



A NEW WORLD REQUIRES A NEW MINDSET

A COMPETITIVENESS OUTLOOK FOR 2019, AND BEYOND

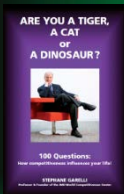


ZURICH
15 NOVEMBER
2018

STEPHANE GARELLI



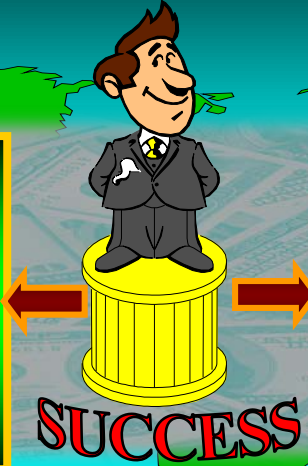
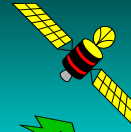
**PROFESSOR EMERITUS AT IMD AND AT THE UNIVERSITY OF LAUSANNE, SWITZERLAND,
FOUNDER WORLD COMPETITIVENESS CENTER**



A WORLD OF INTERFERENCE

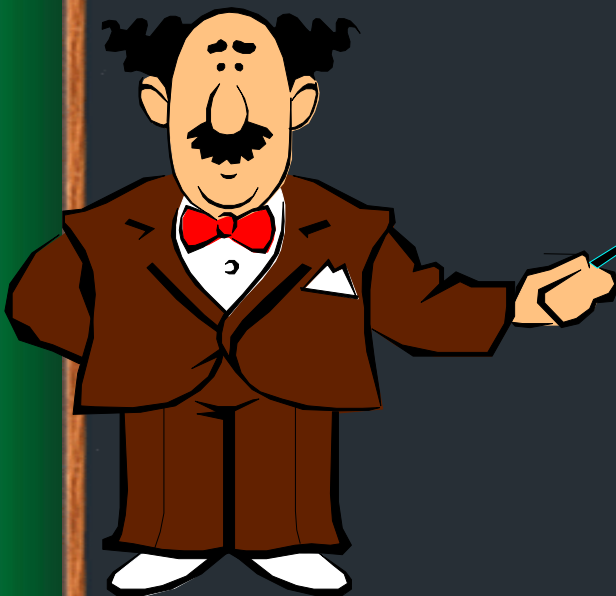
**THE GLOBAL
ECONOMY**

TECHNOLOGY



MINDSET





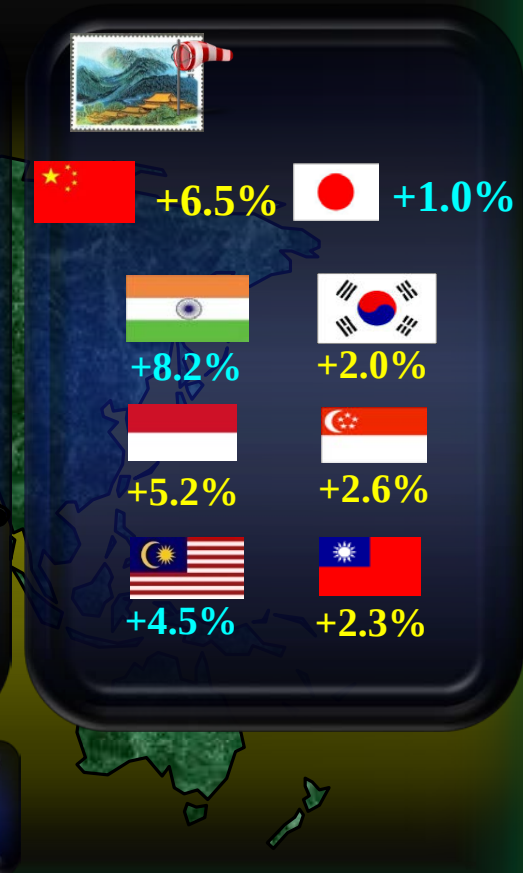
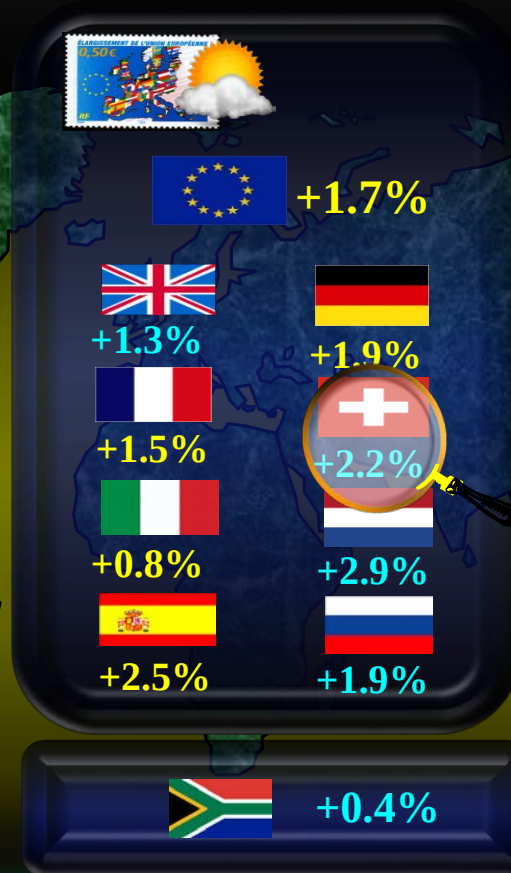
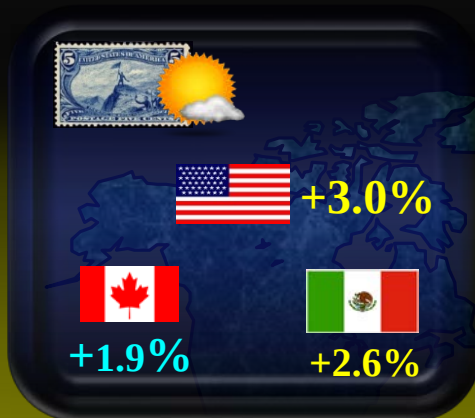
*STILL SOME
GOOD
NEWS?*



A SYNCHRONIZED RECOVERY

GDP GROWTH
12 MONTH PERIOD

Q2 Q3



IS IT THE TOP OF THE CYCLE?

