Remy Beauregard
FQ '24 Research Fellows Program – ECN 199
Notes on success

Instructor notes:

This quarter, I worked with two highly motivated undergraduate research fellows, Simon Ma and Yiheng Xiao, interested in Behavioral and Experimental Economics. The motivation for my offering a fellows group was to receive feedback on my ongoing experimental project *Peer Effects in Novel Strategy Diffusion,* which explores how artificially induced, randomized peer identity changes participant willingness to implement a novel strategy for a laboratory task. I had received positive feedback on the general design from faculty and visiting scholars but thought the project and area of literature fit well with the goals of the research fellow program. However, I realized that undergrad students interested in my project would not have much experience running experiments themselves, so would first need a stronger background in experimental Economics. As such, I trained my fellows to give substantive feedback on experiments in Economics by working with them to design experiments of their own.

My first goal when working with my undergraduate fellows was to establish a firm understanding and meta-understanding of the experimental literature on peer effects in Economics. As this literature is notoriously large, I thought it a suitable environment to hone literature review skills and allow my students to hunt for a research question of their own. During the first several weeks of the program, I gave my students one or two well-published experimental papers on peer effects to read and discuss as a group. I encouraged students to not get lost in confusing econometric specifications or theory, but to instead focus on the critical parts of the paper: what question(s) it was asking, how it was answering that question, what the answer was to that question. Here, I pushed my students to more deeply consider the design of experiments and the operational choices the researchers made: how was a peer precisely defined in this context? What implications did that have for interpretation of its results? Where was the randomization and causality coming from in the authors' design? Did it have any shortcomings? I remember one week we spent almost half the session interrogating two seemingly simple questions: *what is a peer?* and *what is an effect?* This line of questioning would become common in our review of the literature in future weeks. For these days, I would typically begin the discussion by asking fellows their overall thoughts on the assigned papers, after which we would have a back-and-forth discussion about the various features and findings of the papers, noting specifically definitions, methods, and results. In later weeks, I also had fellows select their own papers on peer effects to present and discuss in the group to give a broader sense of the available literature on the topic.

I also wanted to emphasize the importance of a meta-understanding of the literature to my students: the difference between a good experimental paper and a great one. Along with the difficulty of publication in general, we discussed the features of a top 5 paper that give it a general appeal to economists of all subfields. In addition to the design and results of the papers we read, I pushed my fellows to consider the broader implications, both for theory and for applied work, of the results we were reading, understanding why a particular paper may have had the impact and publication result it did. In this way, I hoped to have students understand the importance of both good design and good framing when motivating an experiment: a paper that both spoke to a universal question that interested many and then answered that question in a robust, clean, sensible way. Both of my students expressed strong interest in continuing their Economics education in graduate school, so I believed this emphasis on meta-understanding, beyond a typical undergraduate literature review, would be beneficial to their own future work.

Following our investigation of the literature, I had my fellows spend the next few weeks designing experiments of their own. The scope was quite broad, anything related to peer effects we had been considering all quarter. I encouraged both students to review the literature we had read and seek out new papers on questions they found interesting, trying to find areas where new questions could be asked or old questions could be asked in a new way. Each week, fellows presented updates on their designs, including changes to operational definitions, cited literature, and (general) plans for estimation methods. Realizing that students had less of a background in causal estimation methods than I was expecting (ECN102 and 140 were prerequisites), we spent part of one week's meeting going over regression discontinuity designs when discussing Dahl, Løken, & Mogstad (2014). We wrote out the estimating equation and went through the source of randomization that allowed for causal interpretation, which we then compared to other standard methods like DiD and IV. While students may have seen these concepts discussed theoretically in ECN102 and 140, I think this applied setting was helpful in solidifying how the methods are deployed in practice.

For the fellows' experiments, I also placed strong emphasis on asking a precise and *feasible* question with an experiment. Both fellows quickly identified an area of interest that related to peer effects but had a bit more trouble narrowing down a particular question that could be asked and

answered precisely. Over several later weeks, we honed and refined both research questions and designs and discussed feasibility of estimation and implementation. We discussed ethical constraints stemming from IRB and organizational partners, and the tradeoffs of a complete design and a feasible design. By Week 10, both students had identified a specific, well-motivated research question that could be asked and answered with an experiment that could actually run in the future. I think both students grew to appreciate the difficulty and power of experiments and importance of running good, clean experiments.

