NOTES FROM: *Reader, Come Home,* by Maryanne Wolf

SUMMARY: Humans were never meant to read. No child is ever born with a gene that directly leads to literacy; the reading circuit has to be intentionally, rigorously cultivated, especially in the early years, and nothing about that process is guaranteed. The ability to read these words is nothing short of a miracle, and *you're witnessing it right now in this very moment.*

The human brain - this amazingly, vastly complex *thing*, this technology that *you carry around in your head all day - somehow* finds a way to connect the functions that already exist, like vision, language, pattern recognition, and more, and *combines them* in such a way that you're able to follow this sentence and decode its meaning.

Because the ability to read doesn't develop unless it's actively and effectively taught, the brain of a reader has completely different wiring from that of a non-literate person, with implications that follow a person throughout their entire lifespan.

In this book, *Reader, Come Home*, neuroscientist Maryanne Wolf traces the development - or lack thereof - of the reading circuit and extends her research into questions of what will happen to us as we shift from a literacy-based culture to a more digital one.

The demands of the digital world engage our brains *differently,* and it's become clear to researchers like Dr. Wolf that the medium(s) in which we read shape *how* we read, and encourage or *discourage* the expert analytical and reading skills that are desperately needed today - by everyone.

"What we read, how we read, and why we read change how we think, changes that are continuing now at a faster pace. In a span of only six millennia reading became the transformative catalyst for intellectual development within individuals and within literate cultures. The quality of our reading is not only an index of the quality of our thought, it is our best-known path to developing whole new pathways in the cerebral evolution of our species."

"Within these pages, the meanings of 'good reader' have little to do with how well anyone decodes words; they have everything to do with being faithful to what Proust once described as the heart of the reading act, going beyond the wisdom of the author to discover one's own."

"To be sure, there are genes involved for basic capacities such as language and vision that become rearranged to form the reading circuit, but in and of themselves these genes do not produce the ability to read. We human beings have to learn to read."

“It is still a matter of amazement to me that what we know before we read any sentence prepares us to recognize even the visual shapes of the individual words faster and to understand their meanings more rapidly and more precisely in any new context. We who are expert readers process and connect our lower-level perceptual information (i.e., the first rings of the reading circuit) at near-breakneck speeds. Only such speeds can enable us to allocate attention to the higher-level deep-reading processes, which in turn constantly feed their conclusions back and forth with the lower-level processes, thus better preparing them for the next words they encounter. The cognitive beauty of these interactive exchanges is that they accelerate everything from perception to comprehension. They accelerate perception by narrowing the possibilities of what we will read next to a set of words that correspond to what Gina Kuperberg calls ‘proactive’ predictions. It’s what every smartphone is now doing as you type your words, if occasionally with wild (and sometimes embarrassing) misses. These predictions in turn stem from various sources, including our working memory of what we have just read and our longer-term memory of stored background knowledge. Together, these interactions among perception, language, and deep-reading processes accelerate our understanding because they allow us to read a sentence of twenty words as a sum of predicted thoughts far more quickly than the sum of information provided by twenty individually read words.”

“Open a book and a voice speaks.”

“What will happen to young readers who never meet and begin to understand the thoughts and feelings of someone totally different?”

“For those of you who read that passage in Tolstoy’s novel, *you leaped, too.* In all likelihood the same neurons you deploy when you move your legs and trunk were also activated when you read that Anna jumped before the train. A great many parts of your brain were activated, both in empathizing with her visceral despair and in some mirror neurons acting this desperation out motorically.”

“Over the lifespan, everything we read adds to a reservoir of knowledge that is the basis of our ability to comprehend and to predict whatever we read.”

“It would be a shame if brilliant technology were to end up threatening the kind of intellect that produced it.”

“Chance comes only to the prepared mind.”

“From start to finish, the basic neurological principle – ‘Use it or lose it’ – is true for each deep-reading process. More important still, this principle holds for the whole plastic reading-brain circuit. Only if we continuously work to develop and use our complex analogical and inferential skills will the neural networks underlying them sustain our capacity to be thoughtful, critical analysis of knowledge, rather than passive consumers of information.”

Jonah Lehrer: “An insight is a fleeting glimpse of the brain’s huge store of unknown knowledge. The cortex is sharing one of its secrets.”

“We arrive at last at the end of the reading act. Insight is the culmination of the multiple modes of exploration we have brought to bear on what we have read thus far: the information harvested from the text; the connections to our best thoughts and feelings; the critical conclusions gained; and then the uncharted leap into a cognitive space where we may upon occasion glimpse whole new thoughts.”

“What do we do with the cognitive overload from multiple gigabytes of information from multiple devices? First, we simplify. Second, we process the information as rapidly as possible; more precisely, we read more in briefer bursts. Third, we triage. We stealthily begin the insidious trade-off between our need to know with our need to save and gain time. Sometimes we outsource our intelligence to the information outlets that offer the fastest, simplest, most digestible distillations of information we no longer want to think about ourselves.”

Susan Sontag: “To be a moral human being is to pay, be obliged to pay, certain kinds of attention…The nature of moral judgements depends on our capacity for paying attention – a capacity that, inevitably, has its limits, but whose limits can be stretched.”