NEW TENSIONS



ENERGY COST



LABOUR COST



EXCHANGE RATES



INTEREST RATES



EMERGING MARKETS CURRENCIES



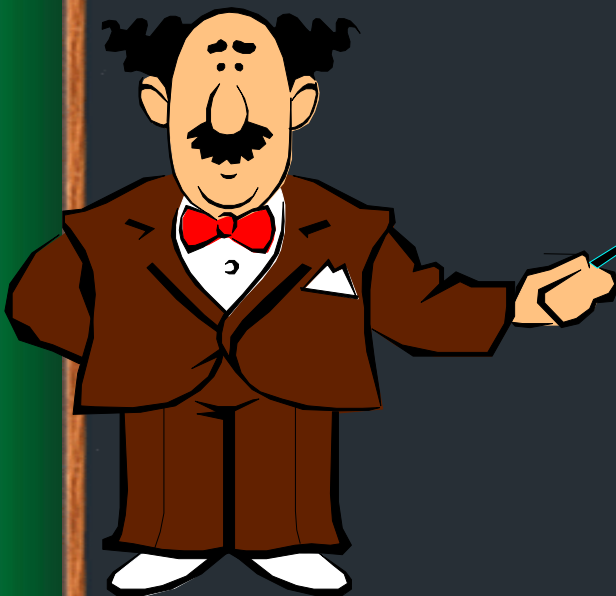
VOLATILITY



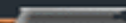
BULL MARKET:
9 MARCH
2009

2008

2018

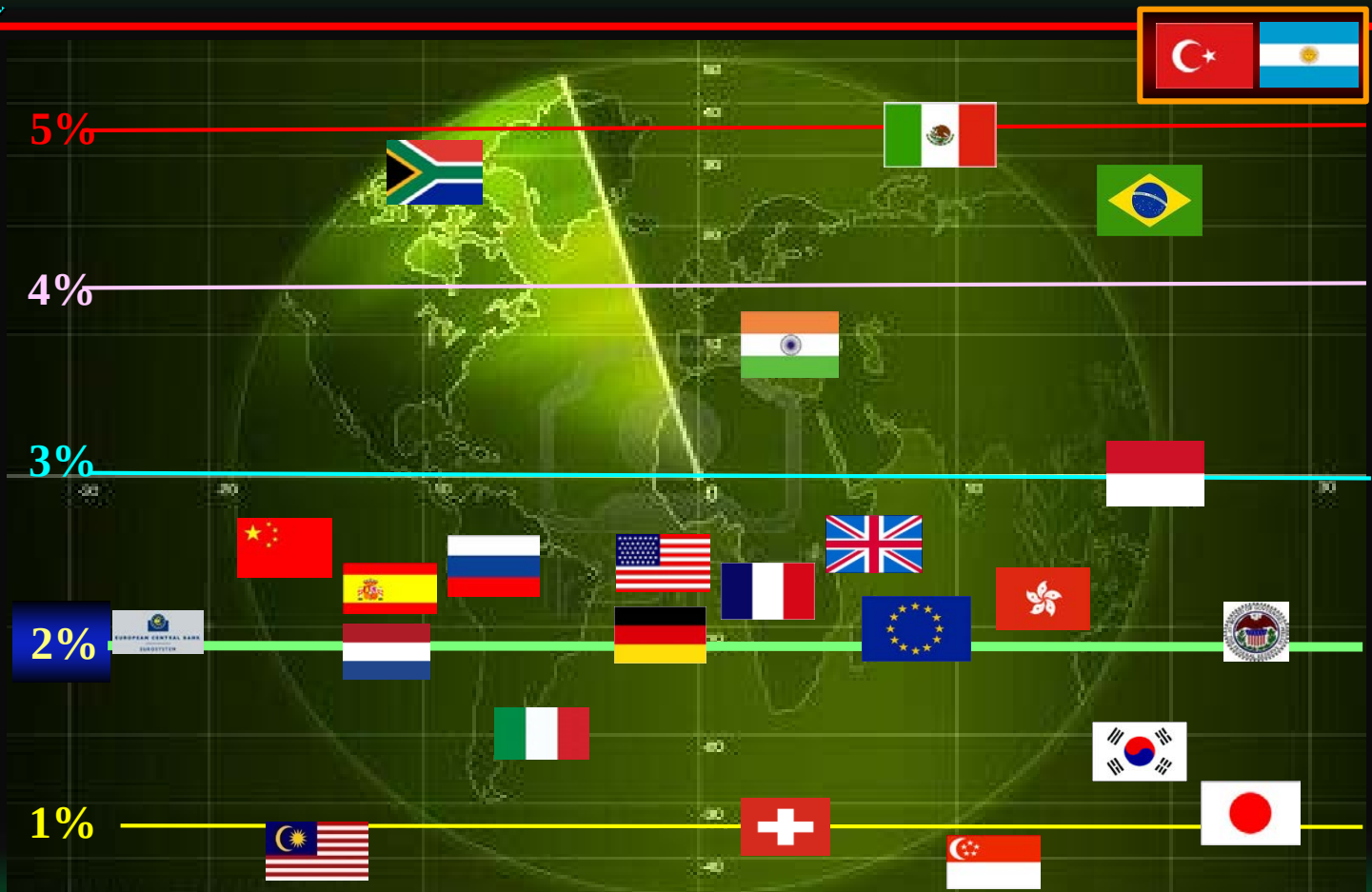


EXTERNAL UNCERTAINTIES





1. INFLATION ON THE RADAR SCREEN...





INFLATION:



INFLATION IS PAYING

30 Francs
FOR A HAIRCUT

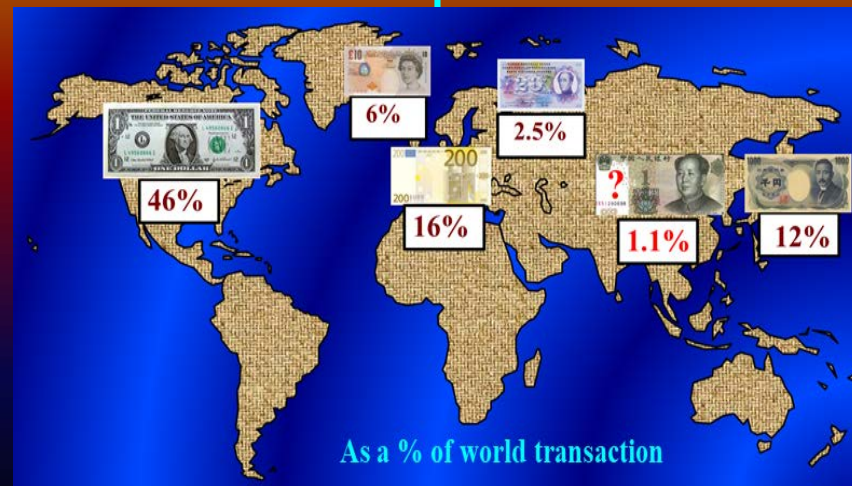
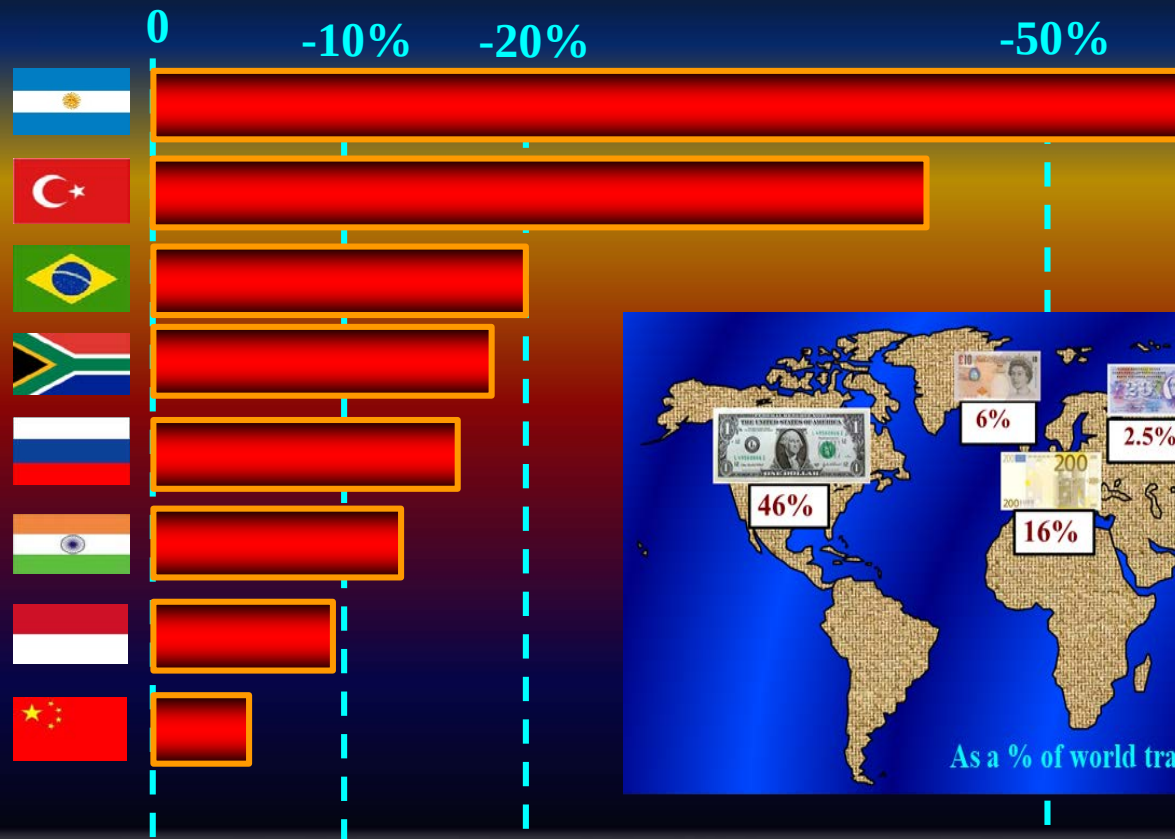
WHICH USED TO COST
20 Francs

WHEN YOU HAD HAIR...



2. CURRENCY VOLATILITY

Against US\$ since January 1st, 2018





WHY?

EMERGING MARKETS



CORPORATE DEBT
IN US\$

\$3.3tn



“NORMAL UNCERTAINTIES”

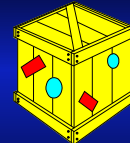


%

+



+



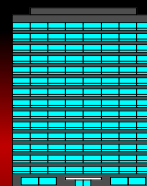
LESS “INTERNATIONAL”
DOLLARS AVAILABLE



FED

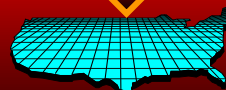


US\$40bn / MONTH



COMPANIES
EARNINGS
ABROAD

REPATRIATION



US\$633bn

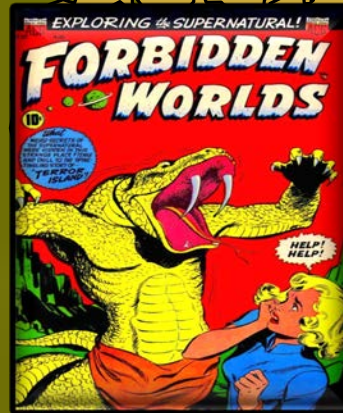
3. PROTECTIONISM ?

FROM JOB PROTECTION

1990

Come in
WE'RE
OPEN

2018



TO NATIONAL SECURITY

TRADE EXPANSION ACT OF 1962

HEARINGS
BEFORE THE
COMMITTEE ON WAYS AND MEANS
HOUSE OF REPRESENTATIVES
EIGHTY-SEVENTH CONGRESS
SECOND SESSION

OR
H.R. 9900

A BILL TO PROMOTE THE GENERAL WELFARE, FOREIGN
POLICY, AND SECURITY OF THE UNITED STATES THROUGH
INTERNATIONAL TRADE AGREEMENTS AND THROUGH
ADJUSTMENT ASSISTANCE TO DOMESTIC INDUSTRY,
AGRICULTURE, AND LABOR, AND FOR OTHER PURPOSES

MARCH 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 26, 27, 30;
APRIL 2, 3, 4, 5, 6, 9, 10, AND 11, 1962

PART 4

Printed for the use of the Committee on Ways and Means



U.S. GOVERNMENT PRINTING OFFICE
WASHINGTON : 1962

894-0

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US SANCTIONS ON
CHINESE IMPORTS

JUL-AUG 2018: \$46bn
SEPTEMBER: \$189bn



“UNTANGLING” GLOBALIZATION

WHAT IS THE “NATIONALITY” OF A PRODUCT?



