April 27, 2004

To: Sharon Ahlers
From: Celeste Spaans
Subject: The Not-Quite Ethical Actions of BART Engineers

The controversy regarding the BART system of San Francisco, California provides an excellent example of how many groups can view the same situation with varied ethical perspectives. I was at first under the impression that this situation was simple, but upon reading the Engineering Code of Ethics more closely, I see that that the scenario is complicated. While I believe that the engineers’ decision to speak to upper level personnel was ethical, I also believe that many of their actions were unethical.

The Memo and Burfine

My ethical analysis for this scenario focuses on Hjortsvang’s anonymous email and the contact with Burfine. On November 18, 1971, Hjortsvang distributed an anonymous memo to “as many levels of the BART organization he could reach” (Anderson 132). This content of this memo described what Hjortsvang perceived to be problems with the ATC, BART organization, and BART’s employees. This memo concludes with a recommendation to establish a Systems Engineering Department. (Anderson 132-133). Management perceived this email to be the act of someone who “was using the alleged lack of coordination as a toe-hold to boost himself in the organization” (Ahlers). Additionally, management felt that the memo was “suspicious and unprofessional” (Martin 226).

My analysis also addresses the contact with Burfine. While there is confusion regarding who contacted Burfine, I believe it was at the prerogative of the engineers. Burfine’s report served as key evidence for the engineers that even a “private engineering consultant who on his own wrote an evaluation of the automatic train control” discovered the same problems as the engineers. (Martin 227). Helix only became involved when the engineers discovered that he was receptive to their concerns and provided him with information. Unger states that “Mr. Helix expressed interest and was persuaded that action was needed. He conferred with two other board members and gave copies of a report on the subject to the entire board and top management” (Unger 6). The only information that Helix had about these issues to put into a report was information that the engineers provided him with.

Writing the Memo and Contacting Burfine: Compliant with Code of Ethics?

Of the seven “Fundamental Canons” that are on the front of the Engineering Code of Ethics pamphlet, I believe that the first four canons are related to the BART dilemma. The guidelines refer to an engineer’s concern for public safety and project success. I believe that the BART engineers did an excellent job of recognizing that it was their duty to speak to their perspective managers and attempt to be heard. Guideline 1 clearly states that “engineers shall hold paramount the safety, health, and welfare of the public in the performance of their professional duties” (Code). The BART engineers attribute their motivation to “the public interest,”

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highlighting problems which they believed could place the public in danger (Unger BART Case 6). Reading further along in the guidelines, it becomes obvious that the engineers took what they 
thought to be the appropriate action. Guideline 1c instructs engineers to “inform clients or 
employers” of situations in which the “engineer’s professional judgment be overruled,” and the 
public could be “endangered” (Code). In addition to concerns for public well-being, guideline 4h 
specifies that “when, as a result of their studies, engineers believe a project will not be 
successful, they shall so advise their employer or client” (Code). As Unger points out, “Hjortsvang had grave doubts about the success of this phase of the project.” Blankenzee had 
concerns about the ATC development, and Bruder “was growing increasingly disturbed about 
the ‘unprofessional’ manner in which the installation and testing of the control and 
communications equipment was being supervised” (6). I think it is easy to understand that the 
three engineers all had doubts about possibility of BART being a safe and successful project. The 
guidelines which are provided in the Code of Ethics are repeatedly instructing engineers to step 
forward and speak out when they feel that something is unsafe or is not going to develop as 
hoped. However, there are other guidelines that Hjortsvang’s memo and the BART engineers 
contact with Burfine do not seem to heed. I view the engineers were unethical to ignore some 
guidelines while following a few “paramount” ones.

The first action that I take issue with is the anonymous memo that Hjortsvang distributed at the 
office on November 18, 1971. Such an action is understandably perceived by management as 
“suspicious and unprofessional” (Martin 226). In my opinion, Hjortsvang failed to remember 
that, as Canon 4 explains, “engineers shall act in professional matters for each employer or client 
as faithful agents or trustee, and shall avoid conflicts of interest” (Code). While the guideline 
continues to specify monetary conflicts of interest, I interpret the heart of the canon to mean that 
engineers shall be trustworthy. This memo only served to make management feel that it were 
under attack by one of its own and made it not want to listen to critique. A professional, who had 
decided to raise concerns, should do so in the proper channels and be willing to put his or her 
name by those concerns. If I had been in management’s position, I would have respected the 
criticism much more if someone had been confident enough in it to sign a name.

