

THE RATIONAL MAN AS A TUNING FORK

by Rosemarie Nagel

*The rational man we choose as our economic tuning fork,
For it is bound to the fundamental tone,
With high overtones dying out quickly.
He is sent behind the veil of ignorance,
From where he reveals her body of knowledge,
Common and pure, with perfect memory and
Incentives.
A blessing or a hidden curse?*

*Now listen!
"Here comes the sun" (spot)
And "sings out, in ancient mode",
Extrinsically or, with intrinsic sentiments,
The overtones for each instrument,
So different, each one.
A surprise at each occasion,
Endless random shocks.
Unpredictable,
Few with perfect pitch.
Yet there is a pattern,
With low to higher degrees.
No instrument would like to be a tuning fork,
Pure yet poor, without overtones.*

*Thus see!
We proudly admit we are boundedly rational.
"Feeling smart" with heart, brain, and genes.
Trustworthy, but not always.
The rational man is simpler, more bounded.
Pity him, not ourselves.
Yet value him. Or is it an IT?
A Machine? Ah! Is that the truth?
Well - then avail IT wisely - as a benchmark.*

*Consider!
Alternative worlds
With veils and creatures
Self creating images of second life
In ancient times man was a shadow,
A stranger to herself,
What he perceived were
Fairy tales she told.
In dawning eras we expect
All of them to meet each other
Perhaps we recognize this day
A glimpse of their common character.*

*Aware!
"In the end we're dependent on
The creatures we've created"
That's why we rise from our armchairs,
And, Experiment!*

THE RATIONAL MAN AS A TUNING FORK[i]

by Rosemarie Nagel

Inspired through *The Zeitgeist* and *The Unknown*

– Under permanent construction –

This page is the same as before but with footnotes.

*The rational man we choose as our economic tuning fork [ii],
For it is bound to the fundamental tone,
With high overtones dying out quickly.
He is sent behind the veil of ignorance,
From where he reveals her body of knowledge [iii],
Common and pure, with perfect memory,
Incentives
A blessing or a hidden curse?*

*Now listen!
“Here comes the sun”[iv] (spot) [v]
And “sings out, in ancient mode”[vi],
Extrinsically or, with intrinsic sentiments [vii],
The overtones for each instrument,
So different, each one.
A surprise at each occasion,
Endless random shocks.
Unpredictable,
Few with perfect pitch.
Yet there is a pattern,
With low to higher degrees[viii].
No instrument would like to be a tuning fork,
Pure yet poor, without overtones.*

*Thus see!
We proudly admit we are boundedly rational [ix].
“Feeling smart”[x], with heart, brain, and genes
Trustworthy, but not always.
The rational man is simpler, more bounded.
Pity him, not ourselves.
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A Machine? Ah! Is that the truth?[xi]
Well - then avail IT wisely - as a benchmark.*

*Consider!!
There are alternative worlds!
With veils and creatures
Self creating images of second life [xii]
In ancient times man was a shadow,
A stranger to herself, [xiii],
What he perceived were
Fairy tales she told [xiv].
In dawning eras we expect
All of them to meet each other
Perhaps we recognize this day
A glimpse of their common character.*

*Aware!
“In the end we’re dependent on
The creatures we’ve created.”[xv]
That’s why we rise from our armchairs[xvi],
And, Experiment! [xvii]*

References

^[i] **A tuning fork** is an acoustic resonator that emits a pure musical tone after some high overtones die out. The main reason for using the fork shape is that, unlike many other types of resonators, it produces a very pure tone, with most of the vibrational energy at the fundamental frequency, and little at the overtones (harmonics).

An overtone is “A musical tone which is a part of the harmonic series above a fundamental note, and may be heard with it.”

Tuning fork sounds <https://www.youtube.com/watch?v=4PB4iCiL398>
<http://www.onlinetuningfork.com/>
<https://www.youtube.com/watch?v=vNuDxc9tZMk>

