Working, learning, leading & thriving in today's constantly changing, exponential world.

IDEA SPARKERS
JSB

new mindsets & lenses may be required.

The past

18th, 19th, 20th C infrastructure
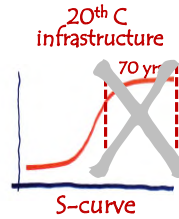
70 yrs

S-curve stable over decades.

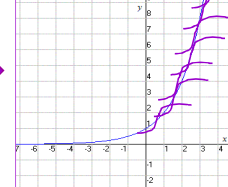The era(s) of relative stability

Skills lasted a lifetime. Career paths were clear

then
The Big Shift Happened

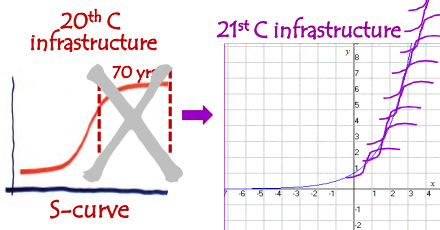Social, Work & Learning Practices evolve around new technologies
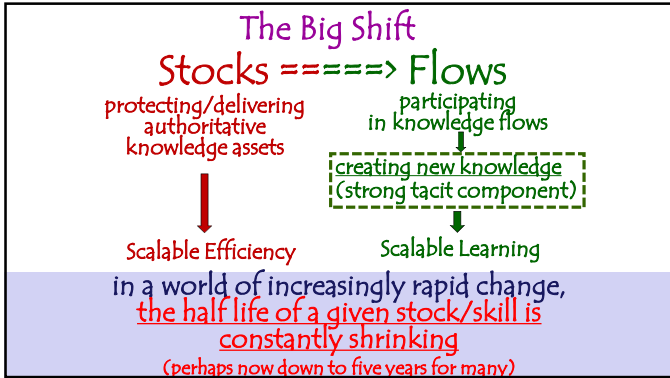
20th C infrastructure

70 yr

S-curve

21st C infrastructure

rapid set of punctuated jumps for the next 20-40 years

yesterdays best practices are rapidly becoming outmoded.

20th C infrastructure

70 yr

S-curve

21st C infrastructure

rapid set of punctuated jumps for the next 20-40 years

How we come to learn and explore has really changed.

The Big Shift
Stocks ======> Flows

protecting/delivering
authoritative
knowledge assets

participating
in knowledge flows

creating new knowledge
(strong tacit component)

Scalable Efficiency

Scalable Learning

in a world of increasingly rapid change,
the half life of a given stock/skill is
constantly shrinking
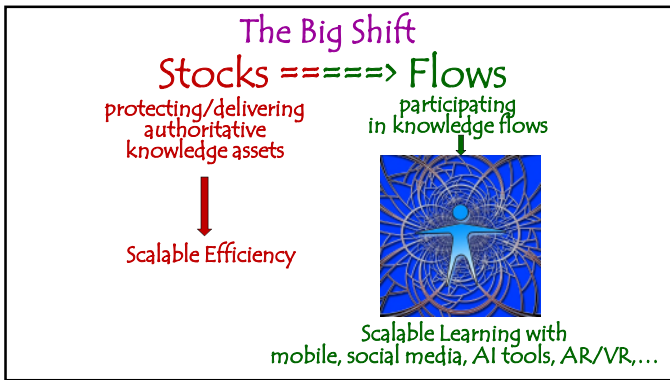(perhaps now down to five years for many)

Too Big to Know:
By david Weinberger (Jan, 2012)

"We used to know how to know. We got our answers from books or experts. We'd nail down the facts and move on. We even had canons."

"But in the Internet age, knowledge has moved onto networks. There's more knowledge than ever, but it's different. Topics have no boundaries, and nobody agrees on anything."

We need new strategies and tools to learn/work/create meaning in our lives

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Scalable Efficiency

Scalable Learning with
mobile, social media, AI tools, AR/VR,…

Three quite different eras required quite different learning strategies & ways of being

Industrial Age

Digital Age

Emerging
Networked Age

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critical skills
for a white water world

- skillfully reading the currents and disturbances of the context,
- interpreting the flows for what they reveal of what lies beneath the surface,
- leveraging the currents, disturbances and flows for amplified action.

But most important!

Knowing your own center –
authenticity reconceived

What kind of learners do we need for this white water world??

We need Entrepreneurial Learners

Which is NOT the same as being an entrepreneur!

Dispositions of an entrepreneurial learner.