“The current variation of Socrates’ worry is that our increased reliance on external forms of memory, combined with the attention-dividing bombardment by multiple sources of information, is cumulatively altering the quality and capacities of our working memory and ultimately its consolidation in long-term memory. And indeed there are some glum estimates that indicate that the average memory span of many adults has diminished by more than 50 percent over the last decade. We will need to vigilantly replicate such studies over time.”

“Calvino dedicated his life to attaining a form of precision, refinement, and lightness in writing that may become invisible or, worse, irrelevant to the skimming readers we could become.”

“The writer deserves my attention to detail; I honor the transaction with my thoughtful focus, by being fully present during the encounter.”

“The future of language is linked both to the sustained efforts by writers to find those words that direct us to their hard-won thought and to the sustained efforts by readers to reciprocate by applying their best thought to what is read.”

“I worry that we are even closer to the stripping away of complex thoughts when they do not fit the memory-enfeebling restriction on the number of characters used to convey them.”

“It would be a gross error to suggest that the depth of an author’s thoughts is directly correlated to the syntactic density of a work. I have often written that we can all appreciate both Hemingway and George Eliot. Nevertheless, I have begun to question the cognitive loss of not being willing or, perhaps in the future, even able to navigate the demands of the complex concepts in denser prose. I am increasingly worried, therefore, about the relationship between the number of characters with which we choose to read or write and how we think. Never more so than now; never more so than with our young adults, or with those who would lead our governments around the world.”

“In a project designed to track the use of citations by students, most student citations referred either to the first page of the source they cited or to the last three pages. One can only wonder whether the pages in between the first and last were ever read.”

“As one master of the fake-news genre told the *Washington Post:* ‘Honestly, people are definitely dumber. They just keep passing stuff around. Nobody fact-checks anything anymore.’ Separating truth from fiction takes time, information literacy, and an open mind, all of which seem in supply in a distracted, polarized culture. We love to share instantly – and that makes us easy to manipulate.”

“Do you, my reader, read with less attention and perhaps even less memory for what you have read? Do you notice when reading on a screen that you are increasingly reading for key words and skimming over the rest? Has this habit or style of screen reading bled over to your reading of hard copy? Do you find yourself reading the same passage over and over to understand its meaning? Do you suspect when you write that your ability to express the crux of your thoughts is subtly slipping or diminished? Have you become so inured to quick precis of information that you no longer feel the need or possess the time for your own analyses of this information? Do you find yourself gradually avoiding denser, more complex analyses, even those that are readily available? Very important, are you less able to find the same enveloping pleasure you once derived from your former reading self? Have you, in fact, begun to suspect that you no longer have the cerebral patience to plow through a long and demanding article or book? What if, one day, you pause and wonder if you yourself are truly changing and, worst of all, do not have the time to do a thing about it?”

“The reality is that each new reader – that is, each child – must build a wholly new reading circuit. Our children can form a very simple circuit for learning to read and acquire a basic level of decoding, or they can go on to develop highly elaborated reading circuits that add more and more sophisticated intellectual processes over time. There will be many differences in how the circuit develops along the way, based on individual children’s characteristics, the type of reading instruction and support they receive, and, critical to our discussion, the medium(s) in which they are reading. The medium’s characteristics or affordances – from physicality to attention-capturing options – add a new, much less understood dimension to influences on the reading circuit’s development.”

“For more than four decades, one of the single most important predictors of later reading achievement has been how much parents read to their child.”

“During the fleeting time from two to five years of age, children in my reading world would be surrounded by stories, little books, big books, little words, any words, letters, numbers, colors, crayons, music – lots of music! – and all manner of things that elicit their creativity, communicative abilities, and physical explorations both indoors and out. Both musical training and various forms of physical practice such as sports and games help children learn both the discipline and the rewards of focusing their attention. Our ideal pre-readers may not all become musicians or athletes, but I hope they will become little cognitive cartographers for whom each excursion into a new corner of their worlds provides fresh material for their reservoir of background knowledge and their growing experiences with words.

I would like children to have the maximum safe radius for the explorations, but for many parents this is not as simple as it sounds. Joe Frost's research shows that the radius of children's activity has shrunk by 90 percent since 1970. There are many reasons why this is so, but children build their internal background knowledge with every successful or unsuccessful exploration, as well as with every book heard, every song sung, every game played, and every rhyme and joke repeated over and over. There are many ways to increase the circumference of children's lives."

"The Bureau of Prisons in states across America know this well; many of them project the number of prison beds they will need in the future based on third- or fourth-grade reading statistics."

"Simply put, the amount of money we invest in the first years of a child's life produces greater returns for each dollar spent than at any other time in the life span. The implications of all the various types of research on the developing child could not be better understood: society needs to invest in more comprehensive early-childhood programs with more highly trained professionals before the first large gaps in language and learning become permanently cemented in the lives of millions of children."

"Nothing in reading acquisition is more important than beginning systematic, targeted intervention as early as possible."

"We all know that progress has never been simple for our species, even in far simpler times than ours. I am a realist and optimist and see reason to be both."

"The great, insufficiently discussed danger to a democracy stems not from the expression of different views but from the failure to ensure that all citizens are educated to use their full intellectual powers in forming those views."

"If good readers are endangered, so are we all."