The Search For The Double Helix Essay, Research Paper

This is an excellent story autobiography, of a brilliant scientist, James Dewey Watson, who reveals the structure of DNA. But this book is not wholly about science. Far from it. It’s about a race, or game, for the one thing that separates scientists from great scientists, the Nobel Prize.

The race is among five people: Wilkins, Franklin, Pauling, and Watson and Crick. And how do you win a race of such prestige? By playing fair? Not in this case. To be the first to uncover the structure of the DNA molecule was going to take a little cheating, and we find out that Jim Watson was not the most “honest” person. More than a few times he lies or simply twists the facts to get what he wants.

Jim Watson is a young, American postdoctoral fellow, trying to work in an English society that has many more rules, or morals, than he is used to. The problem of not being able to work on what he is so wrapped up in, DNA, causes serious problems for him. Because as we find out in this book, when Jim Watson becomes interested in something, he sticks with it. And because of the English morals, he was not allowed to simply take over what someone else, Maurice Wilkins, had already started on.

The beginning of “Honest Jim,” could be traced back to his getting to Cambridge, and the Cavendish Laboratory in the first place. It presented the problem of funding, as Jim was sent to England to study metabolism of nucleic acids with Herman. Watson entirely bored by Herman’s studies, decided he needed to be transferred to Cambridge to work on DNA. And with a few lies to keep his funds coming, he was off to the Cavendish. Once there however, getting to work on DNA was more challenging than he had hoped for. It took some getting in good with Maurice Wilkins, so that he would give the “OK” to do some research on DNA as well. At one point Watson even tried to use his “pretty” sister, which he noticed Wilkins looking at, to get in good. After tediously explaining to Wilkins that he was using models to try to figure out the structure, and not x-ray crystallography, he was finally given the go ahead. After all using models was like working on another problem, or just “playing with toys” to Maurice Wilkins and Rosalind Franklin. Linus Pauling may have also inadvertently helped get Watson and Crick on DNA by doing his own work back in the States. When Watson told Bragg of Pauling’s decision to try to figure out the structure as well, Bragg was all too eager to let them try it rather than let the Western Hemisphere get another triumph over the English.

It then comes to, how “honest” was Jim? I qoute of Jim Watson:

We were only a few minutes out of sight of the hotel when we saw a party coming down upon us, and I quickly recognized one of the climbers. He was Willy Seeds, a scientist whom several years before had worked at King’s College, London, with Maurice Wilkins on the optical properties of DNA fibers. Willy soon spotted me, slowed down, and momentarily gave the impression that he might remove his rucksack and chat for a while. But all he said was, “How’s Honest Jim?” and quickly increasing his pace was soon below me on the path.

This is of wondering importance to how Wilkins may have actually felt about Jim, during those trying years of the discovery. Although Maurice gave to Watson the indication that it was all right to study DNA, he must not have planned on “the problem child,” actually coming up with the correct answer.

“Honest Jim” was also “Lucky Jim” when it came to getting the information needed to make an accurate model of DNA. A chance meeting with Erwin Chargaff, gave Watson the knowledge of how the base’s paired up. And when Linus Pauling’s son, Peter, came to Cambridge for school, Watson and Crick exploited him for all the information that he could muster from his father. But perhaps the greatest stroke of luck was when Linus himself, came up with an incorrect model of DNA. This gave Watson and Crick something to celebrate about, “the Pauling failure…,” and gave them new hope that they could still beat the old dog at his own game.

However, the discovery of the structure of DNA was not all luck. It took the superior intellect of both Jim Watson and Francis Crick to finally figure out the double-helical structure. And why does Watson try to make himself seem even more ingenious by stressing his laboratory incompetence, and his lack of knowledge of the sciences? Doesn’t he realize that this discovery of “the secret of life” says that he is one of the great minds of all time?

Though all the credit need not go to only Watson. Without Francis Crick, the intellectual thinker of the two, Watson would have strayed off the path more than once. Wilkins and Franklin both contributed too, maybe not willingly, but they did. And when the Nobel Prize was given out, it was shared by Watson, Crick, and Wilkins. And why not? Without the information that Maurice supplied Watson and Crick with, they would have probably been beaten by Linus Pauling to the answer. But what about Franklin? Unfortunately she passed away before the Nobel was awarded or else she might have taken Maurice’s place in the Nobel spotlight (only three people can share the same Nobel Prize, and it cannot be given posthumously).

You do not necessarily have to understand all the scientific terms in this book to enjoy it, but it helps. And though Watson criticizes most of the other scientists in this book, for their sex, age, interests, and what not. He does respect their intelligence enough to know that there was a race for the double-helix. You might also ask, does Watson deserve the Nobel Prize? Even though he used others’ information, and immorally barged in on Wilkins’ territory, I still believe that he deserves the “prize.” Because even with Franklin and Wilkins’ input, Watson still had to put it all together and make it fit.