Throughout the process of having fellows design their own experiments, I interjected details of my own project design or literature motivation for students. For Week 9, I offered fellows the same description of my own experimental design that I had been asking them to prepare for the previous weeks: literature motivation, precise operational definitions, randomization and treatment design, estimation methodology, implication of results, and broad theoretical framing. Both fellows asked valuable questions and gave me helpful feedback on my design far beyond their questions when I first described it Week 1 at the start of the program. I think my method of "training to critique" was very successful and helped me identify parts of the experiment I had not previously considered.

Finally, during Week 10 I had my students prepare 5-6 slide, 10-15 minute presentations on their research design and present to the group. These presentations included a literature review, discussion of theoretical motivation and policy implication, proposed experimental design, and a (short) notion of estimation methodology with hypotheses. Both students delivered a compelling, well-motivated presentation with strong intellectual and methodological merit that, as discussed above, I think has scope to run as a real experiment in the future. Fellows even took questions about their designs after the presentation in the style of a real research seminar. At my encouragement, fellows also attended the undergraduate honors thesis presentations, with one also attending department seminars. In addition to their own research designs, I think the fellows gained an appreciation for the research process and a confidence to engage with graduate-level research, both of which will serve them well in their own future graduate work. I was extremely encouraged and pleased with the feedback my fellows gave at the conclusion of the program and hope to be able to offer such a program again in the future.

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Curriculum breakdown:

Assigned reading:

- *Peer Effects with Random Assignment: Results for Dartmouth Roommates* – Sacerdote, QJE (2001)
- *Clean Evidence of Peer Effects* – Falk and Ichino, JLE (2006)
- *Peer Effects in Program Participation* – Dahl, Løken, & Mogstad, AER (2014)

Weeks breakdown:

- Week 1: introductions
- Weeks 2-4: assigned reading & discussion
    - Weeks 3-4: fellows select & discuss an additional paper of their choice
- Weeks 5-8: development of research question and experimental design
    - Goal: 2-3 page document with:
        - Literature motivation (2-3 papers)
        - Operational definitions
        - Details of experiment
        - Hypotheses for results
- Week 9: discussion of Remy's experimental design
- Week 10: fellow presentations
    - 5-6 slides, 10-15 minutes each
    - (Short) Q&A portion following presentation

Student testimonials:

[1] *With mentor Remy's guidance, we worked through each stage of the research process, from reading past literature on related topics to developing and presenting my own research proposal. As a group, we read four prominent research papers on peer effects, and I found an additional paper to read for my proposal. Each step of the process was challenging as everything was new to me, but it has proven to be a rewarding endeavor as I prepare for graduate programs. The program went smoothly and productively, and exceeded my expectations in learning.*

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One of the memorable moments in the program was the process of coming up with my own research topic. Initially, I was overwhelmed by all of the possibilities, but after discussing my ideas and narrowing the focus down with Remy, I landed on a question that resonated with me. With my tutoring experience at the AATC, I decided to look into the effectiveness in diverse tutor pairing on shift. It was thrilling to realize that I could “talk” and experience economics at the research level and contribute at all to an ongoing academic conversation.

Remy highly recommended that we attend the Senior Thesis presentation, and this turned out to be another highlight of my experience. Among the many fascinating presentations, another memorable moment for me was being introduced to the synthetic control method, a technique that amazed me when I was listening in attendance. I was intrigued by how it was used to analyze major policy effect that a simple fixed effects model could not.

At the conclusion of our final Research Fellows session, I shared my interest in the synthetic control method with Remy, which sparked an engaging half-hour discussion. I think the excitement I felt and even just knowing that I feel excited while learning and diving deeper into advanced concepts is what makes participating in Research Fellows an invaluable experience to me.

I have thoroughly enjoyed each step of the program, and I gained more confidence thinking about a career in economic research and how it would be a good fit for me personally.

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[2] *I truly appreciate the opportunity to work on this project, Remy. Over the past ten weeks, I’ve gained invaluable skills, from critically reading papers to identifying overlooked points, designing experiments to test hypotheses, and exploring how research findings can be applied to society. This experience has significantly boosted my confidence in navigating academic work, especially in preparing for graduate studies. I now feel better equipped to tackle literature reviews, build structured research, and connect results to real-world implications. I’m also thrilled that our department offers such a meaningful Research Fellow program—it’s an incredible opportunity for students to engage deeply with academic work. Looking ahead, I’m excited to explore more data-driven research, as this project has inspired me to advance to the next stage of my academic journey. Thank you for such an impactful experience!*