

## Big Data (CS 522)

### *Knowledge is Structured in Consciousness*

#### Lesson 8

#### Spark and SparkSQL

#### *Commanding All the Laws of Nature from the Source*

The declarative style of functional programming makes it possible to write methods (and programs) just by declaring *what* is needed, without specifying the details of *how* to achieve the goal. Including support for functional programming in Java makes it possible to write parts of Java programs more concisely, in a more readable way, in a more threadsafe way, in a more parallelizable way, and in a more maintainable way, than ever before.

*Just as a king can simply declare what he wants – a banquet, a conference, a meeting of all ministers – without having to specify the details about how to organize such events, so likewise can one who is awake to the home of all the laws of nature, the “king” among laws of nature, command those laws and thereby fulfill any intention. The royal road to success in life is to bring awareness to the home of all the laws of nature, through the process of transcending, and live life established in this field.*

#### MAIN POINTS

1. In functional programming, functions are first-class citizens – they are passed as arguments and occur as return values. *In ordinary human life, it is sometimes hard to recognize that one’s mind does not function as well as it could; that one’s emotions are rougher than they need to be; that one’s priorities in life may not be as clear as they could be. Ordinary life is in this way an approximation to a truly full life. It is possible to purify one’s inner life so that functioning in the world is smooth and successful, just as it is possible to tune a car engine or purify muddy water. An effective way to do this is to allow the mind to expand to its infinite nature and allow the body, at the same time, to rest deeply.*
2. In Java SE 8, these inner class approximations have been replaced by lambda expressions, which capture their essential functional nature – arguments sent to outputs. With lambda expressions, it is now possible to reap many of the benefits of the functional style while maintaining the OO nature of the Java language as a whole. *The “purification” process that made it possible to transform “noisy” one-method inner classes into simple functional expressions (lambdas) is like the purification process that permits a noisy nervous system to have a chance to operate smoothly and at a higher level. This is one of the powerful benefits of the transcending process.*

**CONNECTING THE PARTS OF KNOWLEDGE**  
**WITH THE WHOLENESS OF KNOWLEDGE**

1. The Spark employs three basic operations: Transform, filter and action.
2. An RDD is exclusively used by Spark to execute basic operations.
  
3. ***Transcendental consciousness*** can be experienced in the stillness of one's awareness through transcending, is where the laws of nature begin to operate – it is the home of all the laws of nature.
4. ***Impulses within the Transcendental Field :*** As TC becomes more familiar, more and more, intentions and desires reach fulfillment effortlessly, because of the hidden support of the laws of nature.
5. ***Wholeness moving within itself:*** In Unity Consciousness, one finally recognizes the universe in oneself – that all of life is simply the impulse of one's own consciousness. In that state, one effortlessly commands the laws of nature for all good in the universe.