The Stanford Science Swarm is the capstone project in the SIMILE (Science in the Making: Integrated Learning Environment) program. SIMILE students explore the history of science from Greek antiquity to the present, with a focus on the ethics, morality and politics of science in the spring. The Science Swarm gives students an opportunity to research an original topic related to the history of science at Stanford using the analytical and critical methods learnt over the two previous quarters. In his Science Swarm paper Max Morales focused on Provost Frederick Terman’s efforts to transform Stanford from a regional private school into a research university of international renown and these policies’ impact on Stanford undergraduates. Terman, often called the Father of Silicon Valley, sought out government and military funding for Cold War related programs and promoted the hiring of potentially lucrative scientific researchers over talented pedagogues.

While the story of Stanford’s preeminence in science and technology is well-known, Max argues that lackluster teaching in undergraduate courses and poor living conditions on campus alienated undergrad students and led to their increasing politicization. By the late Sixties, students identified the university with the military-industrial complex and protested against secret research on campus. Max constructs a clear historical narrative from numerous sources in the Stanford University archives. He successfully evokes the zeitgeist of this tumultuous period through his use of contemporary song lyrics and anti-war propaganda. Max’s paper is an exceptional effort for a first-year student, demonstrating an ability to combine engaging historical narrative with scholarly archival research.

—Marcelo Aranda

The Heart of Their Discontent: An Examination of the Roots of Student Protest at Stanford University in the 1960s

Max Morales

Come on all of you big strong men
Uncle Sam needs your help again
He’s got himself in a terrible jam
Way down yonder in Viet Nam.¹

This song was one of the primary anthems of the 1960s student protests. It expresses many of the injustices the protestors saw within their society: the voting age, the draft, and, perhaps above all, the war in Vietnam. Students from all parts of the nation, even from prestigious institutions like Stanford University, demonstrated against these and other issues to a degree that was, for their time, without precedent.

I mention Stanford because this institution found itself in a unique position at the dawn of the protest movements. Due to the American government’s desire to surpass Soviet technology, the military poured money into the university system after the end of World War II, seeking to encourage the applied sciences and technological development.² Stanford, at the time of only modest and largely regional reputation, managed to attract such funds primarily due to the efforts of Frederick Terman, Dean of Engineering and eventual provost.³ Thanks to the policies Terman enacted,

there is perhaps no institution that benefitted from government funds more than Stanford, causing the small, regional university to emerge from the Cold War as the internationally known institution that it is today.

What does Stanford’s rise have to do with the student protests? While Terman’s policies increased Stanford’s wealth and prestige, they also had somewhat more ambiguous effects. They focused the university on its graduate schools, often at the expense of the undergraduate programs and its students. They compensated professors almost exclusively for their research and for their ability to garner government contracts, and not for their teaching abilities. They embedded Stanford within the military-industrial complex that the students would come to hate, and simultaneously introduced the students to radical politics for the first time. While it would be wrong to say that Terman’s policies were the only factor leading to the 1960s protest movement at Stanford, they did set the stage for this movement by creating the first widespread student discontent and by placing the university and its students into opposition with one another. The focus of the protest movement, in both its champion and its critics, was on the students and the other young people who led it. We shall follow this tradition and focus on the youngest of these students, the undergraduates, and explore how they expressed their growing discontent through the means that were available to them: newspaper editorials, pamphlets, and other promotional materials.

One of the primary ways in which Terman’s policies generated widespread discontent is that they created a university which undergraduates no longer felt a part of. Key to this process of alienation was the loss of personal attention given to each student, most noticeably on the part of the professors. Terman’s strategy of hiring fewer but more eminent professors in order to save money, compounded with an overall increase in the university’s size, led to an increased student-faculty ratio.\(^4\) In 1956, the Study of Undergraduate Research Committee conducted a survey of the previous year’s graduating class. The directors of this study claimed that the previous year’s seniors had let out “a mighty cry of lament” about their lack of a relationship with the faculty.\(^5\) We see here that Terman’s policies of hiring fewer professors caused widespread discontent among the class of 1955. However, we also see that this discontent was largely generic and unfocused, for the study described Stanford as having “the inevitable impersonality of a large university.”\(^6\)

The seniors were unable to name exactly what policies or individuals had caused their discontent. What is more, they appeared to be unwilling to take any action to address their concerns. Rather, impersonality was “inevitable”; it was the way things were. While this group of students felt unhappy because of Terman’s policies, demonstrating one instance of how Terman’s policies led to student discontent, the class of 1955 did not appear ready to blame the university for their problems or to take action in order to resolve them.