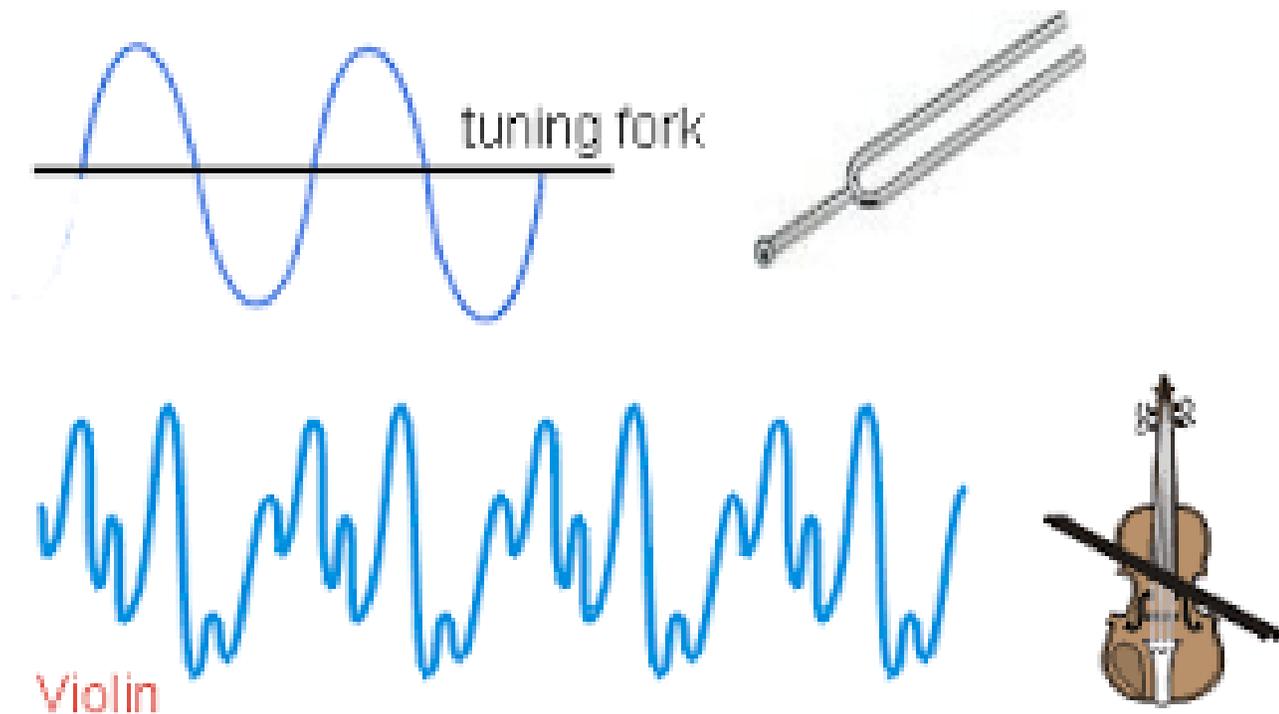
Other instruments

- <http://sooet.com/music/musical-instrument-spectrum.php>

-

Mathematical approach

- <http://amath.colorado.edu/pub/matlab/music/MathMusic.pdf>



References (cont.)

[ii] Friedrich Nietzsche, “Goetzendaemmerung” (“[Twilight of the Idols](#)”): “This essay — the title betrays it — is above all a recreation, a spot of sunshine, a leap sideways into the idleness of a psychologist. [...] And are new idols sounded out? [...] “and regarding the sounding out of idols, this time they are not just idols of the age, but eternal idols, which are here touched with a hammer as with a tuning fork: there are no idols that are older, more assured, more puffed-up — and none more hollow. That does not prevent them from being those in which people have the most faith; nor does one ever say “idol,” especially not in the most distinguished instance.

Friedrich Nietzsche, “Goetzendaemmerung:... “Auch diese Schrift - der Titel verrät es - ist vor allem eine Erholung, ein Sonnenfleck, ein Seitensprung in den Müßiggang eines Psychologen. Vielleicht auch ein neuer Krieg; Und werden neue Götzen ausgehorcht;... Diese kleine Schrift ist eine große Kriegserklärung, und was das Aushorchen von Götzen anbetrifft, so sind es diesmal keine Zeitgötzen, sondern ewige Götzen, an die hier mit dem Hammer wie mit einer Stimmgabel gerührt wird - es gibt überhaupt keine älteren, keine überzeugteren, keine aufgeblaseneren Götzen... Auch keine hohleren... Das hindert nicht, daß sie die geglaubtesten sind; auch sagt man, zumal im vornehmsten Falle, durchaus nicht Götze..”. Turin, am 30. September 1888,

[iii] A **Body of Knowledge (BOK or BoK)** is the complete set of concepts, terms and activities that make up a professional domain, as defined by the relevant *learned society or professional association*.^[1] It is a type of *knowledge representation* by any *knowledge organization*. In the theory several definitions are given, for example: Body of Knowledge is: (1) “Structured knowledge that is used by members of a discipline to guide their practice or work.” (2) “The prescribed aggregation of knowledge in a particular area an individual is expected to have mastered to be considered or certified as a practitioner.” (BOK-def). Waite’s pragmatic view is also worth noting: “BOK is a stepping stone to unifying community” (Waite 2004).^[2] - [Tuncer Ören](#) (2005),^[3]

[iv] The Beatles, “Here comes the sun” (about music and love)

[v] In [economics](#), the term **sunspots** (or sometimes “a sunspot”) usually refers to an extrinsic [random variable](#), that is, a random variable that does not affect economic fundamentals (such as [endowments](#), [preferences](#), or [technology](#)). Sunspots can also refer to the related concept of extrinsic [uncertainty](#), that is, economic uncertainty that does not come from variation in economic fundamentals. [David Cass](#) and [Karl Shell](#) coined the term sunspots as a suggestive and less technical way of saying “extrinsic random variable”.

