

21W.035

Writing Assignment #5 – draft 1

### **Breaking the Stereotypes for Engineers**

*Are engineers benefactors of mankind or wielders of a sinister and uncontrollable technology? Maybe the answer is neither.*

*The Existential Pleasures of Engineering*

Samuel C. Florman

Published in 1996. 224 p.

Children dream of heroics, of saving people and the world. No wonder a poll of several hundred children in the New York metropolitan area by Forbes magazine revealed that the most popular career choice for kindergartners was to be a superhero. The most popular real job? Firefighter. Each profession appears a certain way to the public, and surely, the image of a firefighter risking life to combat flames and rescue the trapped impresses on us the association of a selfless protector accomplishing superhuman deeds.

I am an aspiring engineer. Sadly though, I had no idea what an engineer was as a child. It is a profession that I stumbled into, driven more by practical considerations than by a smoldering desire since an early age. And while I increasingly derive pleasure from this chosen profession and greatly admire famous engineers and their accomplishments, I find myself not truly able to grasp the concrete motivations that led me to my decision, the role I shall play in society as a young engineer, or how society sees me. After all, unlike the firefighter, engineers hardly have a single persona projected to society; there seems to be just as many negative opinions about engineering as there are positive ones. Samuel Florman, in his book, *The Existential Pleasures of Engineering*, explores these issues in a surprisingly lyrical and decidedly non-engineering way.

If you are familiar with the term “existential” then you probably already expect the philosophical nature of this book. Florman’s book is not a practical account of what engineering is or a detailed guide of what engineers can or should accomplish. Instead, themes about man’s relationship to technology and machines are investigated through lofty phrases and frequent reference to opinions by people as diverse as heads of national engineering societies to poets and views from as old as Homer to recent developments. In order to breathe new life into what it means to be an engineer, Florman purposely stays away from technical language, dense or esoteric prose, or un-giving rationality. He favors a conversational tone and use of metaphors to explain how society’s views and expectations of engineers are misguided and how engineering can be a spiritually satisfying profession.

Florman sets us off at a high point by recounting what he calls “the Golden Age of Engineering”, a period between 1850 and 1950. It was a glorious time for engineers, a time when society viewed technological inventions with awe and appreciation. If ever engineers were equated to heroes, this was it. Engineers also thought of themselves as saviors of mankind who could release the common man from “despairing drudgery and burdensome labor” through his ability to solve technical problems and scientific way of thinking. Perhaps, if engineers lead society, then we could free men of their irrationalities and achieve a more cohesive, advanced society.

Alas, even as these ideas and gratifications for engineers were at a high, serious flaws began to manifest. The decline and fall of the engineering profession corresponded closely to a real public concern for safety and for the

destruction/pollution of the environment. With the creation of the hydrogen bomb, it became quite clear the hazards of technological advancement. Furthermore, it was no longer a given that technological advancements actually bring a sense of well being to their consumers. Engineers, instead of being saviors, were regarded by many to be doom-bearers.

However, after bringing to light this disturbing trend, Florman argues against blaming the engineer and especially against calls for engineers to be more ethical. Throughout the book, Florman is a champion of the engineer – attesting to his goodness of character and intent. He quite convincingly shows, through situational examples, that morality is not the problem. Instead, engineers must be more mature in this world that is governed by “conflict, debate, and struggles of the political process”. The world is complicated and anyone who thinks to focus on platitudes about morality is deluding himself and not addressing the real issue. Instead, Florman quite rightly reminds us that it is society as a whole that must unite around values like environmental preservation or food sanitation in order for engineering solutions to have any traction. Society defines its own goals and standards, not engineers, though it is tempting thought given previous associations of engineers as saviors of mankind.

In the second part of the book, Florman exposes the misguided notions of a movement he calls “antitechnology”. This movement seeks to describe technology as a being that has escaped human control and forces men to do and consume things against his wishes. Technology is also creating a culture whereby men are cut off from nature, from his sense of humanity. It is a scary thought, and strangely

appealing to us who complain of the plethora of useless but popular technology trends. But again, Florman deftly attacks the movement's tenets by seeking to explain the fears that led to these views and understanding our woes through the context of technology as a deterministic activity, where our choices in technological pursuit creates unexpected new paths and new choices. He pragmatically reminds us that exploitation is a fact of life – not a result of technologies.

In the last part of the book, Florman seeks to define a new philosophy of engineering and the pleasures that the profession brings. He draws heavily from history, religion, literature, and poetry to offer a complete picture of this philosophy and to counter the general opinion that engineers are dullards with no hint of sentimentality. Whether it is to design and build large structures or lose oneself in the delicate circuits of a computer, engineering is indeed a meaningful love affair. This section of the book is also an appeal to young engineers, like myself, to conduct themselves as humanists, to be emotional and articulate and expressive.

I walk away from this book with a more mature view of what it means to be an engineer. Technology is fickle and perhaps it is pointless for me to assert a control over how technology develops or how it will change society. Instead, I will need to dig a space for rational problem solving within an irrational and politicized society. To be an effective engineer, I must become an effective citizen. Such a large scope and complexity for a profession is a bit daunting, and it seems the engineer could never fit nicely within a well-defined role. But that brings with it new excitement, for as part of a new generation of engineers, I will have a part in determining the path of this profession.

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