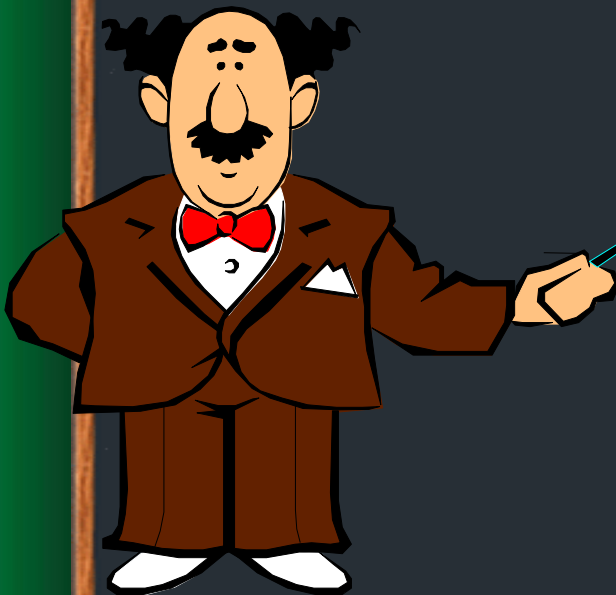


GLOBALIZATION WILL REMAIN

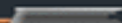
Copyright 2004 by Randy Glasbergen.
www.glasbergen.com



I GOT TOP GRADES!
I OUTSOURCED MY HOMEWORK
TO A KID OVERSEAS



*DO WE REALLY
KNOW
WHAT'S GOING ON?
(STATISTICS...)*





ROOM FOR IMPROVEMENT...

1993-2016

Revised by

1.6%

on average

GDP GROWTH RATE?



BUDGET DEFICITS?



INFLATION?



SPEED?

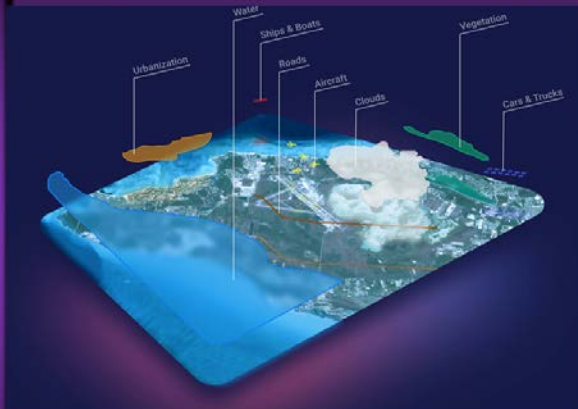




CAN WE DO BETTER?

SPACE TECHNOLOGY

SPACE_KNOW

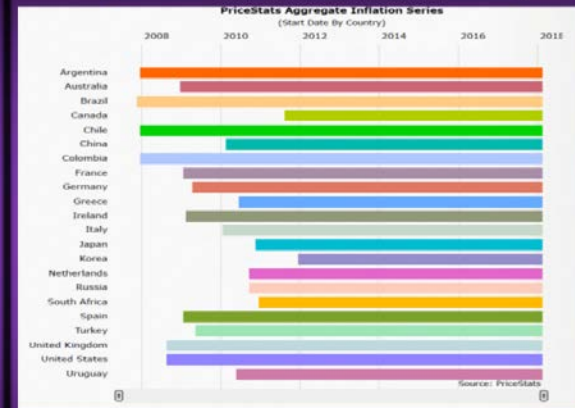


**INDEXING THE
PHYSICAL WORLD**



ONLINE TECHNOLOGY

PriceStats®



**DAILY INFLATION
USING ONLINE PRICES**



HOW FAR?



**YOUR
HOME**

**YOUR
CAR**



**YOUR
DRIVE**

**YOUR
HABITS**

GOOD or BAD NEWS?

FROM PASSIVE TO ACTIVE

DYNAMIC PRICING ALGORITHMS



PRICES

- CONTINUOUSLY ADAPTED
- VOLATILE
- DISCRIMINATION?

E-COMMERCE

REVENUES = \$1, 782bn
USERS = 2,76bn

Source: Stephen Chan, HBR, Dec 2016, Statista 2018



WHAT IF

THE PRIVATE SECTOR

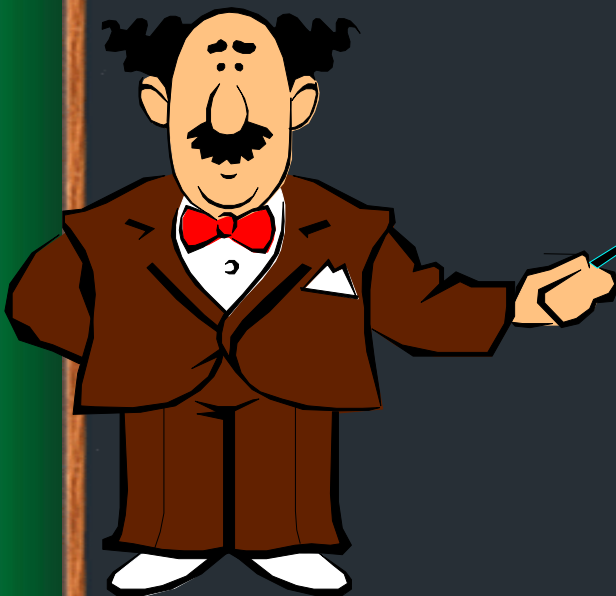


HAS ALL THE ECONOMIC
DATA

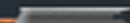
BEFORE



GOVERNMENT?



*DO WE
MEASURE
EVERYTHING?*





ARE WE MISSING SOMETHING?

THE “MATERIAL” ECONOMY



GDP, INFLATION etc.

THE “IMMATERIAL” ECONOMY



?



A UNUSUAL ADVICE...



**“PLEASE
DON’T CONFUSE
ME
WITH FACTS!”**

Anonymous banker...



SOFT DATA (STOCK MARKET)?

“ANIMAL SPIRITS?”



REVENUES



US\$13bn



US\$156bn

PRODUCTION(cars)

100,900

6,700,000

MARKET CAPITALIZATION

US\$58bn

US\$37bn



WHO TO BELIEVE?

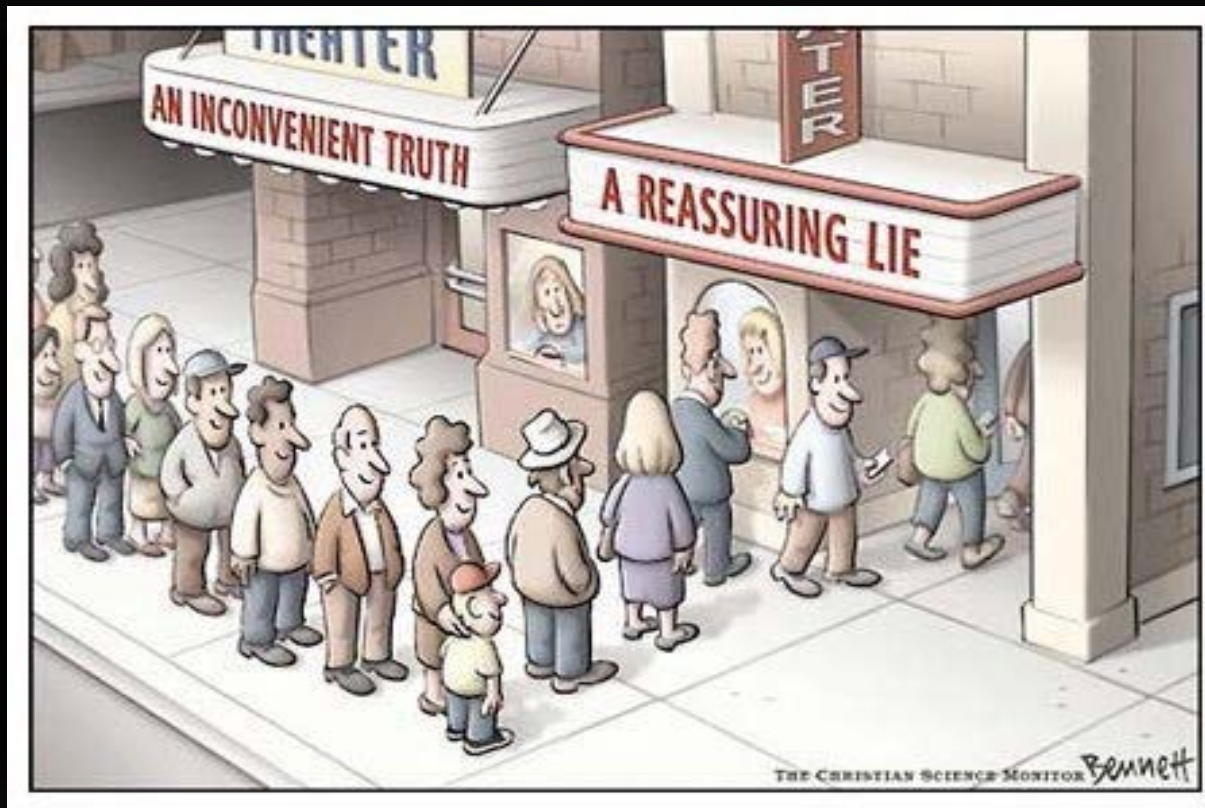


**DURING THE FIRST
558 DAYS
OF HIS PRESIDENCY**

**PRESIDENT TRUMPS
HAS MADE
4,229
FALSE AND MISLEADING
CLAIMS**



WHAT DO PEOPLE WANT?





“FOLK ECONOMICS” (economics perceived intuitively...)

PROFIT IS SUSPICIOUS

COMPETITION IS HARMFUL



AT THE



ORIGIN?

ZERO SUM THINKING

TRADE IS BAD

COMPANIES MANIPULATE



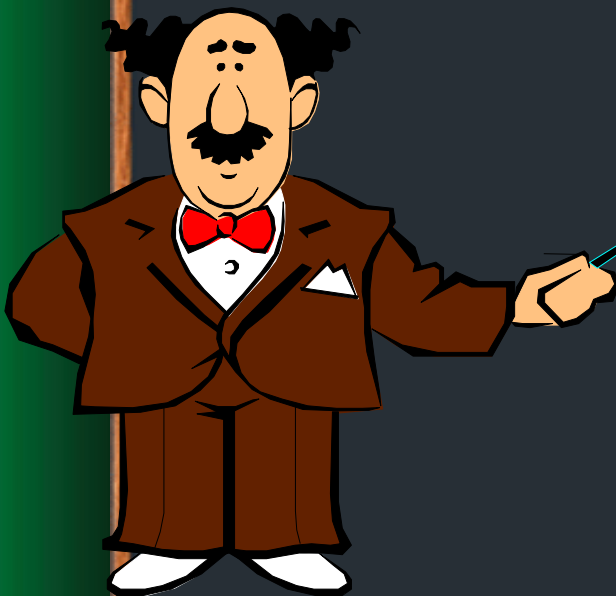
WHAT KEYNES HAS TO SAY ABOUT IT...



