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Course: STS 1123
Course Title: Living Through an Automated World

Year of Award: Spring 2022

Spring 2022 James Slevin Assignment Sequence Prize

We are pleased to invite applications for the James F. Slevin Assignment Sequence Prize. This prize of $500 will be awarded to the graduate student instructor submitting the best sequence of writing assignments for a First-Year Writing Seminar (second place winners, if any, will receive $150).

Assignment sequences in a writing course are built around a series of essay topics. These sequences probably represent work assigned during a portion of the course rather than all of the essay assignments distributed over an entire semester. Submissions should include a rationale and a description of your plans for eliciting and responding to student drafts and revisions, as well as a description of how you prepare students for each essay assignment, for example by engaging them in preparatory writing exercises, including informal writing designed to help students understand the material on which they subsequently write formal essays. Reflections on what worked well, and why, and what you would change another time, are welcome.

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Submissions are due by Monday, May 23, 2022.

Spring 2022 James F. Slevin Assignment Sequence Prize Application

Instr name_____Wanheng Hu_____   Form of Address (circle): Mr. Ms. Mx. Other___Mr.___

Dept & Course # _____STS 1123_____ Course title_____Living Through an Automated World_____

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The Politics of 'Autonomous Vehicles': A Collaborative Research Project Responding to a CFP
<div align="center">Title of Assignment Sequence</div>

Instructor's signature_____ Date___2022/5/23___

The Politics of 'Autonomous Vehicles':
A Collaborative Research Project Responding to a CFP

Wanheng Hu

A Sequence of Assignments from
STS 1123: Technology and Society Topics: Living Through an Automated World

Abstract: This sequence of assignments was centered on a major writing task, in which students were asked to write a collective research paper in groups in response to a real-world call for papers on the topic of "The Politics of 'Autonomous Vehicles'". Assigned during the last quarter of the semester, the sequence aimed at helping students practice writing about sophisticated, collaborative research work effectively, as well as apply and sharpen the writing skills and theoretical perspectives previously learned in the course.

Keywords: collaborative research paper, call for papers, conference presentations

Overview

This sequence of assignments was centered on a major writing task, in which students were asked to write a collective research paper in groups in response to a real-world call for papers (CFP) on the topic of "The Politics of 'Autonomous Vehicles'" (Stilgoe and Mladenovic, 2021). Assigned during the last quarter of the semester, the sequence aimed at helping students in two main regards: 1) apply the writing skills and theoretical perspectives previously learned in the course to social science research, and 2) practice and learn about conducting collaborative research work effectively. It was designed in four major modules, each involving various activities and writing practices to help students get prepared and receive feedback. In this overview, I will first briefly introduce the framework and mechanics of my First-Year Writing Seminar as the background against which this sequence submission was situated. Then I will explain the significance and rationale of this particular assignment sequence.

With a focus on automation viewed as a socio-technical phenomenon, my First-Year Writing Seminar was geared towards the social studies of technology and the main theoretical objective was to unpack the social, political, ethical as well as philosophical dimensions of technologies. The course was arranged along three major, interwoven lines of activities throughout the semester. The first line consisted of in-class discussions in both the social factors within and the social impacts of automation, with various themes such as intelligence, trust, agency, control, labor, and governance. The discussions were facilitated with readings from sociologists, historians, philosophers, and engineers alike, involving a range of technologies including computerized industrial machine tools, medical assistive devices, self-driving cars, automated scoring systems in education, etc. The second line was a series of reading and writing workshops, typically held on Wednesdays, that aimed to familiarize students with skills such as evaluating

sources, making summaries and analysis, proper citation, writing strong introduction and conclusion paragraphs, identifying relevant literature, doing annotations, constructing a thesis and outline, etc. The third line involved a sequence of writing assignments that provided students with the necessary venues to practice academic writing. These assignments allowed students to apply the skills learned in the workshops to the themes of in-class discussions and represented an integration of the first two lines of activities.

Prior to the "Collaborative Research Project" assignment sequence submitted here, students have already finished all eight reading and writing workshops and individually practiced relevant skills with four major writing assignments (not including the very first "diagnostic essay.") For example, writing assignment 2 asked students to summarize Mackenzie and Wajcman's (1999) arguments about the notion of "technological determinism" and to apply them to analyze popular narratives of automation; writing assignment 3 turned to a debate over artificial intelligence (e.g., Collins, 1992; Dreyfus, 1992) and asked students to compare opposing academic positions and engage them into conversations. While these two assignments primarily focused on what "They Say", the next two shifted to what "I Say" (Graff, Birkenstein, & Durst, 2018). Writing assignment 4 was a commentary on *VICE News*'s documentary "The Future of Work" which explores the impact of automation technology on jobs and required students to make analytic comments based on course readings and themes. Writing assignment 5, titled "Engineer Encounters Ethicist", consisted of a 2-page proposal of an area of human activities that the student hoped to automate and a 4-page critical review of the potential social, political, and ethical consequences of the proposed automation technology in question.

