Senior Design I

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To Engineer is Human

Chapter 5 Summary

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**Chapter 5**

**“*Success is foreseeing failure*”**

A lot can be said about the lessons that we have learned throughout history. In this chapter it discussed two main eras and approaches that engineers have taken in the design and construction of various projects. The first was the Trial and Error Period which consisted of the design and construction failures of pyramids as well as cathedrals. For example evidence of this is apparent in the design modification that was made in the Bent Pyramid half way through its construction. In later years construction on cathedrals was based on neighboring projects and lessons learned from structural flaws.

As time progressed we moved on to the Scientific Method Era which made way for advances such as bridges and railroads. During this era engineers focused more on technical advances that required the application of more scientific calculations. Engineers now had to contend with live loads versus stationary loads such as with pyramids and cathedrals. Additionally society’s opinion played a role through the negative media that was circulated globally. Examples of this can be seen in the works of William Wordsworth and Nathaniel Hawthorne as well as *The Harper’s Weekly.*

It is true when they say that the only constant is change. These two eras have demonstrated that the engineer continues to progress and develop as new technology becomes available. He’s continually redefining his/her role in society and what contributions he can make. While to engineer is human and there is always a possibility for error, errors should always be kept to a minimum. Nevertheless, we must always remember to keep the safety of the general populace as our first priority. No one knows what the future holds but if we make a conscientious effort to learn from our mistakes there can be no limit to the potential designs in construction projects still to come.

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