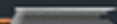
JOHN MAYNARD KEYNES,
1883 - 1946

**FORECASTING
THE ECONOMY**

**IS ANTICIPATING
THE ANTICIPATIONS
OF OTHERS**



*CAN
IT BE
MONITORED?*



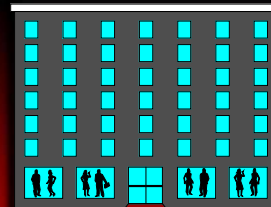


MAYBE...

PERSONAL DATA PROTECTION



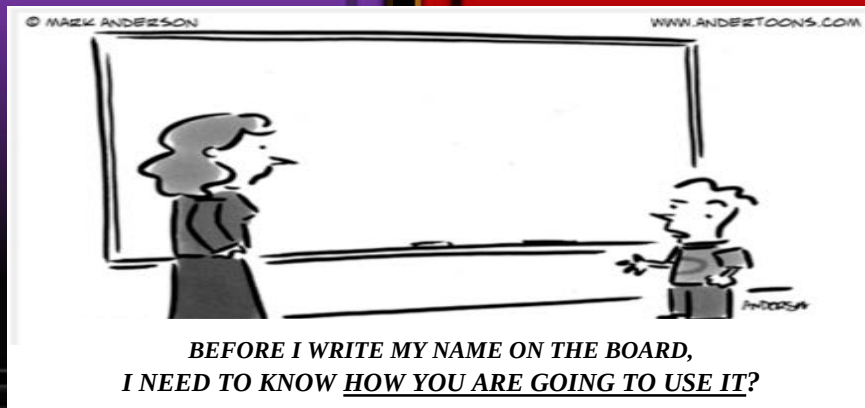
ACCESS TO DATA



PRIVATE

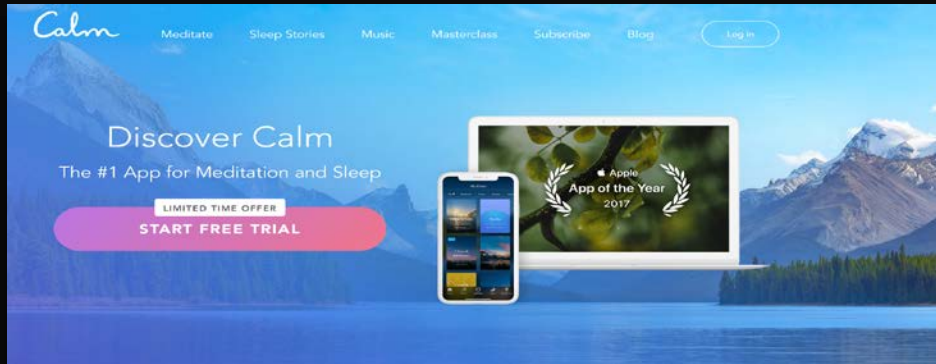


PUBLIC





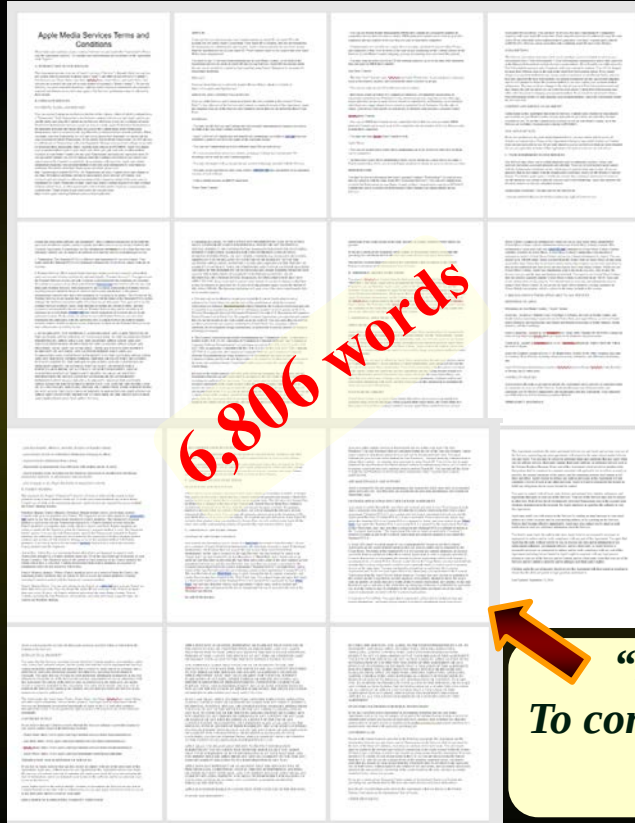
SLEEPING STORIES



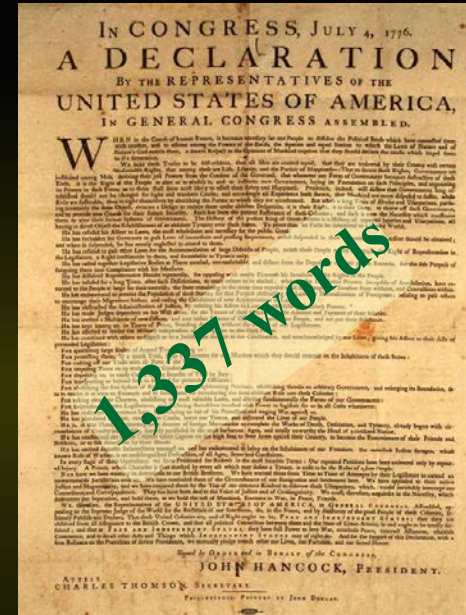
DO YOU REALLY AGREE?



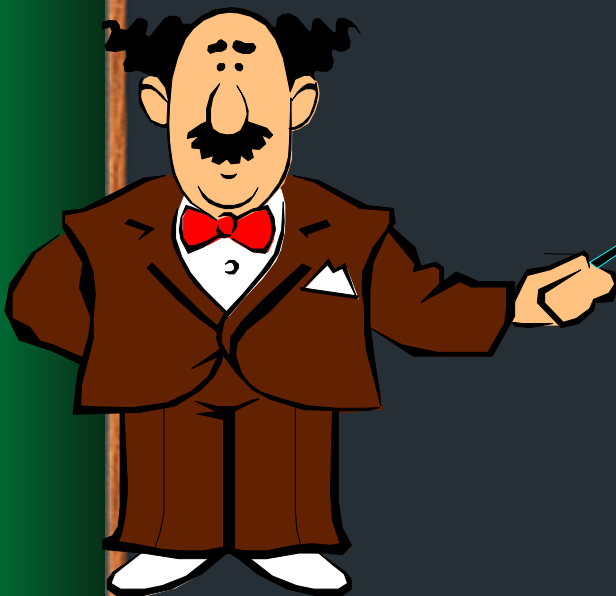
APPLE MEDIA SERVICES TERMS AND CONDITIONS



US DECLARATION OF INDEPENDENCE



“Please read the Agreement carefully.
To confirm your understanding and acceptance
of the Agreement, click “**Agree.**” “