These four assignments have covered various, progressive layers of writing skills, from summarizing and analyzing existing academic arguments (writing assignments 2 and 3), applying such perspectives to primary sources (writing assignments 2 and 4), and identifying one's own research topic and arguments (writing assignments 4 and 5). With all these preparations, students are now ready to take up more complicated, collaborative research projects and writings, i.e., writing assignments 6 (collective annotated bibliography) and 7 (collective research paper, plus a personal reflection piece). Centered on assignments 6 and 7, I also designed a series of activities and pre-assignments that involved different genres of writing. Altogether, the sequence provided a forum for students not only to sharpen their previously learned writing skills through peer collaboration but also to learn about organizing large writing projects and the best practices of group work. The sequence was divided into four modules, in the form of three "Collaborative Research Workshops" plus a "Model Panel with Group Presentations", which I will elaborate in the following sections.

Module 1: Identifying Themes and Forming Groups

This module included two in-class activities and one pre-writing assignment in a single workshop session. It aimed at helping students better understand the CFP, identifying possible themes, grouping students based on their interests, forming group working ethics, and finding relevant literature. At the beginning of this module, I introduced the overall agenda of the "Collaborative Research Project" assignment sequence (see Appendix 1).

Class Activity 1: *Brainstorming—What is 'The Politics of Autonomous Vehicles'?*

In this activity, I handed out a printed copy of the original CFP, with the editors' suggested themes taken away and left blank for students to fill out their own ideas (see Appendix 2). Students were given 10

minutes to read the CFP, discuss their understanding of the topic in pairs, and write down their own ideas of possible themes. Then the class was convened to share the ideas, and a student volunteer helped write down the ideas on the blackboard, which were then being clustered with discussions of connections and commonalities among the ideas led by the instructor. This activity deepened students' understanding of the topic and also stimulated their interest. It could also avoid overlapping themes between groups.

Class Activity 2: *Forming Groups and Establishing Working Ethics*

Ultimately, four overarching themes were identified, after which students were asked to think about their preferences and sign up for the themes on a Google doc in class (ideally with 4 members in each group for an FWS with full capacity, but in my class, it ended up with groups of 3, 4, 4, and 5 students, respectively.) Now that students have formed groups and would work closely with their teammates for the remainder of the semester, it was very important to establish some ground rules to ensure effective and efficient group work. Instead of a "top-down" approach in which the instructor assigns ground rules and tells students what is "right" to do, I adopted a "bottom-up" approach. With a handout (see Appendix 3), I first asked the students to write a few sentences about the best group work in which they participated and what made it so satisfying, as well as the worst group work that they experienced and what made it so unsatisfying. Then each group was required to write three positive things the group could do to ensure a satisfying experience, as well as three things to safeguard against an unsatisfying experience. I then collected these rules from each group and published them on *Canvas* along with group member information and group themes. Such publicity could further improve the effectiveness of these self-generated and collectively created group work principles.

Pre-Writing Assignment 6: *Searching Literature and Creating Bibliography*

For the remainder of the session, students were encouraged to continue brainstorming on the theme of the group and then search for relevant literature and consider how it might be useful. The literature could be either primary sources or secondary literature, including course readings. They were then instructed to discuss their findings on the literature with group members and keep the most useful ones. During this process, I quickly went through each group to provide feedback and answered their questions. The goal of this pre-assignment was to create a preliminary bibliography, with each group member contributing at least three sources. It was designed to prepare the groups for Writing Assignment 6, in which they would make annotations. The assignment was primarily an in-class one, but groups could continue working on it after class if they needed more time. It must be completed before the next module/Collaborative Research Workshop to be held in the following week.

Module 2: Constructing Annotations, Outline, and Thesis

In the second module, students started to work substantially on their group project with both the materials they collected and possible frameworks for their research papers. It included two pre)assignments.

Writing Assignment 6: *Collective Annotated Bibliography*

At the beginning of the Module 2 workshop, I asked students to go through the group bibliography they created during the previous module and to discuss the relevance of each source. And in Writing Assignment 6, they were required to create an annotated bibliography for the group, with each member annotating at least three of the sources. The annotations were created in class and then compiled as a

shared Google Doc document in the group, to which the instructor was also given access so as to provide feedback. During the annotation process, students were encouraged to discuss with each other and I also walked around to check in with each group to answer questions and give feedback. The whole process took about 45 minutes.

