i READ
Adaptable interface using eye tracking
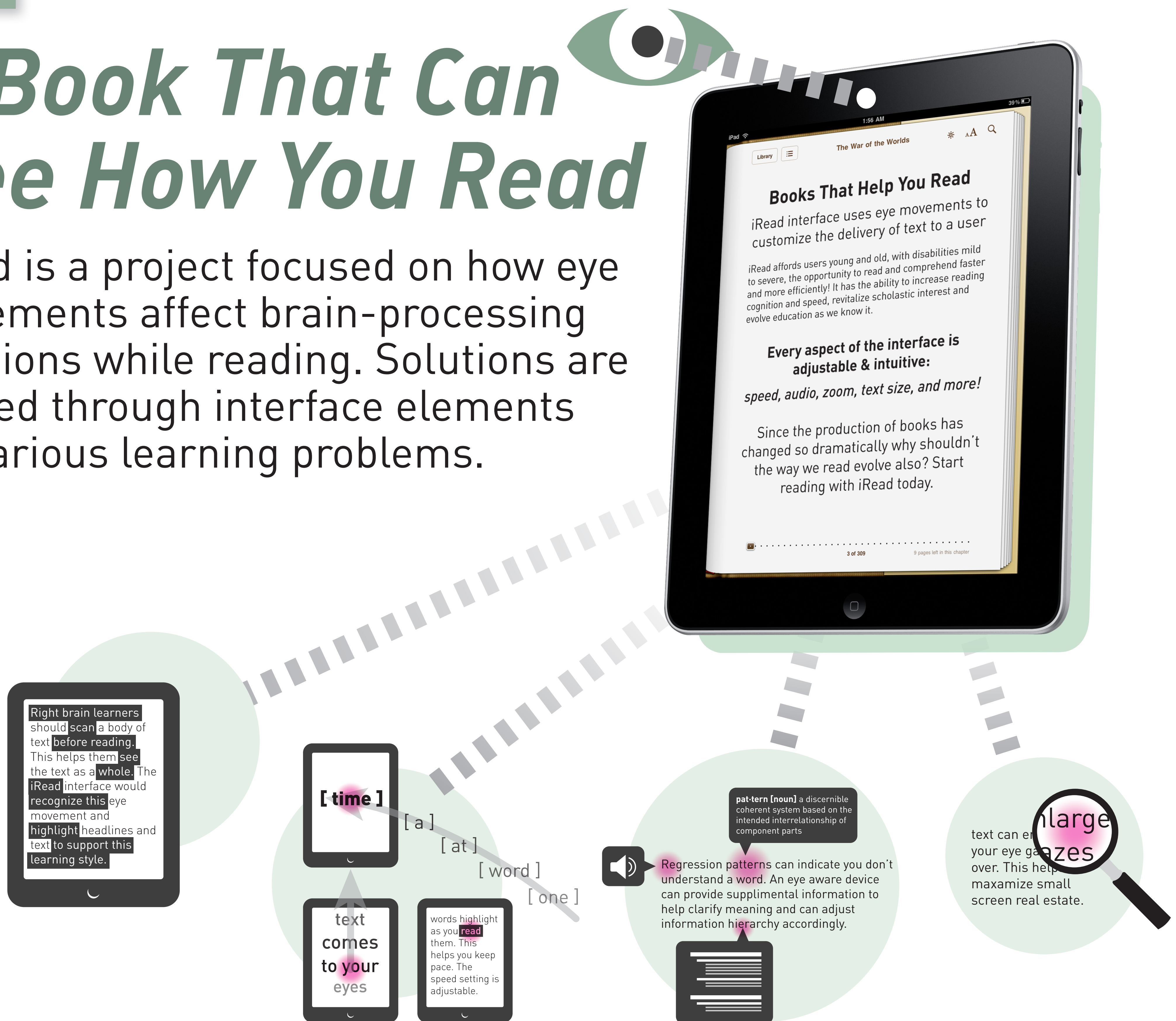*Kristin Freese*

eyeRead

A Book That Can See How You Read

iRead is a project focused on how eye movements affect brain-processing functions while reading. Solutions are offered through interface elements for various learning problems.

Books That Help You Read

iRead interface uses eye movements to customize the delivery of text to a user

iRead affords users young and old, with disabilities mild to severe, the opportunity to read and comprehend faster and more efficiently! It has the ability to increase reading cognition and speed, revitalize scholastic interest and evolve education as we know it.

Every aspect of the interface is adjustable & intuitive:

speed, audio, zoom, text size, and more!

Since the production of books has changed so dramatically why shouldn't the way we read evolve also? Start reading with iRead today.

The War of the Worlds

iPad 1:56 AM
Library

3 of 309   9 pages left in this chapter

Right brain learners should scan a body of text before reading. This helps them see the text as a whole. The iRead interface would recognize this eye movement and highlight headlines and text to support this learning style.

[time]

[a]
[at]
[word]
[one]

text comes to your eyes

words highlight as you read them. This helps you keep pace. The speed setting is adjustable.

pat·tern [noun] a discernible coherent system based on the intended interrelationship of component parts

Regression patterns can indicate you don't understand a word. An eye aware device can provide supplemental information to help clarify meaning and can adjust information hierarchy accordingly.

enlarge text can enlarge your eye gazes over. This helps maximize small screen real estate.

A detailed look at iRead interface elements.

