bedding and Nesting rats**

Authors: Bryana A. S. Thieret & Adam E. Fox

This research was started in the summer of '23 where some tasks were able to be completed and other components of the study are to be concluded during the fall of 2023.

## **WORK EXPERIENCE**

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**Teaching Assistant**, Learning and Behavior course with Lab, St. Lawrence University,  
Professor: Dr. Adam Fox, January 2023 – Present

Weigh and feed rats that are being used for research in the lab along with helping students become comfortable with handling rats and the operant chambers.

**Math Tutor**, Career Connections - Math and Reading Program, St. Lawrence University,  
Program Director: Geoffrey Falen, October 2022 – Present

Working with local school children enrolled in grades 3–9 providing weekly individualized help primarily in math and other subjects as requested.

**Lab Assistant**, Vivarium Animal Care, St. Lawrence University, Instructor: Liz MacDougall,  
June 2022 – August 2022

Provided daily care for the rats in the vivarium which included: changing bedding and water bottles, feeding, replacing water, checking room temperature/humidity, and checking overall animal health.

**Amazon Packer**, Baltimore City MD, April 2021 – Present

Full-time AFE packer on winter, spring, and summer breaks.

**Acrobatic Gymnastics Assistant Coach**, LeeAnn Lenhart, Eldersburg MD, June 2019 – August 2020

Assistant coach for acrobatic gymnastics (retired National Team Member for acrobatic gymnastics in the US). I spotted skills, created dance routines, and corrected dance working with individuals between the ages of 7-18 for 18 hours each week.

## **CAMPUS ACTIVITIES**

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**Dancer**, Performance and Communication Arts Department Dance Concerts, St. Lawrence University, Fall 2021, Spring 2022, Fall 2022

Selected as dancer for ensemble performances directed by Jessica Madden

**Member**, Advocates Program, St. Lawrence University, March 19-21 2021

Participated in campus activities to increase awareness about and preventing acts of sexual violence, including sexual assault, relationship violence, and stalking. Provide

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support to survivors of sexual violence, including referrals to campus and community resources. Participated in bystander awareness training by the Advocates program at St. Lawrence University.

## **VOLUNTEER SERVICE**

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**Campus Kitchens Project**, St. Lawrence University, Canton NY, June 2022 – August 2022  
Preparing, cooking, and distributing meals to the local community each week.

**Day of Service Event**, Canton Free Library, Canton NY, April 2022  
Created and presented a math activity for local Girl Scouts between 6-7 years old to promote excitement for STEM fields.

## **TRAINING**

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Collaborative Institutional Training Initiative (CITI Program): Research, Ethics, and Compliance  
Training courses:

- All Researchers
- Social-Behavioral-Educational Student Researchers; Internet-Based Research – SBE
- Research with Children, Research in Public Elementary and Secondary Schools – SBE
- Working with Rats in Research Settings
- Working with the IACUC

## **SKILLS**

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**Statistical Programs:** Microsoft Excel, SPSS, Jamovi, and RStudio

**Computer Programming Languages:** LaTeX, RStudio, Python, and Java

**Computer Processor Programs:** PyCharm, Processing, and IntelliJ

**Data Aggregation:** Python and Java

**Animal Research Experience:** Rats - sexing (PND 2), weaning, and pair housing

**Proficient in:** Microsoft Word, PowerPoint, and NCH Audacity

## **PROFESSIONAL SOCIETY MEMBERSHIPS**

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Society of Eastern Psychological Association

Society of Quantitative Analysis of Behavior

Association for Behavior Analysis International

Society of Clinical Child and Adolescent Psychology Division 53 of the American Psychological Association

American Psychological Association