Terman’s policies also generated discontent by convincing students that the university administration was apathetic towards them. This belief, compounded by a loss of a personal relationship with the university, resulted in an escalation of student discontent and a departure from the acquiescent attitude of the class of 1955. A candidate for president of the student body in 1966 wrote in his campaign platform that “bureaucratic oversimplification” had created major problems within Stanford, problems that could only be resolved through “reforming the structure of the university.”\(^7\) We see here that students have come to view the university itself as the source of their woes. No longer were problems within Stanford “inevitable”; “bureaucratic oversimplification”—i.e. university administrators—were to blame. As these administrators were responsible for carrying out Terman’s policies, we see that the candidate indirectly blames Terman’s policies for his unhappiness. The mention of reforming the university’s entire “structure” is also important; not only could this student now blame Stanford itself for his discontent, but he was also prepared to enact major changes upon the university in order to address his concerns. The new specificity in blame and willingness to act marks a powerful departure from the comparatively mild language of the Class of 1955, demonstrating how Terman’s policies continued to alienate students to an increasing degree as time progressed.

In addition to convincing students that their administration was apathetic towards them as a group, Terman’s policies also led students to believe that the administration did not value their individuality. Chief among the changes that the candidate wished to enact were that “all major and non-major courses should be graded…by paragraph summaries of a student’s performance.”\(^8\) These words speak to the “bureaucratic oversimplification” the candidate mentioned earlier in the document. He feared that the university had simplified its students to a mere letter on a page, to a grade. Paragraph summaries, he felt, would more effectively capture the individual and his struggle within the university. While Terman’s policies did not

---

6 Ibid.
8 Ibid, 2.
lead to the use of single-letter grades, the concern that this student expressed was a symptom of worries that Terman’s policies did generate: anxiety about whether Stanford truly valued its undergraduates as people.  

A student speaking about a year later spoke to these fears, claiming that, “the administration considers [the students] only as raw materials in a productive process…this causes resentment.” The image of students as “raw materials” is of particular importance, for the speaker uses it to compare his relationship with Stanford to the exploitation of natural resources. Many students before and during the protest movement believed that the university did not use undergraduate tuition to improve undergraduate education. The reasons for this belief are not very hard to discern. Stanford put far more time and effort into its graduate schools than into its undergraduate programs, for Terman believed that the former would be more likely to contribute to the university’s wealth and prestige. Lowen touches upon this policy at the end of her work, describing how undergraduate classes “were poorly taught and the subject matter sterile”, marked by an “alarming lack of challenge to the mind” and “academic gutlessness.” In short, undergraduate education at Stanford was “particularly bad”; of such poor quality that many college counselors began to discourage their students from applying to Stanford. Faced with the simultaneous increase in the graduate schools’ prestige, Stanford undergraduates became convinced that their university was exploiting them simply to benefit the graduate schools. They feared that the university had left them behind on its quest for greatness.  

Another student speaking towards the end of the 1960s expressed these convictions in a slightly different way. In reference to her experiences at Stanford, she said, “I don’t want to feel like I’m being punched and filed all the time.” Rather than expressing the anger other students felt about the decline in undergraduate education, this student instead emphasized her disappointment with the lack of intellectual stimulation at Stanford. She compares her time at Stanford to “being punched and filed”—to an assembly line or other mindless, repetitive movement. This student did not find her Stanford education to be very intellectually stimulating, speaking to the “alarming lack of challenge to the mind” and “academic gutlessness” that Lowen observed in Stanford’s undergraduate programs. But rather than being angry with feeling used, this student was merely disenchanted with the university because it had called on her to memorize vast amounts of facts and figures rather than educating her as a person. One student speaking at the middle of the 1960s expressed a similar disappointment, but with an especially vicious return to the anger we studied in the paragraph above: “the concept of training [has replaced] the concept of education…the university has prostituted itself.”

