When looking at Scheme in comparison to Java The readability comes into play very quickly. At first, I thought Scheme was harder to read, but that was because of my familiarity with Java over Scheme. Scheme in fact is a simpler written language. Schemes syntax is not as verbose as other languages such as java. From what I have learned about scheme with your lectures and documentation, Java is a lower-level language compared to scheme therefore making it more complex and harder to read. While looking at differences between the languages you can see that java has multiple methods in place and must use built in functions and libraries. Comparing that to scheme only needing roughly 7 lines of code. This hurts the readability for java by giving more opportunities to add in constructs and other complex calculations. Scheme is easier to read than java for the reason listed above.

Comparing the simplicity of Java and scheme I looked over the constructs and multiplicity of features I used or could use in the programs. Java offers a wide variety of constructs and libraries to allow for different things such as type checking. This makes the program more verbose in comparison to scheme which hurt the simplicity of Java. I could have written my counter in the recursive call in many ways, and it would all execute the same way. In scheme there is more restriction on the constructs, so it makes it easier for solutions to follow a specific style in comparison to the freedom given in Java. As shown in the graph in our textbook simplicity affects readability. After looking over the comparisons, Scheme takes the edge in both readability and simplicity.

As we learned in chapter 1 of our textbook orthogonality makes the language easier to learn and read. Scheme is clearly the more orthogonal language. Scheme Is a purely functional language compared to java. Java is an object-oriented language. It refers to creating classes and objects to perform tasks. Hence, it is not functional programming. When looking at the assignment two & three, specifically how I used a loop to read in texts for Homework two. In java you can use three different kinds of loops to eventually get the same outcome. In an orthogonal language there would only be one way to use loops.

When it comes to writability, Scheme seems to have the upper hand. Scheme allows for much more compact programs that accomplish the same goal. Looking at it from the viewpoint of the homework, my java program needed sub classes and multiple methods racking up 80+ lines of code. On the other hand, my Scheme program was roughly 9 lines.