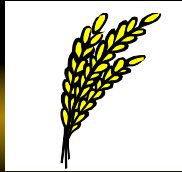


“ONE MORE” TECHNOLOGICAL REVOLUTION





TECHNOLOGICAL REVOLUTIONS ALL THE TIME



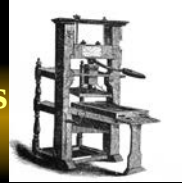
AGRICULTURE

9000 years



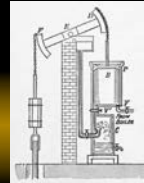
WRITING

4500 years



PRINTING

200 years



STEAM ENGINE

IN ONE LIFE TIME



PERSONAL COMPUTING

INTERNET



MOBILE TELECOM

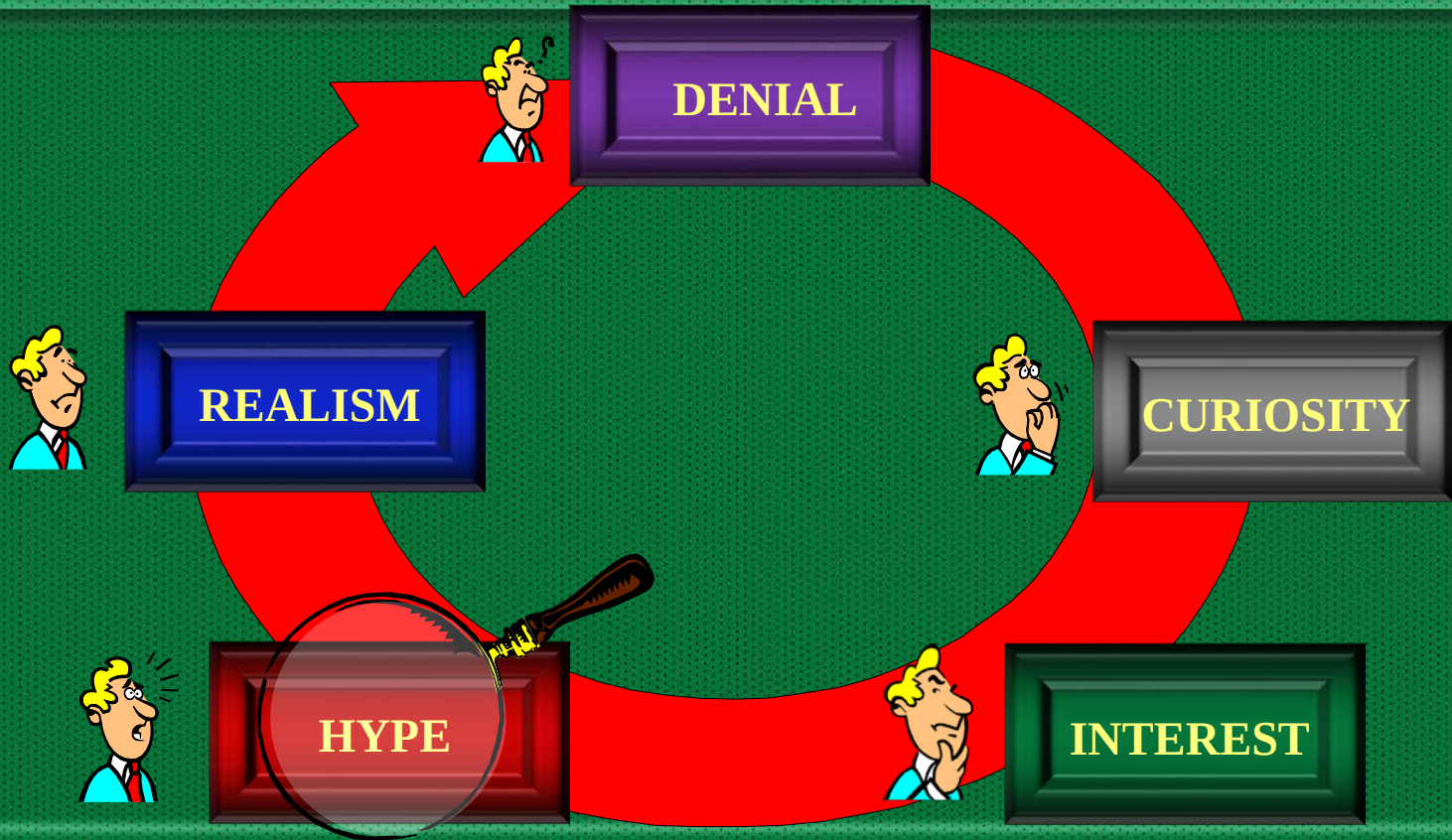


ARTIFICIAL INTELLIGENCE



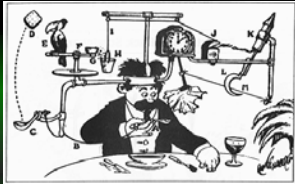
IS THERE A MANAGEMENT PATTERN?

MANAGEMENT PATTERN FOR TECHNOLOGICAL REVOLUTIONS



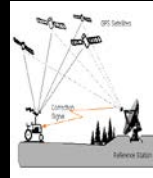
AND THE LATEST ONE?

AUTOMATION



ROBOTS, ARTIFICIAL INTELLIGENCE

CONVERGENCE



AGRICULTURE,
STATISTICS,

CONNECTIVITY



MOBILITY



MEDICAL,

SHARING



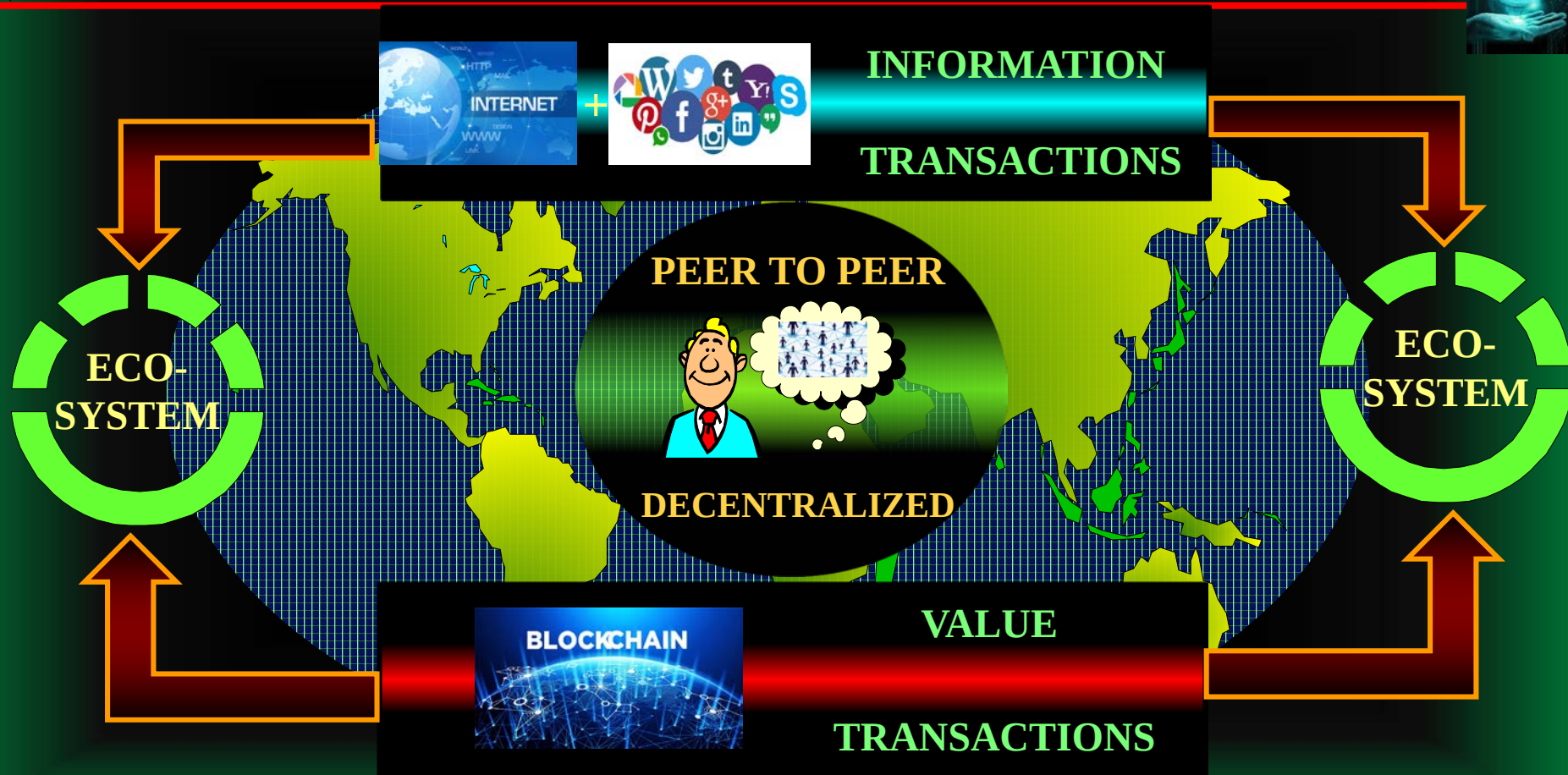
C TO C, PEER TO PEER

LOCALIZATION



SATELLITES, SENSORS

1. THE NEW “ECONOMIC” MODEL





2. THE NEW “BUSINESS” MODEL



PERSONAL DATA

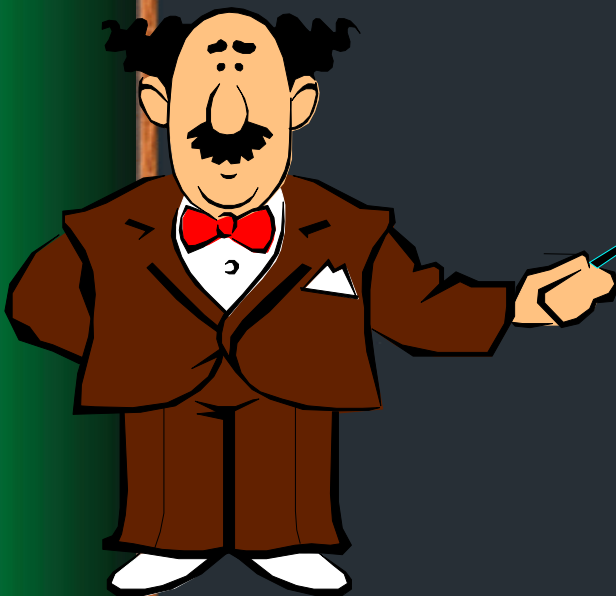
facebook



Spotify



Microsoft®
Office 365



FROM “HYPE” TO “REALISM”



IN THE END, THERE IS STILL A PRODUCT



***SORRY, WE CANNOT EMAIL YOUR PIZZA
AS ATTACHMENT***



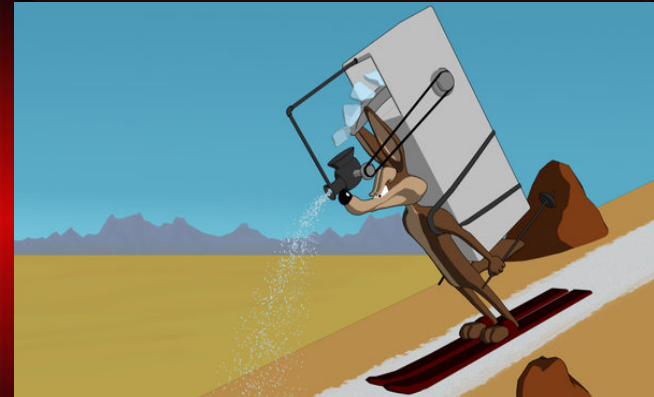
A “DREAM” WITH A “DEADLINE”

IMAGINATION



INNOVATION

EXCELLENCE IN



IMPLEMENTATION



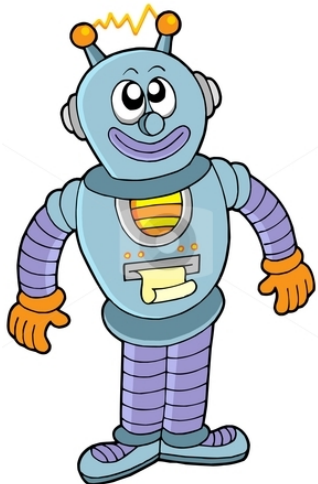
THERE IS A TIME FOR INNOVATION...

