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### A Man on the Moon

*A Man on the Moon* offers an excellent collection of the Apollo missions, mostly focusing on the astronauts' point of views. The book was written by Andrew Chaikin, a science journalist, based on his hours of interviews with the Apollo astronauts and the people around them. Rather than seeing the Apollo astronauts as "perfect" figures, Chaikin reveals the astronauts' characteristics and their relationships. He also tells the details of the events during each mission chronologically, almost as in the logbook. Each chapter describes the entire mission flow, including crew selection, mission preparation, flight operation, and the crew's return to the earth. Such vast coverage would not be possible to be presented in the movies or the HBO TV series where only the highlights are shown. The book depicts the series of missions in order, and show the step-by-step progress towards lunar landing. This logbook style writing and the astronauts' lively conversations in the book allow readers to share the excitement about the missions as if they were with the astronauts back in the prime time of lunar voyagers.

This book gives great insights on the human dynamics, especially the ones between mission crew members. Three crew members spent much time preparing for their own lunar mission, and formed their own dynamics which was distinct from any other. For example, two missions, Apollo 8 and 13, were led by relatively strong leadership. This leadership role was played by Frank Borman in Apollo 8, the first lunar orbital mission with significance since the Apollo 1 tragedy, and by Jim Lovell in Apollo 13, the tragic mission followed by an amazing recovery. Meanwhile, the crews of Apollo 14 had a distinct team structure strongly affected by the authority figure, Alan Shepherd. There was a mission like Apollo 15, whose team dynamics was positively influenced by an outside the astronaut community, the Caltech professor Lee Silver. Most surprising to me, the crews of the most historical mission, Apollo 11, tell in this book that their interactions were relatively limited only to the business, or even Armstrong, Aldrin, and Collins had some conflict with each other. This case might have been special since this first lunar landing had to run under extraordinary pressure. Deke Slayton had his point

that the mission crews do not have to be best friends to accomplish a successful mission. It is true that each and every mission was a significant contribution to the project. However, different missions had different levels of accomplishment, or at least had such impressions to me or even to the people who involved with the project. The significant flights such as Apollo 8, 13, and 15 happen to be operated by crews with more bonding than just in terms of business. I am aware that it is hard to fairly compare different missions focusing on different objectives/background under different environment (crew experiences, lunar time, hardware, pressure, etc). Still, would the historical Apollo 11 mission have turned out to be different if the crew dynamics was different? The Apollo astronauts were surly equipped with appropriate technical skills and physical strength. In addition, some had test pilot experience, or obtained further skills required for specific missions, such as geological knowledge. Although they are human, they were closest to “perfect” astronauts than any other at that time. But, would there be any advanced mission in near future that requires further more such as fine tuning by good human collaboration? With the technology improvement including operation systems or human support systems, the hurdle of astronaut (at least physical) requirements is getting lower and lower. With this technological improvement changing the space exploration basis, what would be left as, or to be added as the essential qualities of astronauts?

NASA seemed to have some selection criteria for the Apollo astronauts according to the book, since they tested the candidates on heating/cooling chamber tests or some psychology tests that are similar to the ones still given in the current ISS astronaut selection. The book, especially in the beginning, discusses about selection of Apollo astronauts. In the class, we learned one of the important virtues required for an astronaut was to be a good test pilot so that they can depict the lunar operation details about which only they can convey the ideas about. However, considering the case of Bill Anders, who was not accepted to the Edwards Test Pilot School, but was selected for the second astronauts group, clearly the requirements were deviated from the ones for test pilots. Since it looks that Chaikin interviewed only the astronauts, but not the NASA heads who picked the astronauts, the criteria are still unclear to me even after reading the book. Even after the astronauts selected, they needed try hard to stand out among the crowds to be picked for missions with limited seats. As described in the book, the competition

could be serious under such pressure, especially for astronauts such as Bill Anders who did not know their criteria. Meanwhile, it is possible that NASA themselves were still in the process of finding the best method to pick crews using “peer review.” The precious knowledge from the Apollo project should have been implemented in to the space station or should be to the next lunar landing operations. As the space program advances, the mission time span and the number of crew increase, causing more different human dynamics. In the class, we discussed about the number of crew increased from one to three as the program progresses from Mercury, Gemini, and to Apollo, but for no particular reason. I wonder if human factor fields will progress enough to optimize the number of people to work in a confined space for long time.

While the book give great insights on the human dynamics in the Apollo projects, the book also covered much technical aspects related to each mission, but not beyond what we learned in the class. The outstanding engineer work on LEM design or guidance systems, or the famous LOR decision are only briefly mentioned in the book. I wish Chaikin, as a science journalist, had a chance to interview people other than astronauts, such as Deke Slayton, or engineers. .

This book by Chiakin is a book in the “Apollo Missions and the Cult of the Astronaut” as categorized by Lanus. Chaikin spent hundreds of hours interviewing astronauts, investigated the audio and video records of the missions (the original resource), and other books or papers written by the people who involved the projects (the secondary resource). Unlike technological records, it would be impossible to perfectly describe what the astronauts thought and how they interacted way back in 30 years. In general, people often think very differently on the same subject, and their opinions change as the time passes by. I found the characters (like Pete Conrad) had different impressions to me when his stories were told by himself or by somebody else in the book. However, Chaikin stayed very objective all through the book, and strictly limited himself to covey astronauts’ interviews. He even managed to get feedbacks from the astronauts with the strong characters. Of course, the book is not completely objective because Chaikin selected the materials to be in the book from great amount of information he was exposed to. (It was interesting to see how HBO series directed by Tom Hanks had episodes that were not in this Chaikin’s book, such as the Apollo 7, the first manned

mission since Apollo 1 tragedy, and the LEM design.) Although there are vast part left to be untold by the astronauts who did not join the interviews, this book is an excellent introduction to what was actually happening to the astronauts in the Apollo projects surrounding. Al Bean said he “felt blessed” since his moon trip. The Apollo projects were much blessed with their consistent enthusiasm for the lunar explorations. (1320 workds)