

# Eleven Thoughts on Dilemmas of Choice, Technology, and Education

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# Digital Natives/Immigrants Revisited

# Basic Assumptions (Prensky)

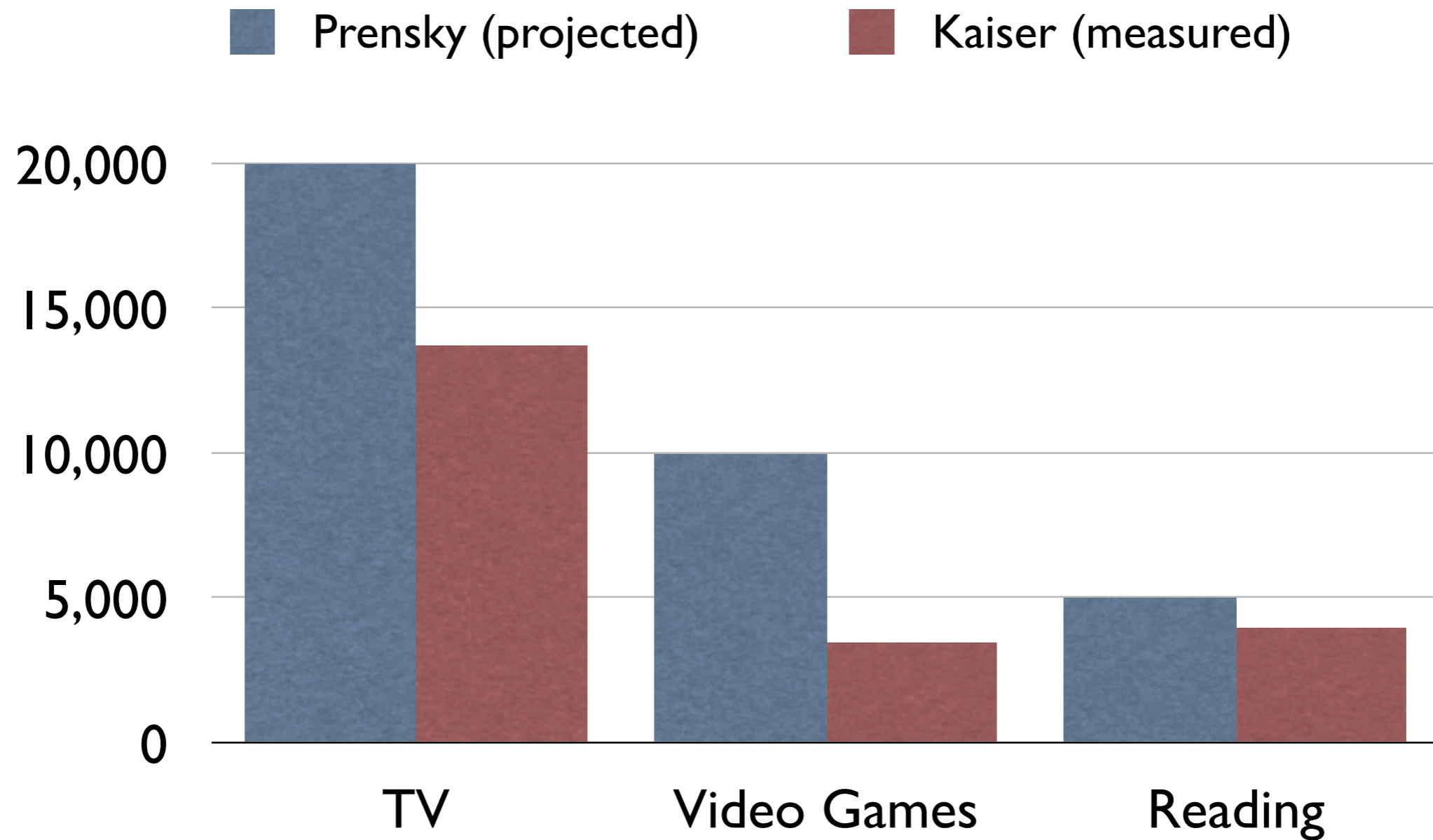
Neuroplasticity

Discontinuity in developmental experience  
due to rise of digital technology

Prensky, M. "Digital Natives, Digital Immigrants." *On The Horizon*, Volume 9, No. 5 (2001)

Prensky, M. "Digital Natives, Digital Immigrants, *Part II: Do They Really Think Differently?*" *On The Horizon*, Volume 9, No. 6 (2001)

# Projected vs. Measured Media Use



Rideout, V.J., E.A. Vandewater, and E.A. Wartella, *Zero to Six: Electronic Media in the Lives of Infants, Toddlers, and Preschoolers*. A Kaiser Family Foundation Report. (Fall 2003)

Rideout, V.J., D.F. Roberts, and U.G. Foehr, *Generation M: Media in the Lives of 8-18 Year-olds*. A Kaiser Family Foundation Study. (March 2005)

# Three Areas of Caution: Misuses of the Metaphor

## Overexplanation

- "My students tune out because they're digital natives."