[vi] Faust I, Johann Wolfgang Goethe, prolog in Heaven (about religion and natural sciences)

[vii] Jess Benhabib: “We used to think in macro, ignoring game theory, that self fulfilling beliefs were only compatible with fundamentals, and inconsistent with non-fundamentals. Now we know that theoretically they can happen, not only through standard distortions like IRS[taxes] but from informational issues and correlated equilibria.”

[viii] John Maynard Keynes (1936), Beauty contest metaphor

[ix] Herbert Simon, bounded rationality , from “Models of man, social and rational”, 1957

[x] Eyal Winter, “Feeling Smart: Why Our Emotions Are More Rational Than We Think” [LLC Gildan Media](#) publisher (about economics, psychology, neuro sciences, genetics, sex, gender, Holocaust)

[xi] https://de.wikipedia.org/wiki/Second_Life

[xii], Wilson, Timothy D. Strangers to ourselves. Harvard University Press, 2004.

[xiii] Empirical Evaluation of self reported attitudes: low correlation between attitude and behavior
https://en.wikipedia.org/wiki/Theory_of_planned_behavior

[xiv] Faust II, Johann Wolfgang Goethe, Mephistopheles about Homunculus

[xii] Herbert Simon, Reinhard Selten armchair economics-

<http://www.astralgalia.com/webportfolio/omnimoment/archives/interviews/simon/index.html>

http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates/1978/simon-lecture.pdf

https://www.jstor.org/stable/40721040?seq=1#page_scan_tab_contents

Selten: [http://darp.lse.ac.uk/PapersDB/Selten_\(EER_98\).pdf](http://darp.lse.ac.uk/PapersDB/Selten_(EER_98).pdf)

[xiii] Experiment, Cole Porter

[XIII]

from "NYMPH ERRANT"
EXPERIMENT

Words and Music by
COLE PORTER

Experiment (song by Cole Porter)

"Before you leave these portals
 To meet less fortunate mortals
 There's just one final message
 I would give to you...
 You all have learned reliance
 On the sacred teachings of science
 So I hope, through life you never will decline
 In spite of philistine defiance
 To do what ALL good scientists do.
 Experiment...
 Make it your motto day and night
 Experiment...
 And it will lead you to the light
 The apple on the top of the tree
 Is never too high to achieve
 So take an example from Eve
 Experiment...
 Be curious
 Though interfering friends may frown...
 Get furious
 At each attempt to hold you down.
 If this advice you'll only employ
 The future can offer you infinite joy
 And merriment...
 Experiment
 And you'll see!"

Moderato

Be -

F Bb6 C7 F Bb6 C7

fore you leave these por - tals to meet less for - tu - nate mor - tals, there's

F Am Gm C7 F Bb6 C7

just one fi - nal mes - sage I would give to you. You

[IV.] "[Here Comes The Sun](#)" (The Beatles)

*Here comes the sun, here comes the sun
And I say it's all right*

*Little darling, it's been a long cold lonely winter
Little darling, it feels like years since it's been here*

*Here comes the sun, here comes the sun
And I say it's all right*

*Little darling, the smiles returning to the faces
Little darling, it seems like years since it's been here*

*Here comes the sun, here comes the sun
And I say it's all right Sun, sun, sun, here it comes
Sun, sun, sun, here it comes
Sun, sun, sun, here it comes
Sun, sun, sun, here it comes*

*Little darling, I feel that ice is slowly melting
Little darling, it seems like years since it's been clear*

*Here comes the sun, here comes the sun
And I say it's all right
Here comes the sun, here comes the sun
-It's all right, it's all right*

*The sun is in fact a stronger guide for our action and
Being than the rational man:
DNA, when we get up in the morning;
How we dress, what we eat etc.,
So maybe we need to give up our rational guideline?*

Recorded by the BEATLES
Here Comes the Sun
For SATB* and Piano
Performance Time: Approx. 3:00

Arranged by
ALAN BILLINGSLEY

Words and Music by
GEORGE HARRISON

Brightly (♩ = 130)

Piano

Soprano Unis. *p*
Alto
Doo 'n doo doo doo... doo doo... doo doo... doo doo... doo...