TAKING THE PLANE...



AND A TIME FOR EXCELLENCE IN IMPLEMENTATION

ARE HUMAN VULNERABLE?



FAST
RE-PROGRAMING



SLOW
BIOLOGICAL EVOLUTION



ARTIFICIAL INTELLIGENCE: THE NEXT FRONTIERS

1997:
DEEP BLUE (IBM) - CHES

2016:
ALPHAGO (GOOGLE) - GO

2017:
LIBRATUS - POKER

CONCEPTUAL



2017:
ALPHA-ZERO
(DEEPMIND)

REPURPOSED AI

ASSEMBLING AN IKEA CHAIR



20 MINUTES

DEXTERITY?





THE UNSOLVED ISSUE: ENERGY



PROCESSING POWER (GOOGLE)



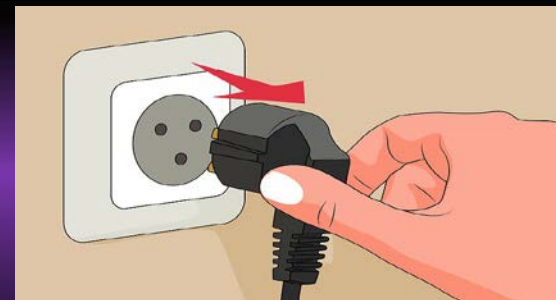
STORAGE POWER (AMAZON)



DELIVERY POWER (FEDEX)



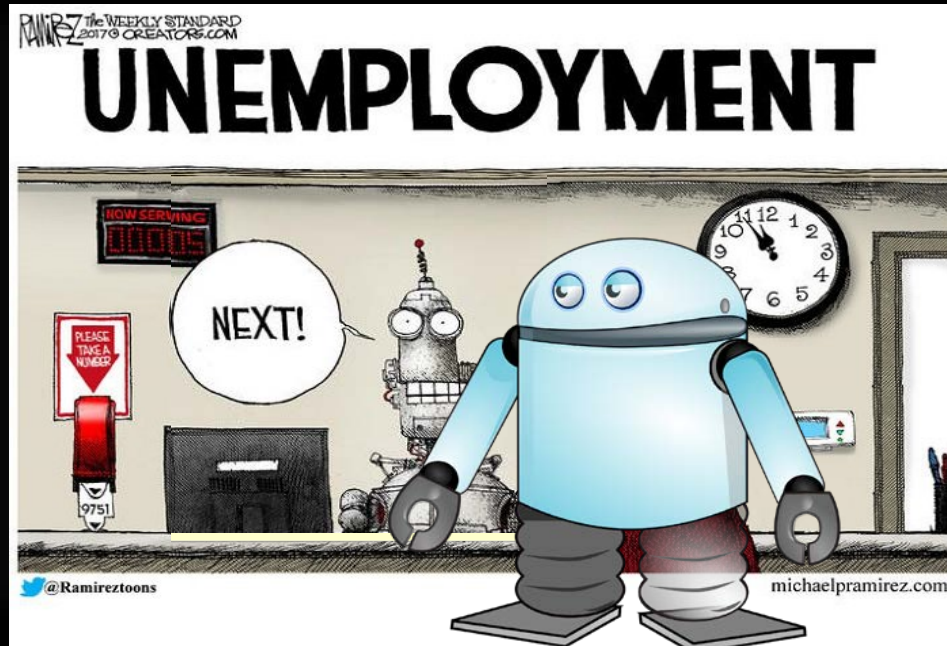
ULTIMATE WEAPON

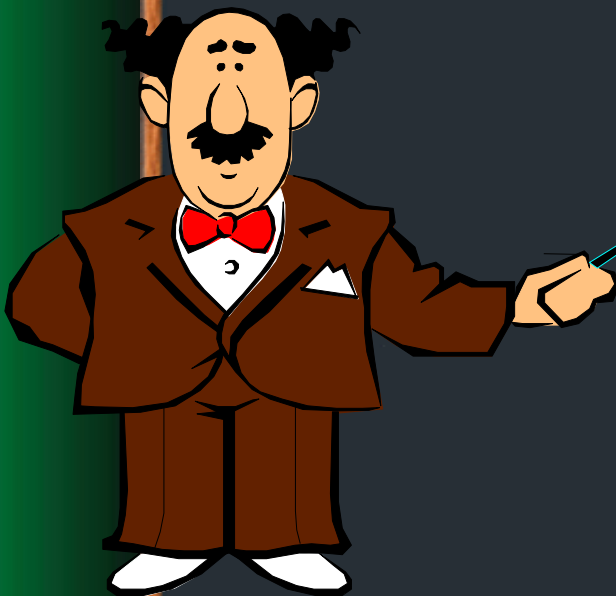
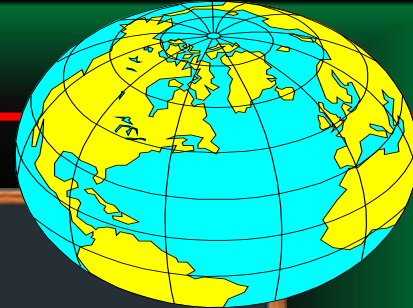


UNPLUG!

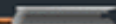


WHAT IS NEXT?





WHO OWNS TECHNOLOGY?





WHO OWNS THE TECHNOLOGY HIGHWAY?





BRANCHING OUT OF THE HIGHWAY?



CLOUD COMPUTING



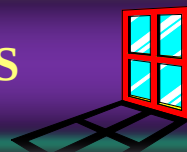
Alphabet

facebook

ADVERTISING



BATTERIES



WATCHES



ELECTRONIC PAYMENT

EXIT
«ELSE-
WHERE»





**WHO
WILL BE YOUR
COMPETITORS
TOMORROW?**



**WHERE
WILL
THEY
COME FROM?**



HOW LONG DOES A COMPANY LIVE?

S&P 500 LIST: AVERAGE COMPANY TENURE



61 YEARS



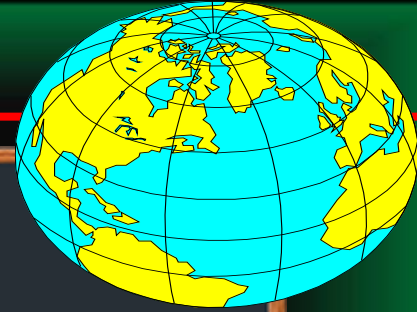
18 YEARS!



By 2027,
75% OF THE S&P 500 WILL HAVE DISAPPEARED...



WHO OWNS WHAT?



REDISTRIBUTING



THE CARDS...



WHY? SOVEREIGN WEALTH FUNDS ARE BIG PLAYERS



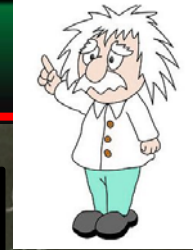


WHY? - SOME COMPANIES HAVE A LOT OF LIQUIDITIES





WHY: THE “MAGIC” FORMULA



GLOBALIZATION + TAX OPTIMIZATION = LOT OF CASH

GLOBAL DIVIDENDS

\$1,249bn

(2017)

SHARE BUYBACKS

\$1,100bn

(5 US TECH CIES
\$115BN)

CONSOLIDATION



M&A = \$3,490bn

(2017)

FIRST HALF 2018 = + \$2,000bn



BIG SPENDERS (2017)



TEN BIGGEST US AND CHINESE TECH FIRMS



US\$215bn

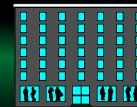
40%

INTANGIBLE ASSETS



30%

PHYSICAL ASSETS



30%

ACQUISITIONS



TOTAL INVESTMENT

Source: The Economist, 28 July 2018



BUYING STARTUPS

US COMPANIES bought **562** EUROPEAN STARTUPS
2012-2016



11 OF 15 TOP ACQUIRERS = SILICON VALLEY

Source: Mind The Bridge, Crunch Base, 2016



ALSO FROM ASIA...



45%
VENTURE CAPITAL
IN CHINA



CHINA NEW ERA TECHNOLOGY FUND

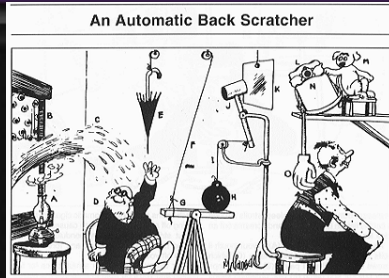
\$15bn



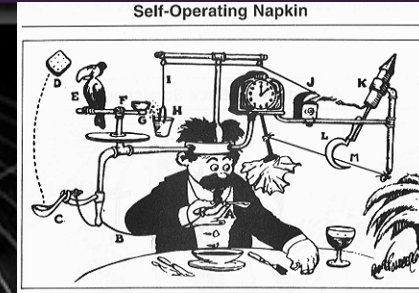
VISION
FUND

\$100bn PRIVATE EQUITY FUND

ABSORBING TECHNOLOGY AND START-UPS?