Pre-Writing Assignment 7A: *Preliminary Outline and Thesis Statement*

The remainder of the Module 2 workshop was allocated to Pre-Writing Assignment 7A, which asked students to draft (or revise) the outline for the group paper with a preliminary thesis statement and then divide the writing work based on the outline among the group members. Students were first instructed to discuss the annotations they worked on and come up with a possible overarching thesis that connected their individual ideas. With the working thesis statement, the groups then drafted an outline and each member took up a section for the writing work. During the class, I spent about 10 minutes in each group reviewing and commenting on the thesis statement and outline and checked if everyone knew what they were going to work on.

<u>Module 3: Drafting and Integrating the Manuscript</u>

This module focused on the writing process, individually and collectively, and both after class and in class.

Pre-Writing Assignment 7B: *Individual Section Drafts*

Through the Module 2 workshop, especially pre-writing assignment 7A, students were clear about their writing tasks within the overall framework of their group project. For pre-writing assignment 7B, they were required to complete a draft of 2 to 3 pages for the outline section they were responsible for. This assignment was designed to be completed after class, and students were supposed to bring their drafts to the Module 3 workshop.

Class Activity 3: *Integrating Section Drafts into a Manuscript*

The majority of the Module 3 in-class workshop was devoted to integrating the section drafts into a complete manuscript responding to the CFP. As a first step, group members went through each section of the paper—the author briefly introduced the main ideas, organization, and problems/difficulties, followed by other members' comments and feedback. In the next step, the sections drafts were compiled as a whole, which was collectively reviewed in terms of the following aspects:

- Introduction: is the thesis statement clear and well-formulated?
- Coherence: does each part address some aspect of the overarching thesis?
- Organization: does the paper have smooth transitions between the sections?
- Conclusion: does the conclusion point to further implications (in addition to a summary)?
- Format: is the citation consistent throughout?

If the group finished the above steps and had more time in class, they were encouraged to move on to prepare for the next assignment/activity.

Module 4: Model Panel with Presentations and Comments

Now that the groups already had a manuscript of their collective paper, I designed a "model panel" to provide a venue to present the group papers and solicit feedback from the class as well as the instructor. It was also a process of "reverse outlining" as students pulled out the key points to make presentation slides.

Class Activity 4: *Group Presentations and Model Panel*

In the Module 4 workshop, we held a model panel on "The Politics of 'Autonomous Vehicles'" with four presentations. After I, serving as the "chair", briefly introduced the panel and its agenda, each group was given 12 minutes for the presentation, followed by 5 minutes of comments/discussions. All presentation slides were sent to me in advance to ensure smooth transitions. In the discussion section, other groups were asked to provide feedback on the presentation regarding what was done well and what could be improved. I also served as the timer for the panel, and the presenter was reminded when 2 minutes were left in the presentation. After all the four presentations were completed, I provided some brief concluding remarks and the class had a group photo.

Writing Assignment 7: *Final Collaborative Paper & Personal Reflection Piece*

Final Collaborative Paper. Based on the feedback and comments during the panel presentations, the groups were given about a week to revise and finalize the collective research paper. During this period, I offered *ad hoc* meetings with groups to go through their group projects. All group members would receive the same grade for their collective paper.

Personal Reflection Piece. In addition, students were asked to submit a personal reflection piece of 1-2 pages about this group work experience. More specifically, the reflection paper should address the following questions: 1) How did the group function in general? 2) What were your contributions to this project? 3) What did you learn about writing and group work in this process? The assignment was designed to help students summarize their experiences and lessons about collaborative research/writing and group work, as well as to enhance their sense of responsibility for making due contributions.

Reflections: What Worked Well and What to Change

Overall, the CFP-centered sequence of the (pre)assignments and activities worked very well, and based on their reflection papers, students had an overwhelmingly positive experience in this collaborative research project. The first module was especially critical for a successful project since it helped make things set out on the right track at the very beginning by cultivating students' commitment, stimulating their interest, and establishing proper group work ethics. Using PowerPoint Slides and handouts, I made very clear instructions for each activity and (pre)assignment. While many of the writing skills were taught and practiced by students individually, this assignment sequence helped enhance such skills in the context of collaborative writing of a relatively sophisticated research paper. It was not only because students had opportunities to learn from their groupmates by working closely, but also because the sequence involved a variety of interrelated writing modalities, such as bibliography, annotations, outline, thesis statements, presentation slides, a major research paper, and a personal reflection piece. Moreover, during these writing processes, students were able to receive abundant feedback from group members, classmates, as well as the instructor.