› Always, questing, connecting, probing.
› Deeply curious and listening to others.
› Always learning with and from others.
› Reads contexts as much as content.
› Thrives outside of the formal curriculum
› Reflects on performance with the help of cohorts

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Connecting with others both inside & outside of your own silos, work groups, tribe and organization

In today's world AQ may more important than IQ

Adaptive Quotient -- AQ

The Inevitable by Kevin Kelly

"The cycle of obsolescence is accelerating (the average lifespan of a phone app is a mere 30 days!), you won't have time to master anything before it is displaced.

3

The Inevitable by Kevin Kelly

"The cycle of obsolescence is accelerating (the average lifespan of a phone app is a mere 30 days!), you won't have time to <u>master anything</u> before it is displaced.

Endless Newbie is the new default for everyone, no matter your age or experience. <u>That should keep us humble</u>."
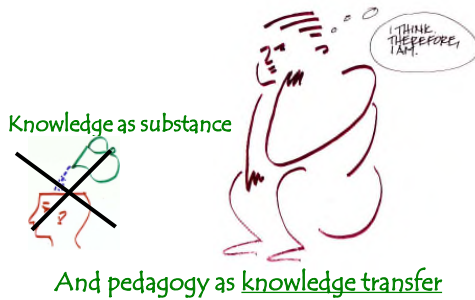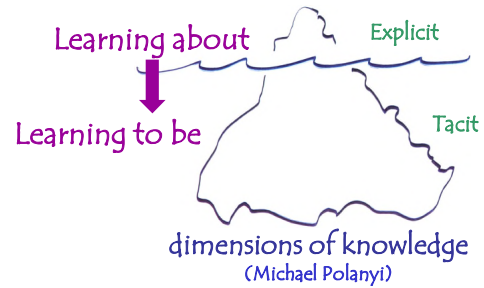
We also need:

New approaches to learning,

Ah, a blended epistemology for the white water world.

Cartesian View of Learning

I THINK THEREFORE I AM.

Knowledge as substance

And pedagogy as <u>knowledge transfer</u>

Traditional Approach: learning-about ====> learning-to-be

Learning about   Explicit

Learning to be   Tacit

dimensions of knowledge
(Michael Polanyi)

For lifelong learning a better starting position might be:

A more Social View of Learning

we participate therefore we are

<u>understanding</u> is socially constructed.
making knowledge personal

Changing the Flow

Learning-about ⟲ Explicit

Learning-to-be Tacit

Constantly refreshing a practice-in-situ
Productive Inquiry : I get stuck, need to know more.

Changing the Flow

Learning-about ⟲ Explicit

Learning-to-be Tacit

Med Schools
Duke Univ. Med School – Singapore
Your new Med School – Pasadena

Constantly refreshing a practice-in-situ
Productive Inquiry : I get stuck, need to know more.

also

Reverse Mentorship

Especially important in an exponential world..
but it can also be humbling.

and of course

No, Grandma,
Listen,
Double-Click
The Chrome Icon

Was a wake up call to me

Mixing & mingling at the Hacker Dojo

Peer learning/making/creating.
Arc-of-Life learning & what wasn't learned at college.

Hackamonth--
silo busting at Facebook

Once a year, engineers at Facebook are encouraged — but not required — to ditch their jobs and try something else out within the company for thirty days, called "Hackamonth."

And building deeper communities of practice across the whole company.

A more Social View of Learning

we participate
therefore we are

We learn in action and around exceptions with and from each other – reflective practitioners

In today's world exceptions are the coin of the realm especially in mission critical (e.g. ER) practices where improvisations often replace business processes and "best practices".

Mission critical operations are often best viewed as a tribe of tribes each with its own practices, language, beliefs, tools and power. More accurately: where doctors form their own tribe and likewise for nurses and so on. So we really have something closer to a tribe of tribes

Given the emerging capabilities of networked everything (via mobile, internet of things (iot), IIot,..) this provides a chance for technology enhanced reflective practicums to support accelerated (situated) learning – that is learning from exceptions.

But for this to work getting multiple tribes to listen and honor each other is key. Sadly technology can help but not solve this problem. A willingness to speak truth to power is crucial

Zooming Out

In our new exponential world maybe we need to broaden our own lenses In how we work, learn and play.

