

**This is Your Brain
on Paper**

sappi

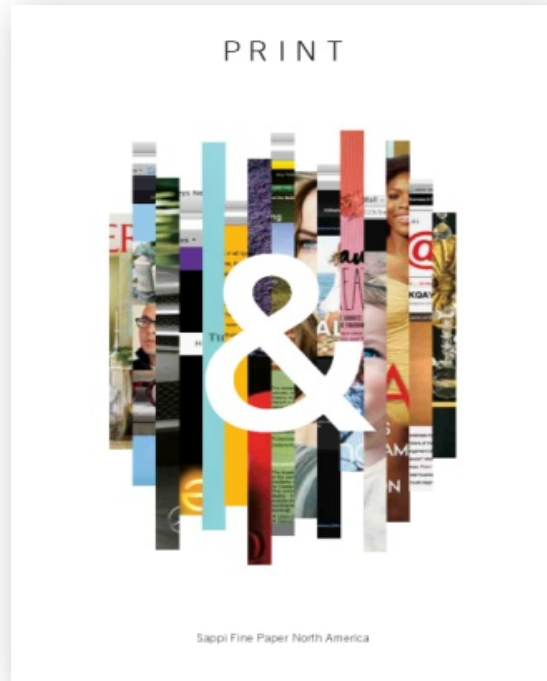
Is Content Just Content?



Marshall McLuhan

The **Medium** is the **Message**

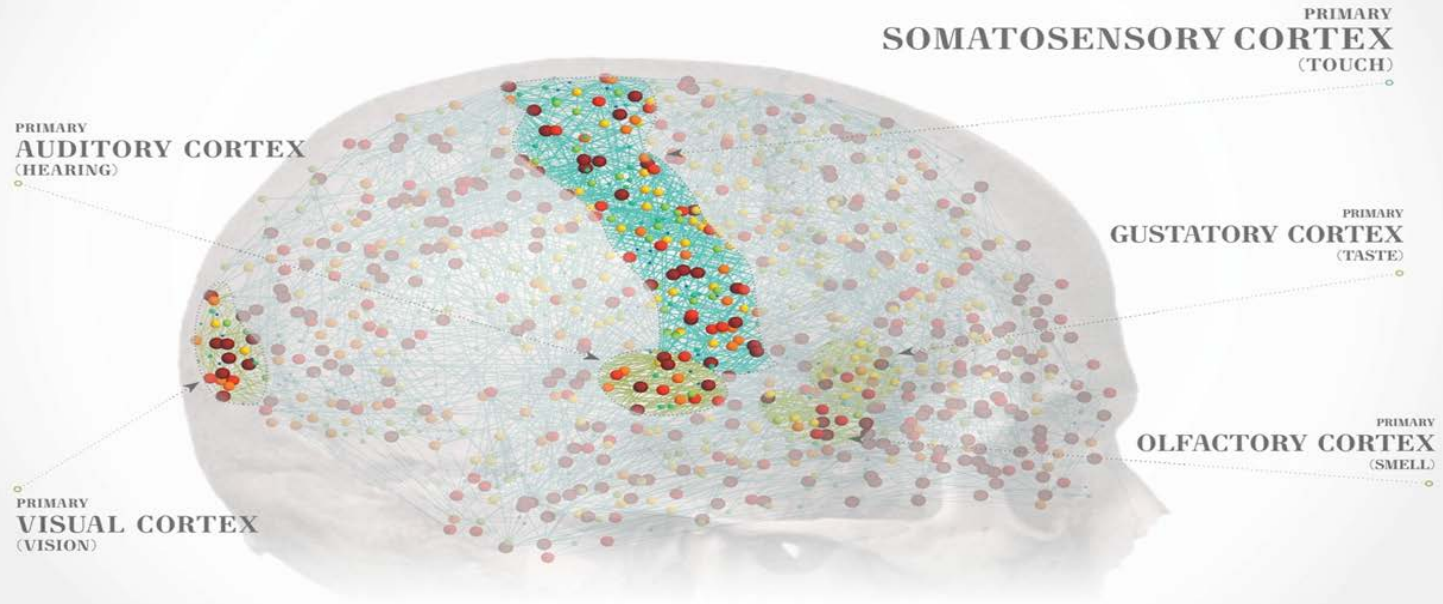
(McLuhan, 1964)



Print & (2013)