We have examined how Terman’s policies led to the first widespread instances of student discontent. The consequences of Terman’s policies—the loss of the personal touch as a result of increased class sizes, generation of the belief that the university administration was apathetic towards undergraduates both as a group and as individuals, and fears about a decline in undergraduate education as the university devoted the majority of its resources to the graduate school—caused undergraduates to feel alienated and apart from their university. We also noted an important transition in the student discontent: students went from accepting their lot within the university to working to rectify the injustices they believed had been levied against them. At the same time, students began to focus their activism towards larger social and political issues, such as those mentioned in the song at the start of this paper. We can trace both of these shifts in the student discontent to the same source: ultimately, their roots lay in the policies of Frederick Terman.

Stanford faculty knew that undergraduate education was not what it could be. Professors, for instance, complained that they could no longer communicate with their students. In the words of Dr. Halstorf, head of the Department of Psychology in the 1960s, his undergraduate students had “a naïve conception of psychology” that was “a complete misrepresentation of the facts” due to the university having “too many students.” Administrators began holding meetings to discuss this and other possible ways of improving undergraduate education as early as 1957.

9 Pat Dietterle, “Student Leaders Have Their Say on Education”, The Stanford Observer, Nov. 1966, 7. Note: The Stanford Observer, as far as we have been able to determine, was a professionally run, monthly magazine that reported news on campus. Unlike The Daily, it does not appear to have used student authors and was issued from 1966 until it was discontinued in 1995. Because The Observer often does not list its author’s names, any names in the citation will be of the students quoted in the article rather than the article’s author.

10 Lowen, Creating the Cold War University, 227–228.

11 Ibid, 227.

12 Ibid, 231.


14 Lowen, Creating the Cold War University, 227.


One strategy administrators hit upon is what we now call the Resident Fellow or the “R.F.” program, in which a member of the faculty lives with students in the dorms. The administration hoped that this would allow students to develop a relationship with a professor, thereby giving Stanford the personal touch it seemed to be lacking. One of the very first such resident fellows was Allard Lowenstein, a young, charismatic lecturer in the political science department. In 1961, the university placed Lowenstein in Stern Hall, an undergraduate residence known for being particularly unwelcoming and oppressive. What the university either did not know or did not take into account was that Lowenstein, in addition to being young and charismatic, was also a political radical. A few years earlier, the South African government had deported him for protesting apartheid rule, and he was very interested in the fledgling anti-war movement in the United States. Lowenstein succeeded in transforming Stern from one of the least popular dorms on campus to one of the most popular. However, at the same time, he also radicalized its students. Before his arrival, students had largely been concerned with issues related to their education. But, in the words of William Chafe, Lowenstein’s most ardent biographer, after Lowenstein’s arrival “the issues [important to the students] broadened to include coed living, then the civil rights movement, and eventually the protest against the Vietnam War.”

Stanford’s administration, realizing that their strategy had agitated students to new heights, did their best to remove Lowenstein at the end of his first year. Despite their efforts, Lowenstein left an ideological mark on Stanford that remains even to this day. Never again would students return to the days when problems were “inevitable” or not to be solved. Lowenstein’s philosophy of “if you don’t like the rules, see if you can’t get the rules changed,” would usher in a new age of student political activism and concern with social issues that, while not present to the same degree today that it was immediately after Lowenstein’s departure, nonetheless remains an important part of campus life.

---

18 Lowen, Creating the Cold War University, 233.
19 Ibid.
20 Ibid.
22 Ibid, 173.
23 Ibid, 173.
24 Ibid, 172.
26 Ibid, 170.