INNOVATION



INNOVATION

TECHNOLOGY

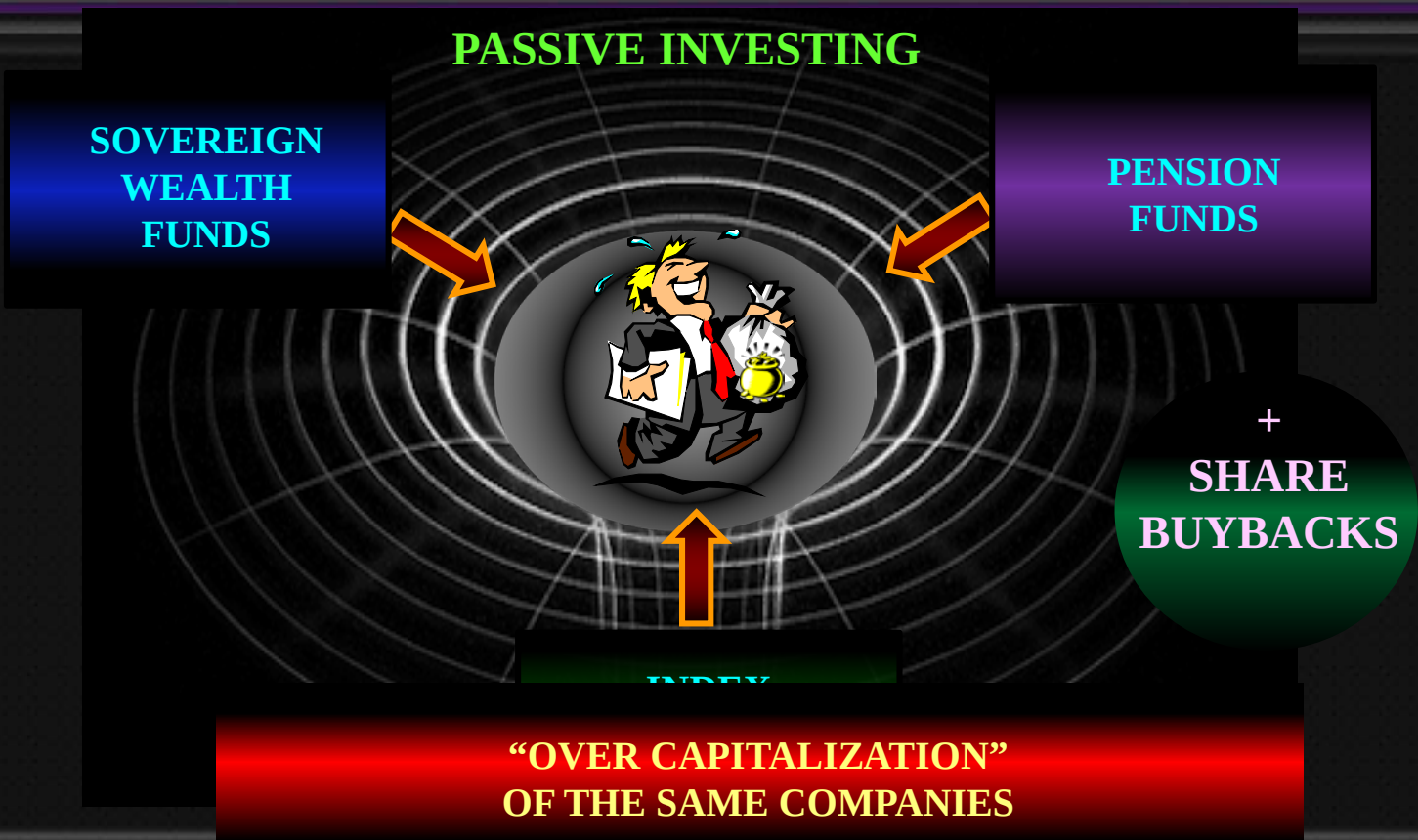
MONEY



INNOVATION



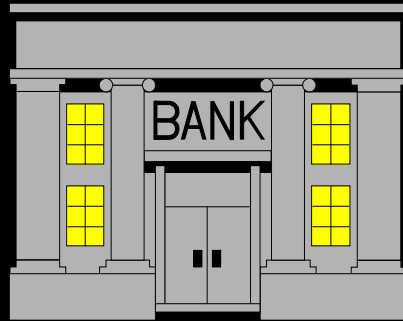
AND FOR STOCK MARKETS?





THE NEXT BIG SYSTEMIC RISK?

THE WORLD



OF
BANKS?

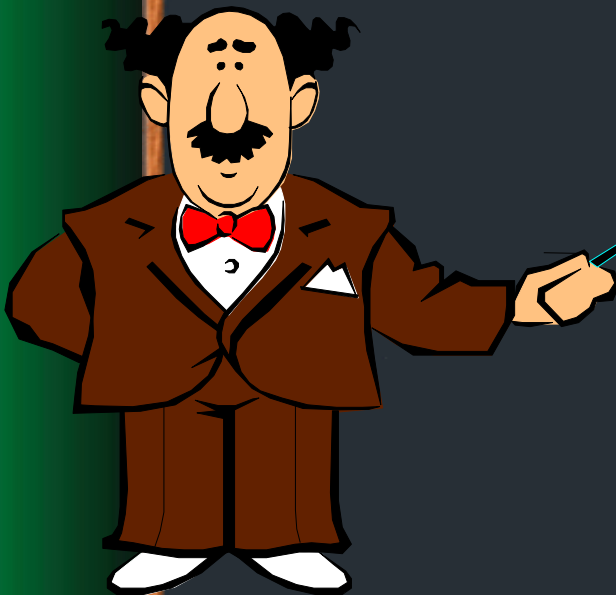
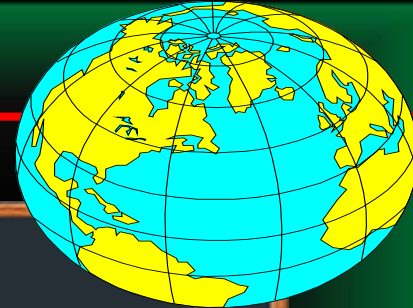
THE WORLD



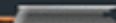
OF
TECHNOLOGY?



DOMINO EFFECT

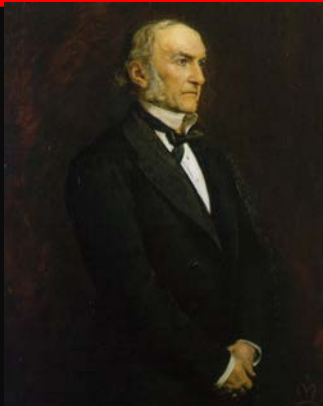


HOW GOVERNMENTS REACT?



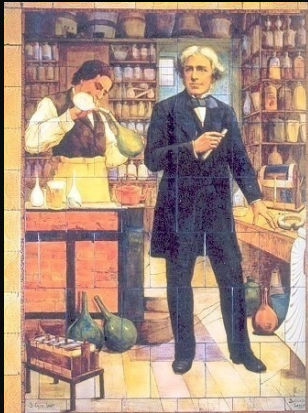


TAXES...