HUMAN SENSORY SYSTEMS

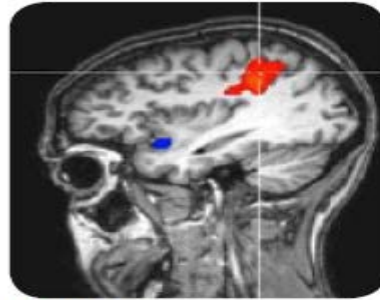
AND THE MECHANICS OF TOUCH



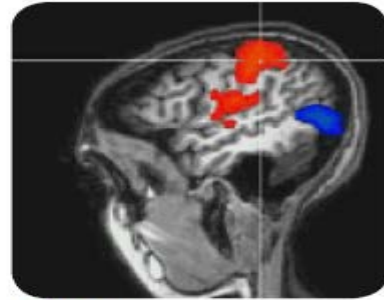
Are there differences in the communication effectiveness of physical and virtual media?

Reading ink-on- paper stimulates

- Visual
- Haptic
- Olfactory
- Auditory



Right parietal



Left parietal

- Tangible materials leave a deeper footprint in the brain
- Physical material involves more emotional processing, which is important for memory and brand associations
- The 'real' experience that the physical media provides means it's better at becoming part of the memory

Source: Millward Brown Case Study: Using Neuroscience to Understanding the Role of Direct Mail, 2009 dm

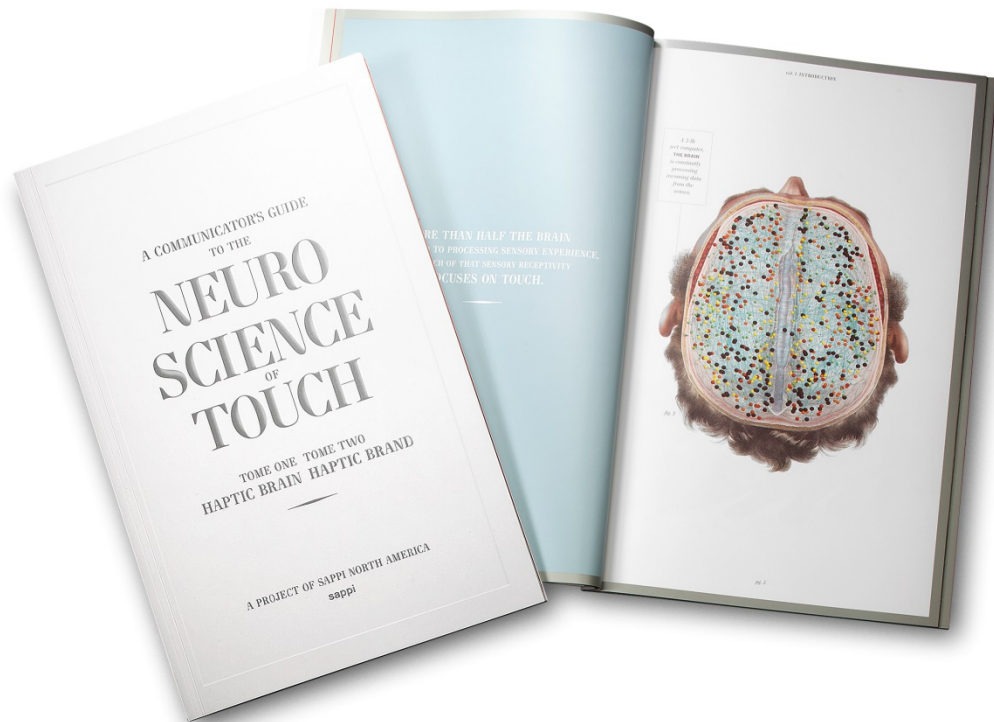
**“PEOPLE UNDERSTAND AND REMEMBER
WHAT THEY READ ON PAPER**

BETTER THAN WHAT THEY READ ON SCREEN.

**RESEARCHERS THINK
THE PHYSICALITY OF PAPER
EXPLAINS THIS DISCREPANCY.”**

—FERRIS JABR

**“WHY THE BRAIN PREFERS PAPER”
SCIENTIFIC AMERICAN**





**“HAPTIC BRAIN” WAS WRITTEN IN COLLABORATION WITH
DR DAVID EAGLEMAN**

**MORE THAN HALF THE BRAIN
IS DEVOTED TO PROCESSING SENSORY EXPERIENCE,
AND MUCH OF THAT SENSORY RECEPTIVITY
FOCUSES ON TOUCH.**

Endowment Effect & Valuation

VID.

