

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

United States Department of Transportation --
Publications & Papers

U.S. Department of Transportation

2002

Summary of Working Group Activities

Cyril Arney
Consultant

Follow this and additional works at: <https://digitalcommons.unl.edu/usdot>



Part of the [Civil and Environmental Engineering Commons](#)

Arney, Cyril, "Summary of Working Group Activities" (2002). *United States Department of Transportation -- Publications & Papers*. 30.

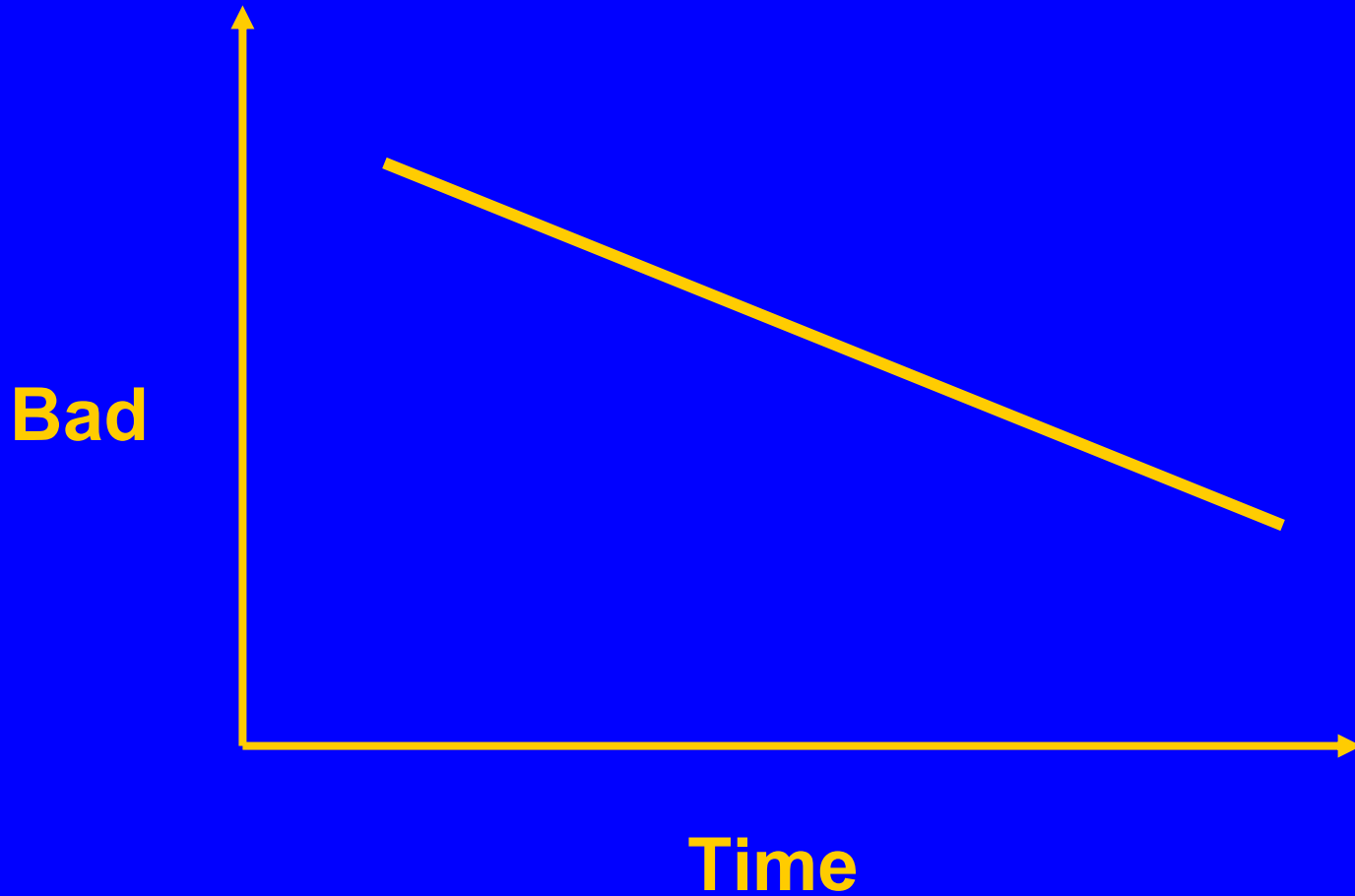
<https://digitalcommons.unl.edu/usdot/30>