## Discrimination

- "They really can't be expected to do that because they're a digital native/immigrant."

## Timidity

- "OK, if we put our content in a form that is more like what our students grew up with, that's all we need to do."

What other research can help  
us retain the power of the  
metaphor, but steer away from  
its misuses?

# A. Something About Identity (I)

# Textual Poachers (Jenkins)

Watching media is the beginning, not the end, of the viewer's participation.

Participation involves a specific set of critical and interpretive practices.

Participation defines a base for viewer activism.

Participation defines specific forms of cultural production, aesthetic traditions and practices.

Participation creates an alternative social community.

# Participant Suggestions Responding to A.

No more lectures (in talking head format);

Creation of a classroom community with multiple localized roles;

Stimulate group interaction;

Take advantage of IM for group communication;

Promote class recordings for later use and individual use/sampling;

Move from information transfer to engagement;

Change classroom space from presentation to lab;

Just-in-time education, instead of just-in-case.

# B. Something About Complexity

# Newsflash: TV Not Getting Dumber

## - Story At II -

### (Johnson)

Today's shows are much more complex structurally than those from 10, 20, 30 years ago.

The complexity may not operate just on the structural level, but also on the content level.

There is evidence for a feedback loop between this type of complexity and an increase in certain forms of intelligence (Flynn Effect).

# Structural Complexity

- Dragnet: one plot thread
- Starsky & Hutch: one major plot thread (about 96%, uninterrupted), one minor plot thread (about 4%, at beginning and end)
- Hill Street Blues: nine plot threads - three about 5% each, five about 14-18% each, one about 29%, minimal overlap
- The Sopranos: nine plot threads - ranging from about 4% to about 75%, about 80% overlap

# Content Complexity

It isn't just Bugs Bunny singing opera anymore...



# The Flynn Effect

3 IQ points gain per decade on broad-spectrum tests

- In other words, over a quarter of today's population would score in the "very superior" range of the original 1932 Stanford-Binet test, as opposed to 2.25 percent then!

7 IQ points per decade on abstract reasoning tests

Most explanations are unsatisfactory in providing an account for this phenomenon (inc. test-taking sophistication, nutrition, schooling, child-rearing practices)

Best bet: visual and technical environment

# Participant Suggestions Responding to B.

Provide more complex material and interactions in class;

Maybe the current separation between subjects is not appropriate?

A caveat: students are already handling multiple plotlines in multiple classes - is there a possibility for overload?

## C. Something about Identity (II)

# Plenitude (McCracken)

Plato's theory of Plenitude: "All that can be imagined must be."

Some key aspects of "social plenitude":

- There are an increasing number of social species, with substantial depth to each, and substantial difference among them.
- These species are genuinely new and not derivative, and they are overrunning traditional domains.
- Plenitude is aided by a delinkage of natural and cultural categories.
- Plenitude provokes plenitude across and within categories.
- Plenitude is multiplying history, poetry, fashion, art, music, scholarship, and nationality.

# Participant Suggestions Responding to C.

Evidenced in students in hybrid courses:

- Students' use and knowledge of the technology is like connecting desert islands.

Several possibilities:

- Create tailored moduli for each student:
  - Will the peer group suffice to fill knowledge gaps?

or:

- Aggregate the needs into groups:
  - This should allow for integration of knowledge areas.

or:

- Explore other avenues altogether

An open question: how do we use this to reconcile different learning styles between the sciences and the humanities?

# D. Something About Choice

# I Know What I Want - Or Do I? (Gladwell)

## The Coke Test

- Preference in one scenario is not necessarily preference in another scenario...

## Sensation Transference

- What you want may really be what looks like you want it...