If students had not been unhappy due to the changes Terman’s policies brought about, then the university would never have hired Lowenstein to live in the dorm. If Lowenstein had not had such sustained, intimate contact with students, they either would not have been radicalized at all or at least would have been radicalized in a very different way. We see, then, that Terman’s policies were the ultimate cause of the undergraduate’s political radicalization. Strangely enough, Terman’s policies had the opposite effect on Stanford’s administration. Due to Terman’s desire to garner lucrative contracts, professors often had to work with government agencies and private companies to develop military technology and strategies, both of which would eventually be used in Vietnam. To the students, with their newfound social conscience, the ways in which their university served the war were repulsive and horrifying. Terman’s policies had the effect of imparting to the students a very particular set of values, values that were often in direct opposition to what the same policies simultaneously required of Stanford’s professors. In short, Terman’s policies placed Stanford’s administration and its students into direct opposition with one another. Paradoxically, Terman created a university whose students passionately believed that the way in which their alma mater had risen to greatness ran contrary to their most deeply held morals.

The powerful imagery that protestors distributed demonstrated the consequences of Terman’s policies. The Cold War machine so often criticized for being faceless and impersonal was all too personal for these students. Its face was one they knew well: that of Stanford itself. The poster attached to this paper portrays the “Stanford Empire” as a bloated, Godzilla-like beast with blood dripping from its teeth and claws (See Appendix A). The names of Stanford’s trustees frame the brute. But most importantly, the monster’s scales bear the names of corporations from which Stanford accepted funds, companies like Kaiser Aerospace and the RAND Corporation (see the bottom of the monster’s jaw and immediately below its eye respectively, Appendix A.1). Due to the way in which Terman’s pursuit of government contracts increased Stanford’s prestige, many corporations, these two among them, began to invest in the university alongside the government. They played a pivotal role in developing the technologies and strategies that the American military used in Vietnam. The fact that Stanford had received money from these corporations, and that university professors worked with them to develop military
technology, was anathema to the student activists. Their anger at what they perceived as the worst sort of betrayal is present in their portrayal of Stanford as a monstrous beast, with the blood of innocents—presumably the blood of the Vietnamese—dripping from its claws and fangs. In fact, if we interpret the "Stanford Empire" poster a bit more literally, we can conclude that students saw their university as the culmination or the supreme power of this Cold War machine. If the monster is Stanford, we see that all the other aspects of the military-industrial complex are mere fragments of the beast; it is Stanford, as the sum of all these malicious elements, that is the real nightmare. This idea, along with the brutal act of violence done to the monster as it is skewered with a spear, perhaps more than anything speaks to the extreme anger and hatred that Terman's policies generated.

A document that demonstrates a slightly different aspect of the anger Terman's policies caused by setting the students against the university is a pamphlet known as "SRI SRI", distributed in October of 1968. This document details the views that certain student activists held about the Stanford Research Institute, a laboratory loosely connected with the university that, among other activities, conducted classified research for the military. Perhaps the most powerful image from this pamphlet is the drawing captioned "STANFORD GIVES THE AXE TO THAILAND" (see Appendix B). These words refer to the traditional student chant during football games, particularly against rival CAL:

"Give 'em the Axe, the Axe, the Axe!
Give 'em the Axe, the Axe, the Axe!
Give 'em the Axe, give 'em the Axe, give 'em the Axe!"

Above the caption is an image of an axe dripping blood, a reference to how the military used technology developed at Stanford in the Vietnam War.