This Article is brought to you for free and open access by the U.S. Department of Transportation at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in United States Department of Transportation -- Publications & Papers by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

HFW 2002

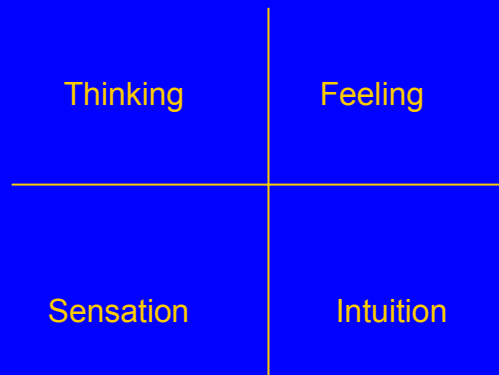
- Where we were in 1996
- Where we are today
- Great progress
- Great success of HFW 2002
- Thanks to all involved
- Outstanding way forward
- Clarify doubts
- Conclusions

Shape of the 20th Century

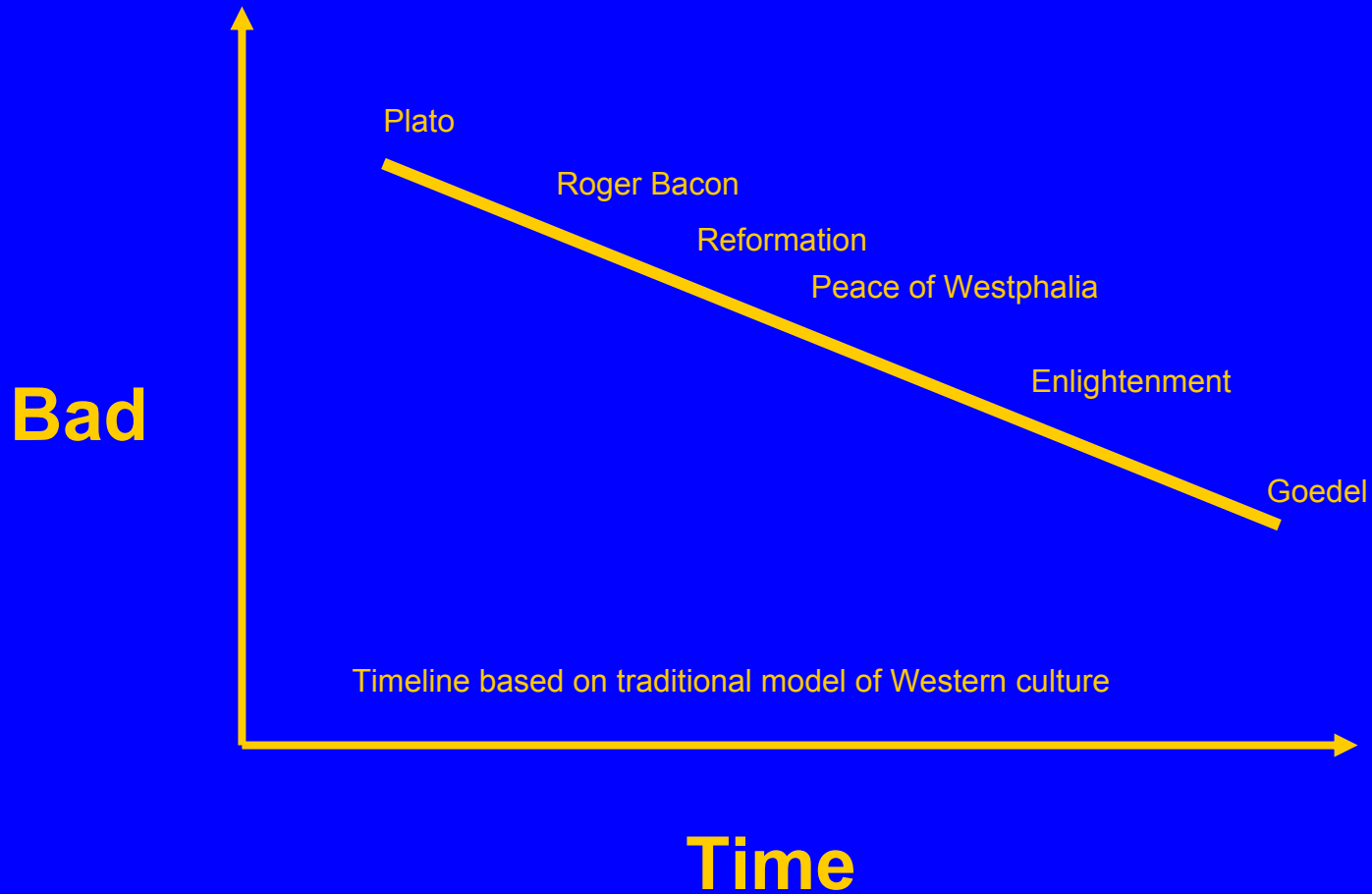


Carl Jung (1875-1961)

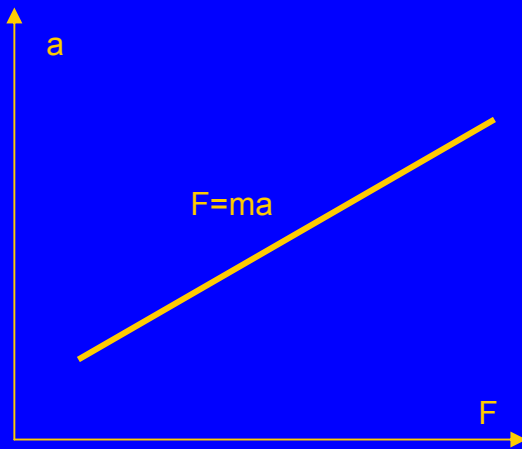