WILLIAM. E. GLADSTONE

***MR FARADAY, WHAT IS
THE USE OF ALL THESE
INVENTIONS?***



MICHAEL FARADAY

***I AM NOT QUITE SURE...
BUT I KNOW THAT
ONE DAY YOU WILL
TAX THEM...***



THE GLOBAL TAX REVOLUTION: PRINCIPLES



EUROPEAN UNION



OECD



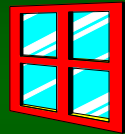
THE UNITED STATES

- **TERRITORIAL SYSTEM**



**“PAY TAXES WHERE
REVENUES ARE LOCATED”**

- **TRANSPARENCY**



**“EVERYTHING
SHOULD BE DECLARED”**

- **EQUALITY OF TREATMENT**



**“GLOBAL AND LOCAL
COMPANIES THE SAME”**

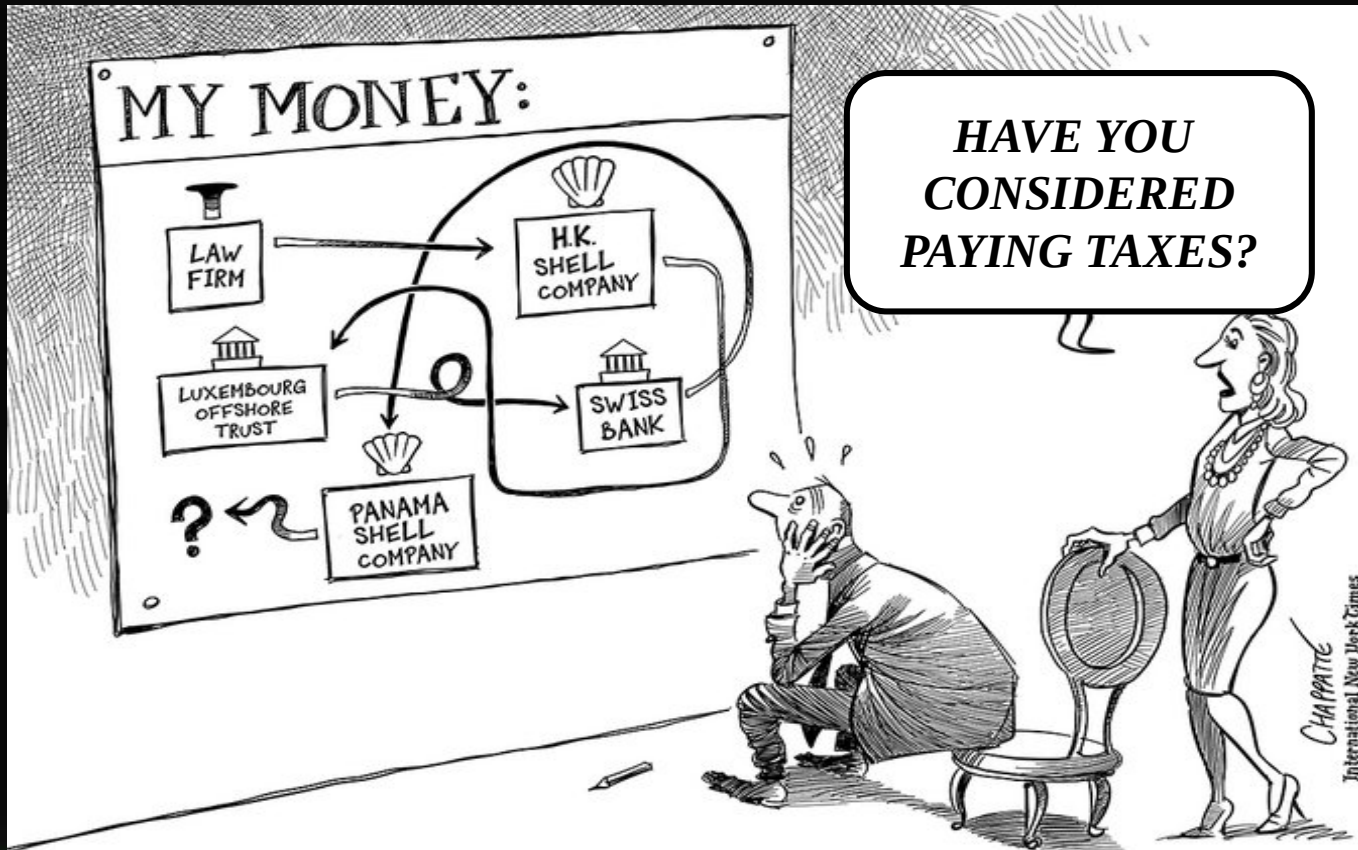


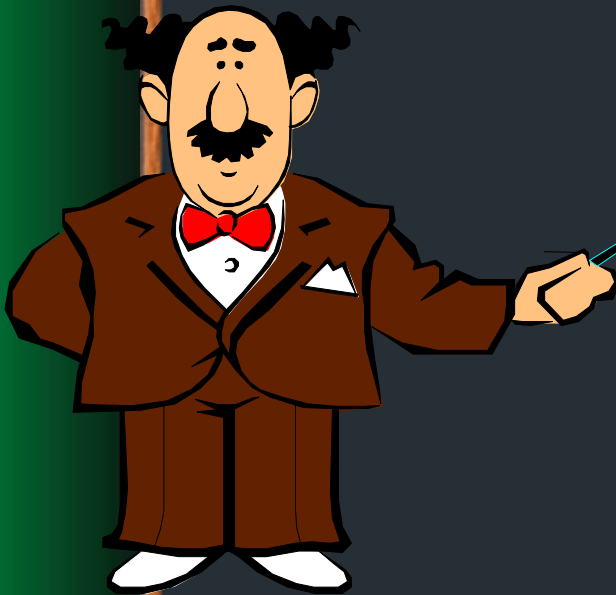
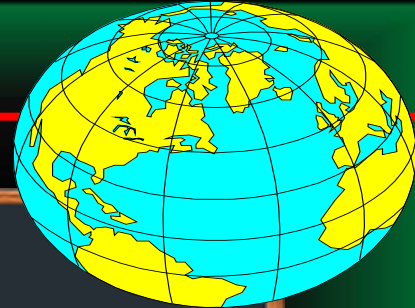
**BUT:
NO TAX RATES
HARMONIZATION!**

**NEW:
EU DIGITAX
ON GROSS REVENUES**

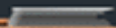


AN ALTERNATIVE?





WHAT IS NEXT? A “YOUTHQUAKE”



UNDERSTANDING MILLENNIALS (age 18-35)



“MEISM”
Self
Fulfillment
and
“Narcissism...”



**THE “SELFIEs”
GENERATION**



ESCAPING REALITY...

Time spent
with a screen



SMARTPHONE



TV



PC



TABLET

90% CHECK SMARTPHONE



WITHIN 15min. WAKING UP

65% PREFER LOSING THEIR CAR



RATHER THAN THEIR PHONE

Source: Nielsen Audience Report, Huffington Post, 2017



UNDERSTANDING MILLENNIALS (age 18-35)



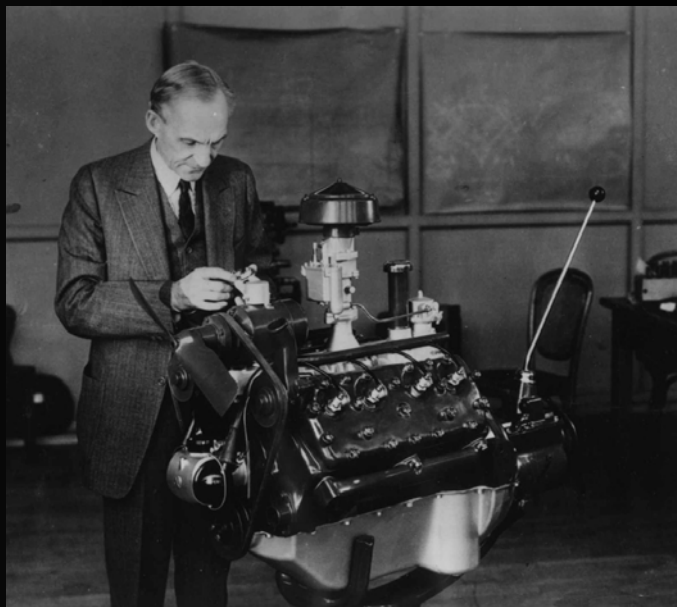
“MEISM”
Self
Fulfillment
and
“Narcissism...”

**LITTLE
AFFILIATION**

Political, Religious...

CONCERNED
State of the World





HENRI FORD
1863 - 1947

**A BUSINESS
THAT MAKES
-
NOTHING
BUT MONEY**

**IS
A POOR BUSINESS!**



UNDERSTANDING MILLENNIALS (age 18-35)



“MEISM”

Self
Fulfillment
and
“Narcissism...”

ENTITLEMENT

Demanding
And
Intrusive



LITTLE AFFILIATION

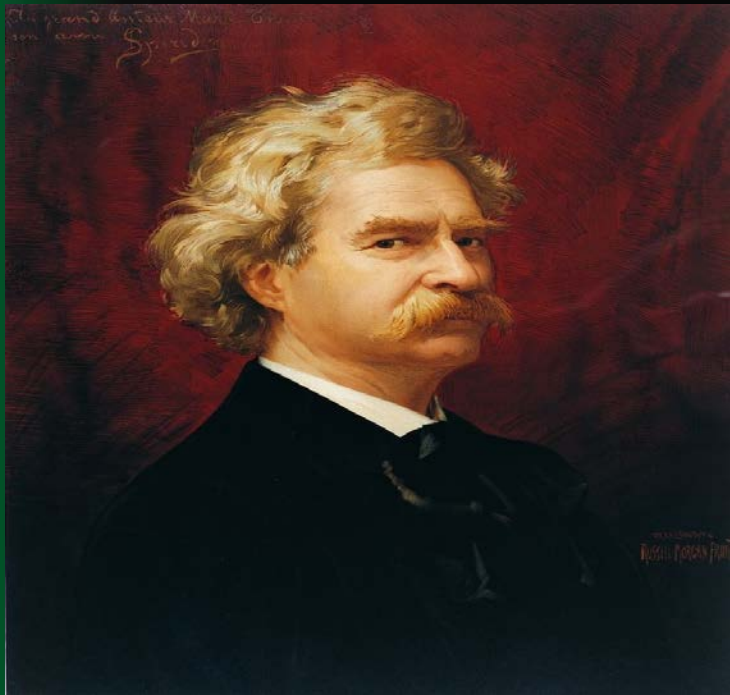
Political, Religious...

CONCERNED
State of the World





A SENSE OF TRANSPARENCY?



MARK TWAIN, 1835 - 1910

**“NEVER
DO WRONG,
ESPECIALLY
WHEN SOMEBODY
IS
LOOKING! “**



UNDERSTANDING MILLENNIALS (age 18-35)



MEISM

Self
Fulfillment
and
“Narcissism...”

ENTITLEMENT

Demanding
And
Intrusive



LITTLE AFFILIATION

Political, Religious...



CONCERNED
State of the World

OWNERSHIP (SHARING)

“Free is Cool!”







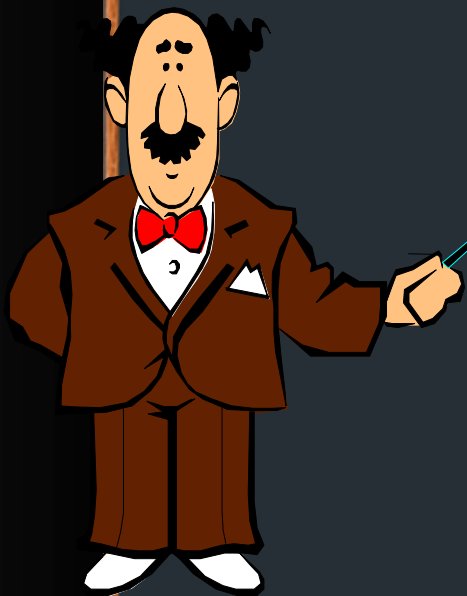
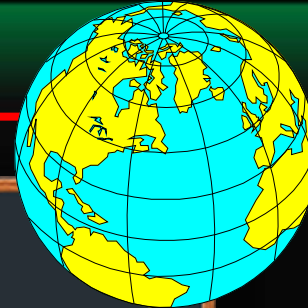
THERE IS NO FREE LUNCH...



IF YOU THINK THAT A PRODUCT IS FREE

THEN YOU ARE THE PRODUCT!

TIM COOK, CEO APPLE



THEREFORE...



RESILIENCE...



EPICTETUS

55- 135

**IT'S NOT
WHAT HAPPENS TO YOU
THAT
MATTERS,**

**BUT HOW
YOU REACT TO IT!**



ACCEPT UNCERTAINTIES...



HENRI-FREDERIC AMIEL
1821 - 1881

**THE ONE
WHO INSISTS
ON
PERFECT CLARNESS
BEFORE HE DECIDES...**

NEVER DECIDES!



BUT BEWARE OF THE LAW

OF “UNINTENDED CONSEQUENCES”



OLD DELHI – BRITISH COLONIAL TIME