This image demonstrates that students had mentally linked Stanford and the military-industrial complex. We see this idea in the imagery of the tyrannosaurus poster, but in this document it is much more explicit. The "Axe" poster transforms a classic Stanford tradition into an act of savagery, showing us the extent to which students implicated their university in the Vietnam War. To the students, Stanford neglected its undergraduate programs in a way that generated widespread student discontent and anger. As Terman's policies changed the university, the student discontent also changed, escalating from resigned unhappiness to impassioned rage. When Terman's policies created the prestigious institution that we now know as Stanford, they did so by using government funds to enrich the university, by using the prestige of government work to attract the most eminent scholars in engineering and other sciences, and by using both of these techniques to create some of the most widely recognized graduate programs in the world. But, on the path to greatness, Stanford neglected its undergraduate programs in a way that generated widespread student discontent and anger. As Terman's policies changed the university, the student discontent also changed, escalating from resigned unhappiness to impassioned rage. The ways in which Terman altered the university also set into motion a process that would end with the radicalization of the student body. And because Terman's policies had embedded Stanford so deeply within the conservative establishment of its time, the student's anger intensified as they saw the identity of their institution as contrary to the values they had recently come to hold so passionately.

Technology, was anathema to the student activists. Their anger at what they perceived as the worst sort of betrayal is present in their portrayal of Stanford as a monstrous beast, with the blood of innocents—presumably the blood of the Vietnamese—dripping from its claws and fangs. In fact, if we interpret the "Stanford Empire" poster a bit more literally, we can conclude that students saw their university as the culmination or the supreme power of this Cold War machine. If the monster is Stanford, we see that all the other aspects of the military-industrial complex are mere fragments of the beast; it is Stanford, as the sum of all these malicious elements, that is the real nightmare. This idea, along with the brutal act of violence done to the monster as it is skewered with a spear, perhaps more than anything speaks to the extreme anger and hatred that Terman's policies generated.

A document that demonstrates a slightly different aspect of the anger Terman's policies caused by setting the students against the university is a pamphlet known as "SRI SRI", distributed in October of 1968. This document details the views that certain student activists held about the Stanford Research Institute, a laboratory loosely connected with the university that, among other activities, conducted classified research for the military. Perhaps the most powerful image from this pamphlet is the drawing captioned "STANFORD GIVES THE AXE TO THAILAND" (see Appendix B). These words refer to the traditional student chant during football games, particularly against rival CAL:

"Give 'em the Axe, the Axe, the Axe!
Give 'em the Axe, the Axe, the Axe!
Give 'em the Axe, give 'em the Axe, give 'em the Axe!"

Above the caption is an image of an axe dripping blood, a reference to how the military used technology developed at Stanford in the Vietnam War.

This image demonstrates that students had mentally linked Stanford and the military-industrial complex. We see this idea in the imagery of the tyrannosaurus poster, but in this document it is much more explicit. The "Axe" poster transforms a classic Stanford tradition into an act of savagery, showing us the extent to which students implicated their university in the Vietnam War. To the students, Stanford neglected its undergraduate programs in a way that generated widespread student discontent and anger. As Terman's policies changed the university, the student discontent also changed, escalating from resigned unhappiness to impassioned rage. The ways in which Terman altered the university also set into motion a process that would end with the radicalization of the student body. And because Terman's policies had embedded Stanford so deeply within the conservative establishment of its time, the student's anger intensified as they saw the identity of their institution as contrary to the values they had recently come to hold so passionately.

The 1960s is one of the most controversial periods of American history. It is also, perhaps, one of the most poorly understood. As this decade has had such an enormous impact on American politics today, it is often difficult to read and write its history without also judging it. While the events at Stanford represent only a small portion of this controversial time, they also represent a particularly important
one. They demonstrate how suddenly a group of people can radically change their minds and be moved to action. They demonstrate how what one documenter called “the sons of privilege”35 can revolt against the forces that brought their university and their family into wealth and prestige. They demonstrate how an institution can rise to extraordinary heights through devotion to a single goal. And, perhaps more than anything else, they demonstrate the price of progress.

BIBLIOGRAPHY


Fathers and Sons, dir. by Don Lenzer (1969; Public Broadcasting Laboratories, obtained online through the April Third Movement Historical Archive). Accessed on 7 May 2014 at http://www.youtube.com/watch?v=xbi8q9oqxog


35 Fathers and Sons, dir. by Don Lenzer

APPENDIX A

APPENDIX B