Tenor Unis. *mf*
Bass
Here comes the sun...

Chords: A, D, E, B7

Prologue In Heaven (Goethe, Faust I)
(God, the Heavenly Hosts, and then Mephistopheles.)
(The Three Archangels step forward.)

RAPHAEL

*The Sun sings out, in ancient mode,
His note among his brother-spheres,
And ends his pre-determined road,
With peals of thunder for our ears.
The sight of him gives Angels power,
Though none can understand the way:
The inconceivable work is ours,
As bright as on the primal day.*

"The Sun is playing a secret melody, hidden inside itself, that produces a widespread throbbing motion of its surface. The sounds are coursing through the Sun's interior, causing the entire globe, or parts of it, to move in and out, slowly and rhythmically like the regular rise and fall of tides in a bay or of a beating heart." (Kenneth R. Lang)

<https://www.youtube.com/watch?v=CcuZD0A7RwM>

 **Solar Sounds**

These are solar sounds generated from 40 days of Michelson Doppler Imager data and processed by [A. Kosovichev](#).

The procedure he used for generating these sounds was the following. He started with doppler velocity data, averaged over the solar disk, so that only modes of low angular degree ($l = 0, 1, 2$) remained. Subsequent processing removed the spacecraft motion effects, instrument tuning, and some spurious points. Then Kosovichev filtered the data at about 3 mHz to select clean sound waves (and not supergranulation and instrumental noise). Finally, he interpolated over the missing data and scaled the data (speeded it up a factor 42,000 to bring it into the audible human-hearing range (kHz)).

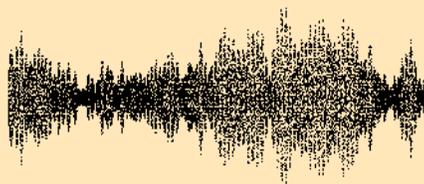
One Mode



($l=1, n=20, \nu=2.94-3.0$ mHz)

- [AIFF Format \(~1.5 mins\)](#) (900 KB)
- [AU Format \(~1.5 mins\)](#) (1.3 MB)
- [AU Format \(~0.5 mins\)](#) (500 KB)

Three Modes



Scene II: A Laboratory (Goethe, Faust II)

(In the fashion of the Middle Ages: lots of heavy apparatus for strange purposes.)

HOMUNCULUS Well, now, you

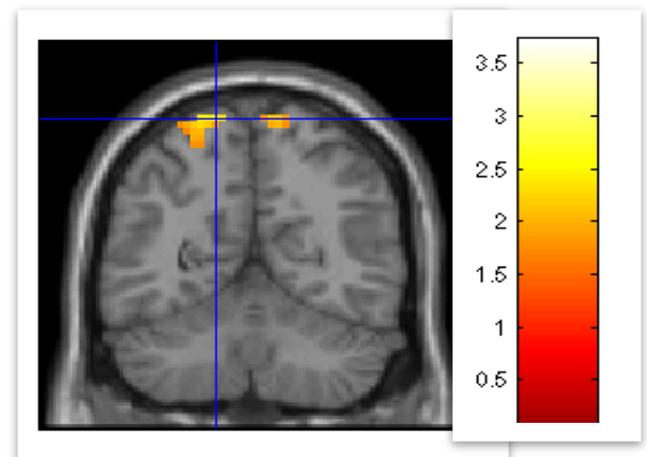
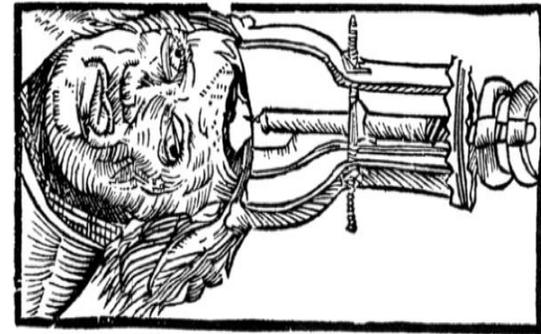
Stay home, there are important things to do .
Unfold all your ancient parchments,
Then, by rote, collect life's elements,
And place them together with due care,
Consider What, more deeply consider How.
Meanwhile round the world, a bit, I'll fare,
And find the last dot on the 'i', for now.
Then the great work will see its final stage:
Great effort will merit great reward, you'll see:
Gold, honour, fame, a long and ripe old age,
And science too – and virtue, possibly.
Farewell!