There are two things that I would like to change or experiment with if I were to administer the sequence for another time. One thing is the way groups were assigned (in Module 1). Even though we successfully identified four major themes, it turned out that students' interest was not equally distributed. When I created the Google Doc for the sign-up, we initially had 6 students for one theme and only 1 for another. It took some negotiations to redistribute but we were still not able to get the ideally 4*4 distribution. Next time I might try randomly assigning groups first and then each group deciding on the theme. Another thing that I may adjust is the comment session following presentations (in Module 4). The original 5-minute comment was an open, spontaneous session, which restricted the depth of the feedback given. Next time, I will assign "discussants" to each presentation and make the slides available to them in advance so that they can be more prepared and specific when giving suggestions.

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*Appendix 1

Writing Assignments #6 & 7 | Collaborative Research Project

The Prompt: In this final, collaborative project, you are supposed to work closely with your classmates to produce a collective research paper in response to a real-world call for papers on the topic of "The Politics of 'Autonomous Vehicles'" (attached below). The project involved two major assignments: for Writing Assignment 6, you are supposed to create a collective annotated bibliography, and for Writing Assignment 7, you will submit a collective research paper as well as an individual reflection paper. The length of the collaborative research paper is 6-8 pages for groups of three, 8-10 pages for groups of four, and 10-12 pages for groups of five.

Project Mechanics: This is how the collaborative research project works:

While you may spend some time after class on this essay, the project will be conducted step-by-step and facilitated with three in-class "Collaborative Research Workshops" and one presentation session as a "Model Panel":

➢   Workshop 1—Identifying Themes and Forming Groups (Wed, 04/20)
➢   Workshop 2—Constructing Annotations and Outline (Wed, 04/27)
➢   Workshop 3—Drafting and Integrating the Manuscript (Wed, 05/03)
➢   Model Panel—Group Presentations and Comments (Mon, 05/09)

Each workshop/model panel will involve various activities and pre)assignments, of which detailed instructions will be released properly on or before the workshops.

As a group, you will submit the following:
✧   A collective annotated bibliography (due Wed, 04/27)
✧   A final, collective research paper (due Mon, 05/14)

Individually, you are supposed to submit a personal reflection piece of 1-2 pages (due Mon, 05/14). The reflection should address the following questions:
✧   How did the group function in general?
✧   What were your contributions to this project?
✧   What did you learn about writing and group work in this process?

Assignment Goals: 1) apply the writing skills and theoretical perspectives you've learned in this course to real-world social science research; 2) practice and learn about collaborative research work effectively.

Submission Instructions: For all the written work, please follow the same requirements as specified in previous writing assignments. The collective paper and personal reflection should be submitted via *Canvas.*

*Appendix 2

Call for Papers: **The Politics of 'Autonomous Vehicles'**

Editors: Dr Jack Stilgoe (Science and Technology Studies, University College London) and Dr Milos Mladenovic (Department of Built Environment, Aalto University)

'Self-driving', 'driverless' or 'autonomous' vehicles promise to change the world in profound ways. The suggested benefits include safety, efficiency, accessibility and improved urban environments. However, researchers and others have been quick to raise questions about responsibility for crashes, safe testing and possible wider ramifications for transport systems. In a discussion that has been dominated by science, engineering and narrow questions of ethics, there is a need to draw attention to the old questions of politics: Who wins? Who loses? Who decides? Who pays?

This collection (special issue) will publish original research that helps anticipate the politics of autonomous vehicles. The focus could be on the road, where vehicles are being tested and interactions with other road users are being worked out, on the lab, where rapid developments in machine learning and simulation are generating new possibilities, on discourses about possible and desirable futures, or somewhere else.

Despite the 'autonomous vehicle' terminology, these technologies, when considered through social science lenses, look far from autonomous. *They will be shaped by human interests and expectations, and future sociotechnical systems will be entangled in social worlds (infrastructures, rules, norms, behaviours, institutions and more) in complex and possibly unpredictable ways.*

We invite contributions from researchers on the following themes as they relate to self-driving vehicles: *[Please brainstorm ideas and add them below]*
- ➢
- ➢
- ➢
- ➢
- ➢
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Appendix 3

Group Work Ground Rules

Individually:
  - Write a few sentences about the <u>best</u> group work in which you participated and reflect on what made it so satisfying.

  - Write a few sentences about the <u>worst</u> group work in which you participated and reflect on what made it so unsatisfying.

As a group:
  - Write three <u>positive</u> things the group could do to ensure a satisfying experience.
  - Write three things the group could do to <u>safeguard</u> against an unsatisfying experience.
  - Submit your group suggestions to me via email. I'll compile and post them on *Canvas*.