4

PERCEIVED OWNERSHIP
AND TOUCH

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Bi-Lateral Literacy*

Reading Ink-on-Paper

- Heart-rate & blood pressure lowers
- Reader slows down
- Try to read every word
- Search for narrative/story
- Read for content, context & nuance

- Read more in depth
- Longer mnemonic retention
- Better understanding of content
- Higher value of authorship
- Higher value of Brand

Reading on a Digital Device

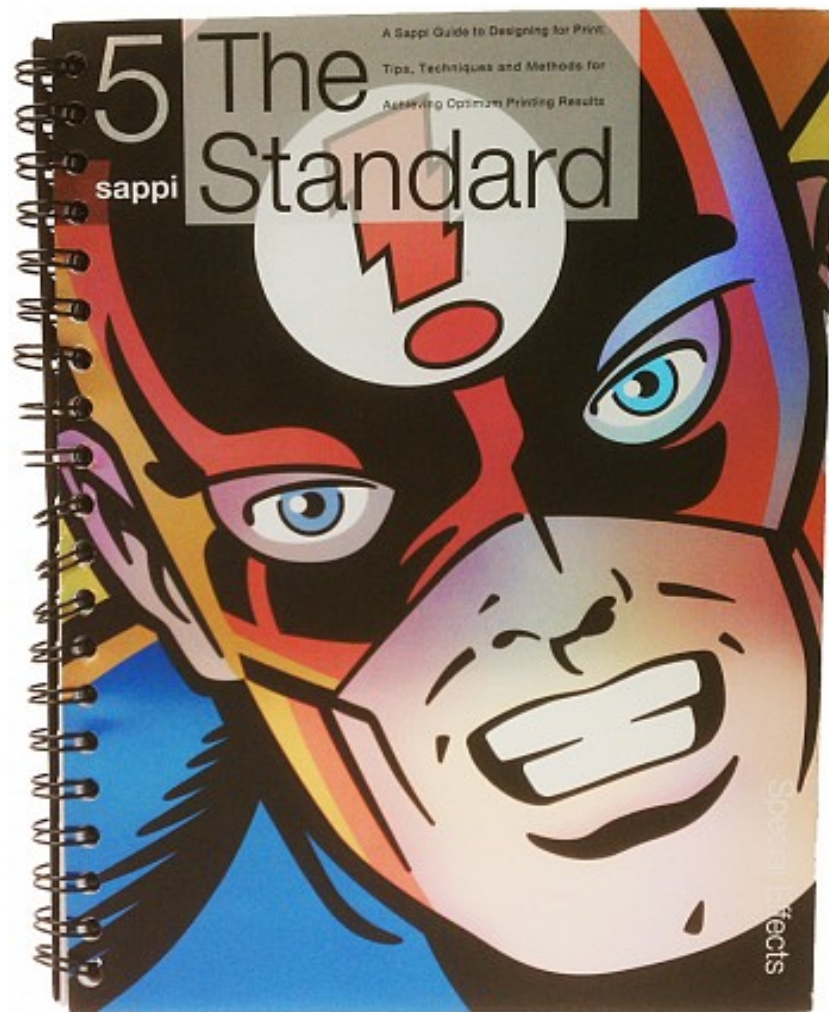
- Immediately switch to new, evolved 'digital' synaptic cortex
 - Switch to skim mode
 - Seek key words, highlighted copy, links
 - Seek imagery & video links

 - Read for speed
 - Low retention rate
 - Lower understanding of content
 - If interested, follow link to more options
- Options: website, social media, print

Proust and the Squid: The Story & Science of the Reading Brain,
Dr. Maryanne Wolfe, Tufts University (Harper Perennial, 2008)