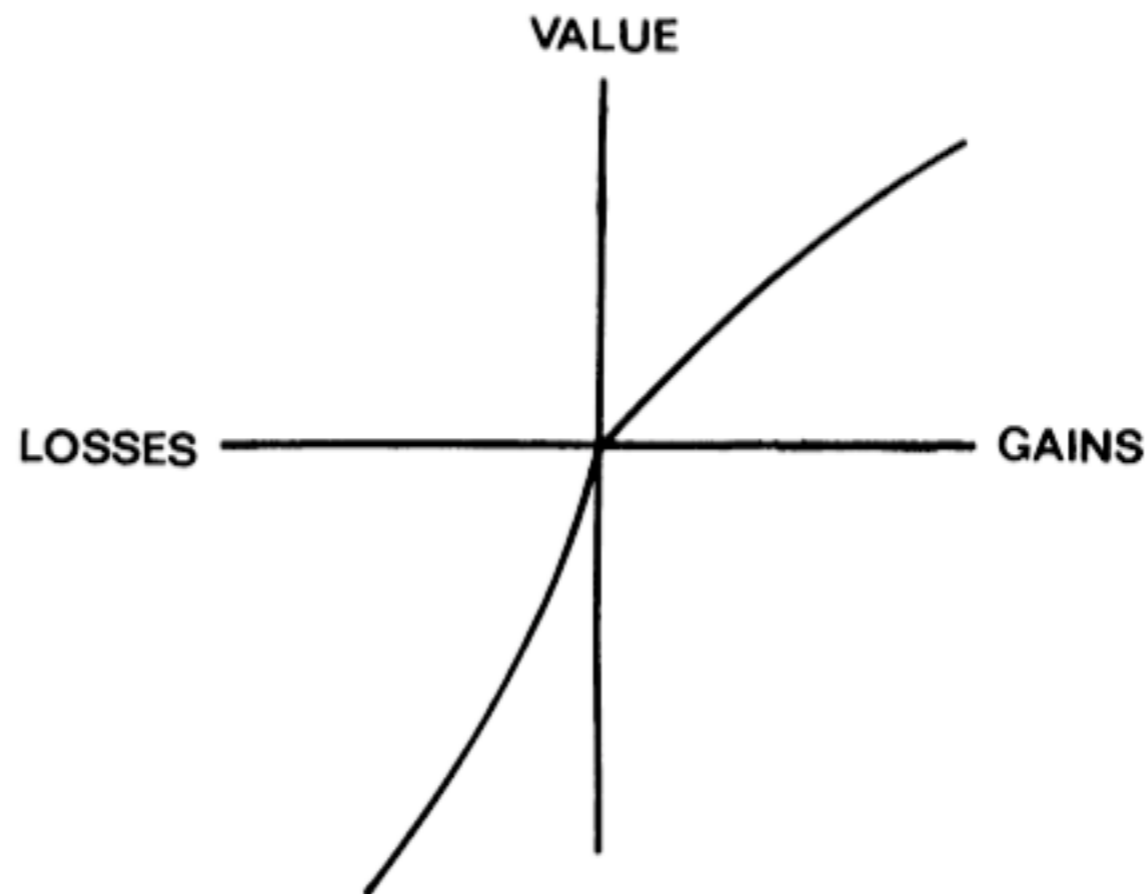
## The Aeron Test

- You may not be able to want something you want if you don't know how to want it...

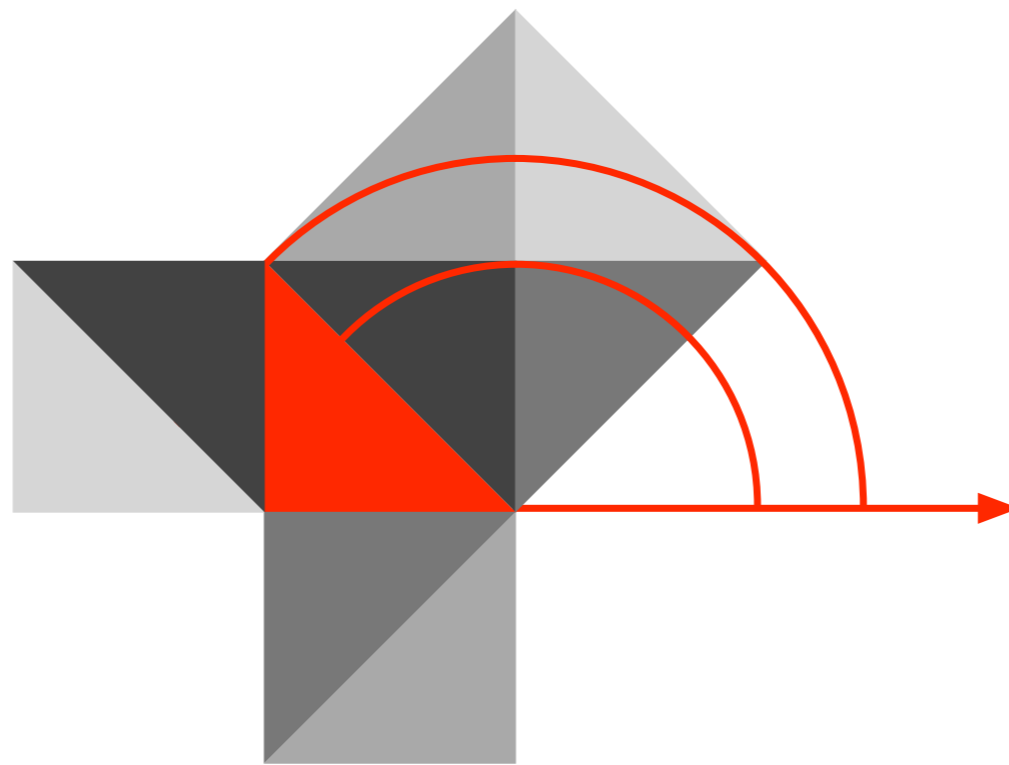
# E. Something About Ownership

# "You can't take that away from me" - Or, How Gershwin Was Right In More Ways Than One...

Prospect Theory (Kahneman and Tversky)



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