WAGNER(Sadly.)

Farewell! It gives me pain.
Already, I fear, I'll not see you again.

MEPHISTOPHELES

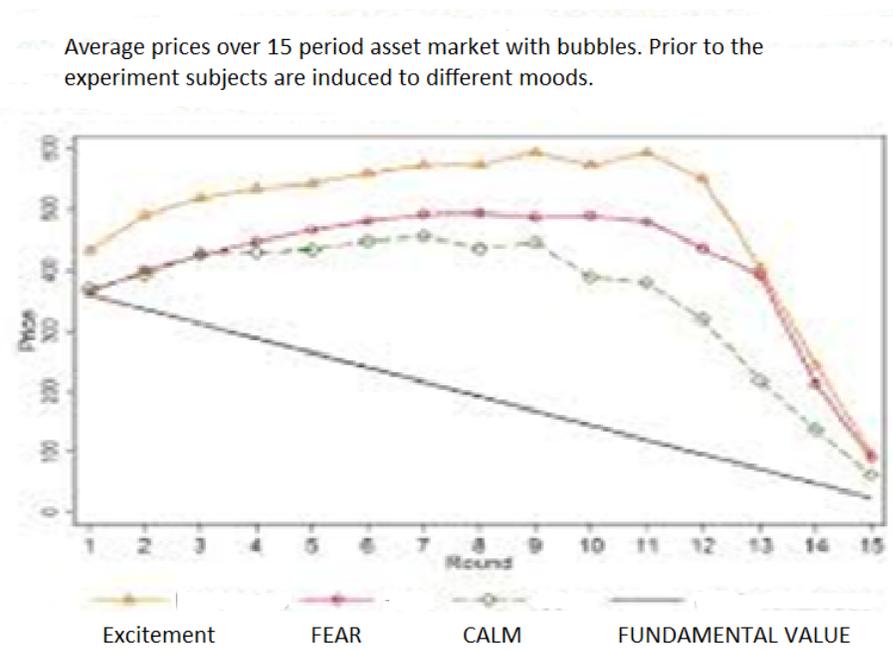
Now to Peneus, lively, on!
Sir Cousin's highly rated.
(To the audience.)
*In the end we're dependent on
The creatures we've created.*



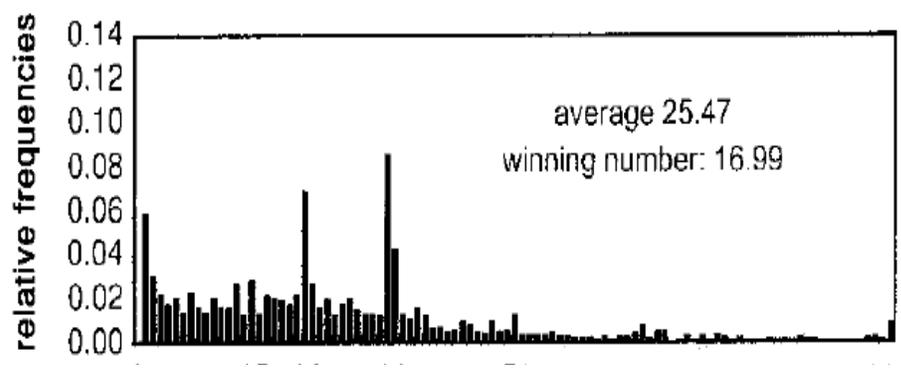
[viii] Beauty Contest Metaphor Keynes (1936, p. 156)

Or, to change the metaphor slightly, professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces

from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those which average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees.



Beauty contest experiments



Epilog

This manifesto tries to touch /express several dimensions related to economics.

First of all it tries to create a holistic thinking within economics

as it used to be in ancient time until recently; oikos=greek for home.

*Mathematical scientists have managed to come to the roots of reasoning,
to not get distracted by something not being able to be capture, as emotions.*

They have achieved a fantastic goal.

However, now it is time to “go back” =to revolute.

The manifesto is a step to bring all back that was there before in a simplistic manner:

*including economic theory (micro and macro) and experiments,
music, psychology, religion, natural sciences, and the humanities and spiritualism.*

The trick is that the manifesto is a collage, as in a painting.

The educated reader could find it all in the quotes.

But maybe the author herself has to spell it out.

A switch from a mathematical metaphor to a physical metaphor insures

that a deviation from the ideal model is seen as an enrichment

and not as an error/irrationality/ bounded rational behavior

as it is the case in economics at the moment.

The tuning fork metaphor is a symbol that expresses just this- pureness vs poorness.