Hypertext

Hypertext mode of the iRead interface allows the user to adjust the density of hypertext within a body of text. Since right brain learners are holistic they benefit from scanning articles before they read them. Hypertext affords graceful scanning, controls unnecessary eye movements and provides links to additional information.
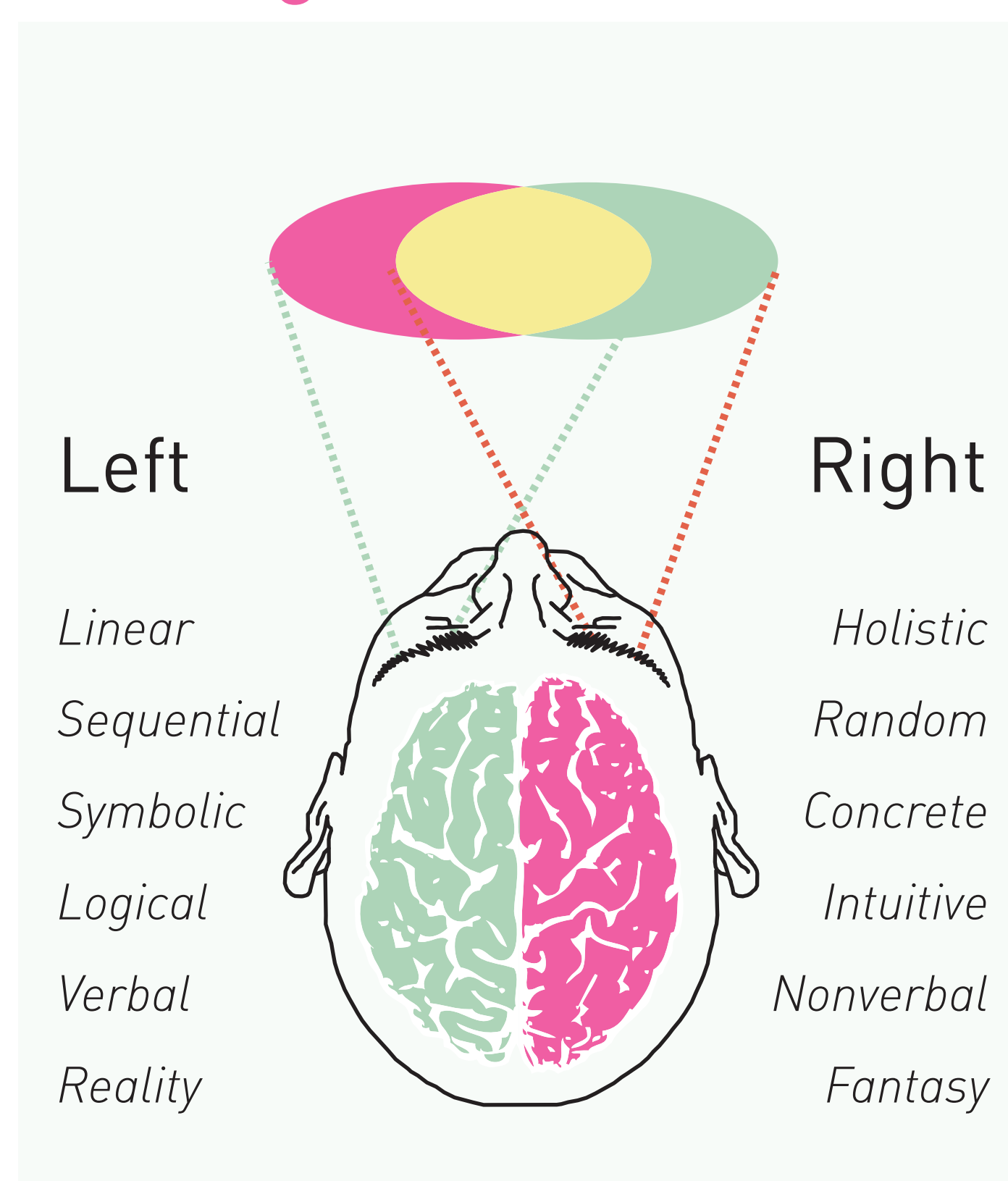
Attention

Attention mode records the users level of attention while reading. Using both face and eye recognition the interface can alert the user when they need to wake up or take a break. It can also perform eye-tracking exercises to stimulate the user and encourage progression.

Visual

Visual mode adds imagery to text in order to increase recall memory and assist right-brain learners. Right brain dominant learners are better at created scenes in their head as opposed to sub-vocalizing words in sequential order to obtain meaning.

Reading is a left brain function.

Left	Right
Linear	Holistic
Sequential	Random
Symbolic	Concrete
Logical	Intuitive
Verbal	Nonverbal
Reality	Fantasy

Left vs. Right Brain Learning Styles

Reading, language and writing are left-brain processing functions, most people that struggle with reading are right-brain dominate learners or have visual eye-teaming problems.

In western cultures, reading is done from left to right. Left to right eye movements, like sequential processing, is a function of the left hemisphere of the brain.

While eyesight is simply the eyes ability to see something, vision is defined as the understanding of what is seen. Reading, like vision is learned. They both involve the ability to take incoming visual information, process that information and obtain meaning from it.

iRead interface adjusts to various learning styles intuitively through eye movements. This enhances the reading experience for right-brained individuals as well as those with learning disabilities.