Engage
Educate
Entertain

Educate &
Inspire



Educate & Inspire

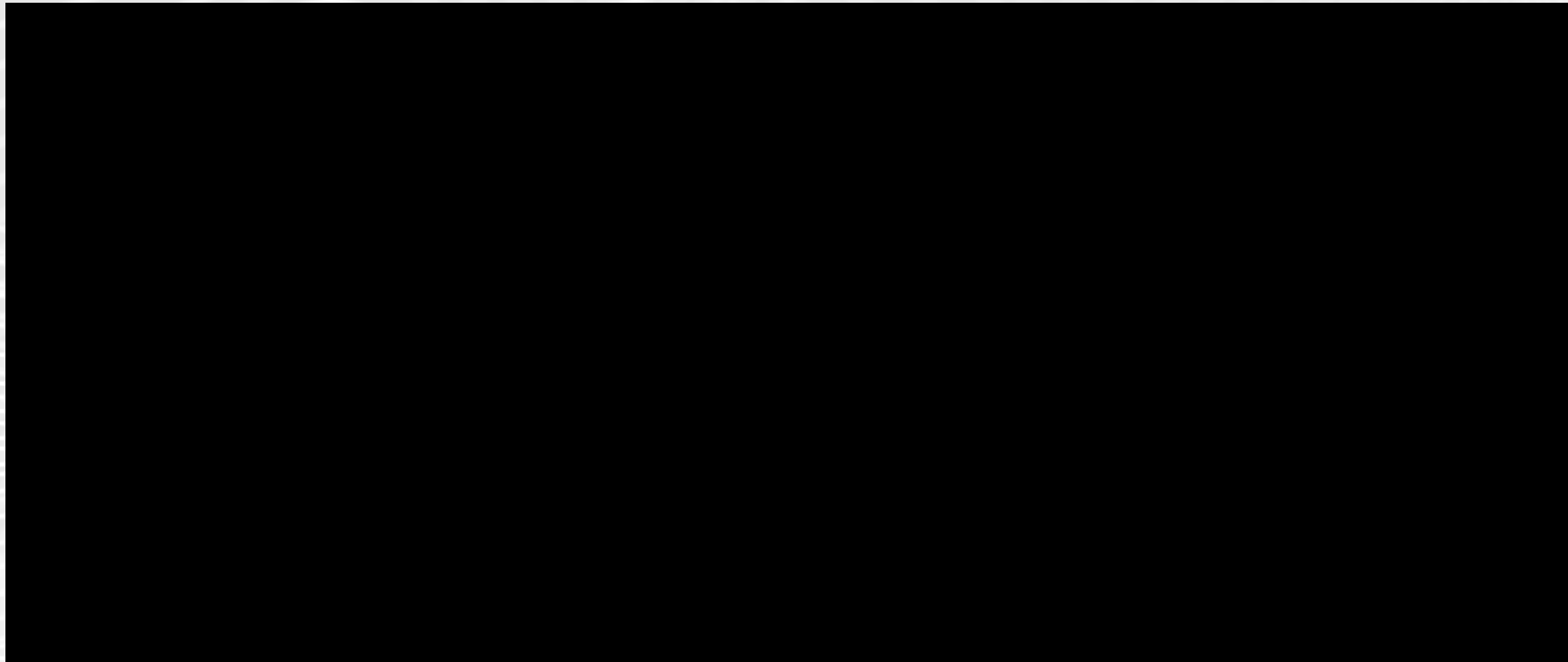




Engage
Educate
Entertain



Electroluminescent Ink



Electroconductive Inks

*ON THE 22nd OF APRIL McDONALD'S IN THE NETHERLANDS
GAVE THEIR GUESTS A MUSICAL SURPRISE.*

Light, leap to the future



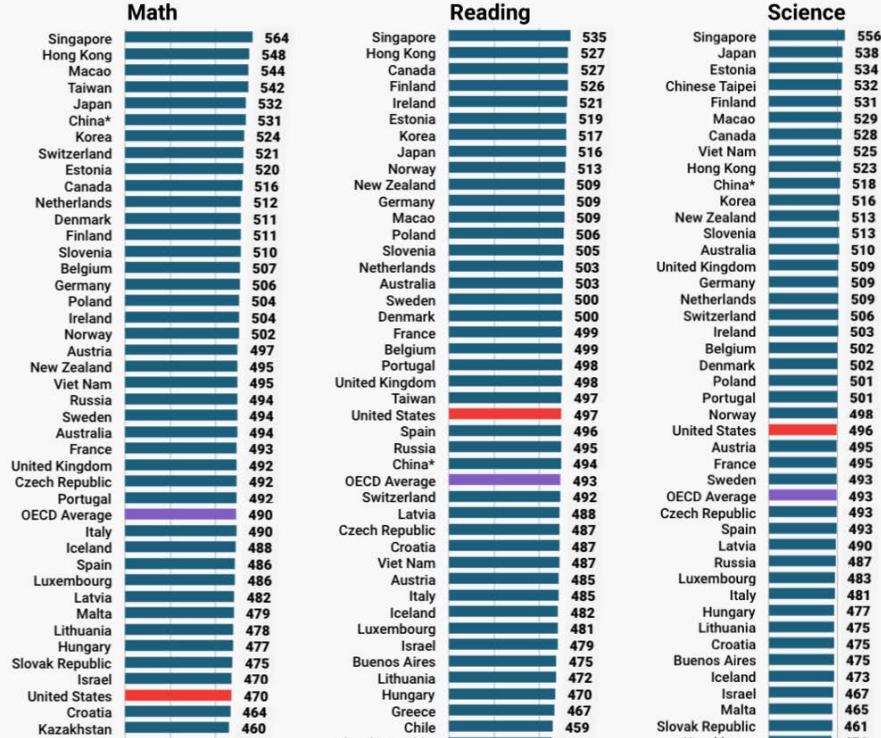
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A Looming Concern