Another concern regarding the memo is the tone in which it was written. As discussed in class, 
the memo is scathing and highly opinionated. When Anderson chooses to begin sentences with 
“it is difficult to understand. . .” he fails to realize that maybe the situation is not so confusing to 
others (133). He describes the “lack of technical competence and an undue reliance on PBTB’s 
judgment” (133). What authority does Hjortsvang have to judge other people’s technical 
competence or reliability? His memo provides few facts and a lot more opinions. I am not 
arguing that Hjortsvang was accurate in his complaints or not. However, what I notice is his 
failure to comply with Canon 3: “engineers shall issue public statements only in an objective and 
truthful manner” (Code). His memo is certainly not objective and does not have enough factual 
data included to determine whether or not it is truthful. Guidelines for this Canon specifically 
state that “they shall include all relevant and pertinent information in such reports. . .” (Code). 
Hjortsvang would have much better serviced his cause had he laid out the facts and allowed his 
readers to draw his same concerns, rather than telling them how it was (from his perspective).

Lastly, Hjortsvang’s memo is suspected of being self-promoting. On January 17, 1971 
Hjortsvang had written a memo, in which he suggested the creation of a Systems Engineering
Department. He chose to end his anonymous memo with that same recommendation. His memo ends, “it is proposed to establish a Systems Engineering Department immediately. Most of the personnel can be extracted from existing departments. . . in this process there will be an opportunity to examine the other ‘engineering departments’ to determine their adequacy” (Anderson 132-133). He has managed to not only make it sound as though he wants to be an integral part of this department, but he has also managed to accuse other engineers of not being accurate. This is behavior is completely unbecoming of a professional. Guideline 3e describes that “engineers shall be dignified and modest in explaining their work and merit, and will avoid any act tending to promote their interests at the expense of the integrity, honor and dignity of the profession” (Code). I must admit I would be ashamed to be associated with someone who would distribute an anonymous memo and yet be bold enough to insinuate what he has.

The second action that I take issue with is the engineers’ decision to seek out and consult Burfine. This action is blatantly a violation of Canon 4 (refer to previous mention regarding engineers acting as faithful agents for employer). Management definitely could not trust these engineers after discovering that they had contacted outside professionals to review internal BART functions. While Hjortsvang and Blankenzee disagree on whether or not it was intended for Burfine to write a report on his findings, the fact that he was ever contacted is unethical (Ahlers). Burfine did not work for BART and it was not the within the engineers’ authority to contact him. If they did not feel confident that their criticisms could stand alone, then they should have questioned if they had enough evidence, not called upon a third party to validate their claims.

The engineers’ contact with Burfine had a devastating influence on their being dismissed. They foolishly shared this report with Helix, who then ironically violated their trust and went public with the information. The individual meetings that each engineer had with superiors demonstrate that each was lying in his testimony. All three deny that they knew or had contacted Burfine and did not know who had gotten him involved (Anderson 141-150). Again, this completely eliminates all trust that management could have in the engineers. Obviously after soliciting other engineers to join their cause, their cover was blown and management knew that they had at least a hand in making the information public (Anderson 146-147). Lying about their actions accomplished nothing more than further discrediting themselves.

The BART engineers undertook what they believed to be an ethical endeavor. I agree that the actions they took were appropriate to some degree, but I believe they ruined their chances of being heard because of some grievous, unethical choices that they made along the way. Sadly, I think that the three engineers were viewed as a unified group, when in fact there was miscommunication amongst them and I perceive Hjortsvang acted more unethically than the others. Unfortunately, the mistakes that they made are blatant enough that while I support the engineers’ original action, I understand why management chose to fire them.
References


Ahlers, S. Key points from chapters 7 and 10 of divided loyalties [memo]. Memo to Engre 350 Students. 2004 Apr 23.