A blended way of knowing for a world with accelerating change

homo sapiens
man who knows

homo faber
man who makes

homo ludens
man who plays

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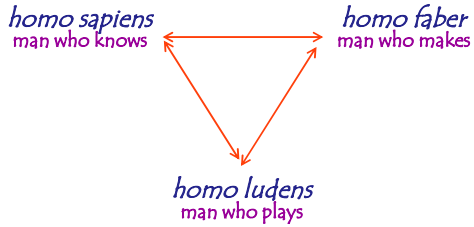
Homo Ludens
a highly nuanced concept of play

- as in permission to fail, fail and fail again and then get it right:
- as play of imagination – poetry
- as in an epiphany – suddenly falling in place
 as in solving a riddle.

Learning as riddles,
leading to a reframing the world.

Extending the Blend even further

homo sapiens
man who knows

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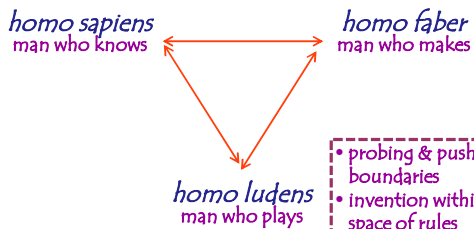
- probing & pushing boundaries
- invention within a space of rules
- deep tinkering

Extending the Blend even further

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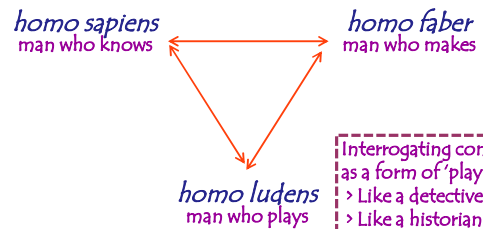
Interrogating context
as a form of 'play'
› Like a detective
› Like a historian
   (making sense)

The Big Picture

The Big Shift
Stocks =====> Flows

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Scalable Efficiency

Scalable Learning

A <u>new kind</u> of symbiotic relationship between us and computation
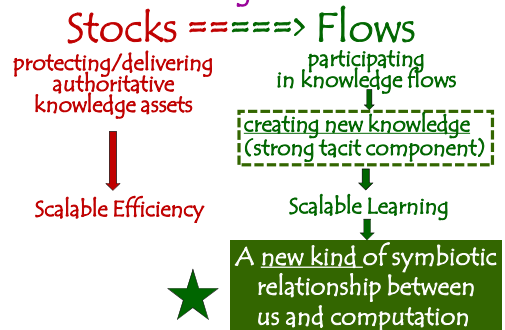
Leaping forward..

IA   vs   AI

Intelligence   Artificial
augmentation   intelligence

Working with the machine, not against it
And learning from it as it learns from you.

Garry Kasparov   Deep Blue
Grand Master

VS

1996 vs 1997

Freestyle chess tournament

The winners racing with the machine
as a generative dance between us and machine.

Zack Stephen and Steven Cramton

Google AI to play live Go match
against world champion

March 9th to 15th – 1 million dollar prize

Deep Learning Machines

"cat"

A key property of *deep* is that the system is composed of
a collection of trainable neural network layers..

But the real catch is that we don't really program these
machines. We *train/curate/mentor* them and
sometimes they do that to/for themselves.

Cultivating a blended way of knowing & learning with
human/machine

homo sapiens + IA   homo faber + IA
man who knows   man who makes

imagination

homo ludens + IA
man who plays

Indwelling across a distributed community of practice –
creating a networked imagination

Beware

"The real difficulty in changing any enterprise
lies not in developing new ideas,
but in escaping from the old ones"
John Maynard Keynes:

Changing practices is hard, hard, hard!
(especially one's own practices)

Thank You

John Hagel
JSB
Lang Davidson

A New Culture of Learning
Douglas Thomas
& JSB

Pragmatic Imagination
Ann Pendleton-Jullian
& JSB

Cultivating a blended way of knowing & learning with human/machine

homo sapiens + IA
man who knows

homo faber + IA
man who makes

imagination

homo ludens + IA
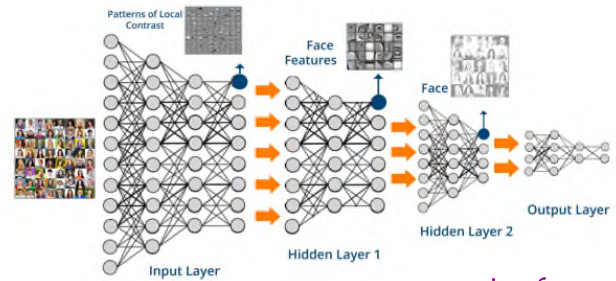man who plays

With the imagination as the binding agent

As much craft as science

Fig: Face Recognition using Deep Networks