The United States ranks 24th globally in Reading
(Programme for International Student Assessment)

2015 PISA AVERAGE SCORES



United States

24th Reading

25th Science

41st Math

Learning In A Digital Age

Maryanne Wolf, Ed.D. *Tufts University and Curious Learning*
Keynote Speaker, Learning in a Digital Age Conference

January 14, 2016, Framingham, MA



"We are creating and encouraging a culture of distraction where we are increasingly disconnected from the people and events around us, and increasingly unable to engage in long-form thinking. People now feel anxious when their brains are unstimulated."

~ Joe Kraus



It may be decades until we know
what living in a state of constant
distraction will do to us,

— *Douglas Rushkoff* —

AZ QUOTES



NEWS

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Currently, in the United States
only 11 of the 50 states
teach cursive handwriting
as a part of their curriculum.

Handwriting activates the brain more than keyboarding
because it involves more complex motor and cognitive skills.

Handwriting contributes to reading fluency
because it activates visual perception of letters.

Handwriting is a predictor of success in other subjects,
because good handwriting has a positive impact on grades.

Sponsorship and Funding

Nike	> Athletic Wear	> Every Athletic Event
Automotive Industry	> cars	> Automotive Racing
Fashion Industry	> Clothing	> Social, Cultural, Entertainment,

Political

To observe, evaluate and improve their products

Print > Communication, Educational, Marketing & Sales
products/resources

Can we afford continue to produce printed materials that we cannot read?

United States must find balance of reading & handwriting
with programming and coding at ALL levels of education

Decrease in Reading skills in the US will drive Corporations
to foreign countries for employees with higher skill levels

Parental & educational awareness programs
of the psychological hazards of constant distraction

What We Learned

Monitor fatigue will create more reading opportunities

**We must take advantage of our understanding
of the Endowment Effect and Bi-Lateral Literacy**

**It will be the tactile, sensual delights of paper and print
that will keep it engaging, valued and shared.**

Use Paper, Ink and Digital Technology to get Readers back to Print

**Video is the fastest growing media which offers
exceptional opportunities for augmented reality**

What We Learned

Print isn't dead or dying -
it is evolving from a commodity to a higher quality
and specialty experience.

There will be less of it.
What is left will be high quality in both
the physical product and the editorial content.

Content will drive survival
verses the substrate or medium.

Integrated campaigns = more profit + more revenue.

Print has appeal beyond age + \$

Who benefits/profits
from starting a rumor
that states
“Print is Dead”?

Riepl's Law

New, further developed types of media
never replace the existing modes of media
and their usage patterns.

Instead, a convergence takes place in their field,
leading to a different way and field of use for these older forms.

The old doesn't necessarily die out.

In some instances, the old methods are absorbed
or recycled into a new form.

In others cases, those methods are refined
and distilled down to their essence.

In 1913, Wolfgang Riepl, chief editor Nuremburg Daily

1455 First commercially printed book

1690 First printed Newspaper

1731 First Magazine

1893 Radio invented

Live Theatre

1890 First Moving Picture

1928 Television

1972 First eMail available to public

1991 World Wide Web open to public

1995 Streaming videos

1998 First 'blog'

Thank You!

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sappi

sappi etc

daniel.dejan@sappi.com

@danielatSappi tw

daniel.dejan.52 fb

in/danieldejan Li



Printing on paper may be centuries old,
but it is very much a medium for the new millennium.

Advances in both paper and printing technology
have allowed marketers to achieve effects that were not possible a decade ago.

On the right paper, print can evoke nearly any texture
through various coatings and varnishes, different inks, and special techniques.

**Together, *Print & Digital* will enhance
the communication needs of the 21st century.**

THE MEDIUM IS THE MESSAGE