- Swiss psychologist
- Shadow
- Collective unconscious
- Psychological types (basis of MBTI)



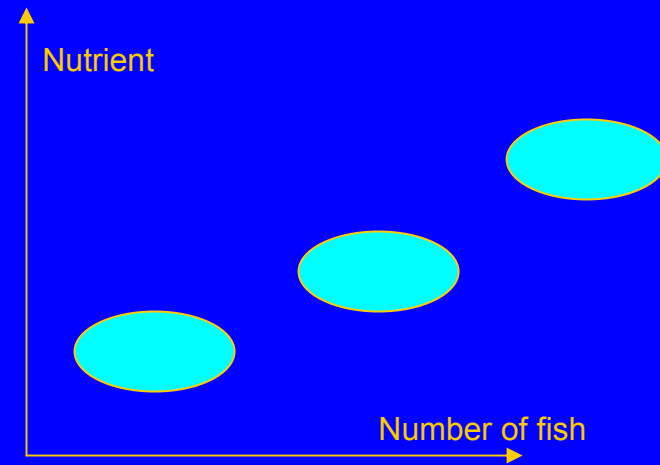
Shape of human progress



What is correct HFE model?



Newtonian physics



Chaos theory

The problem redefined

- 38 years and one month
- Engineering deficiency disorder” (DSM)
- Support group
- Process of continuous improvement
- The ‘trip’ to Austin
- Transcendance or Immanence?

Behavioral Science

- Behavioral Science: any of various disciplines dealing with human actions, usually including the fields of sociology,, social and cultural anthropology, psychology, and behavioral aspects of biology, economics, geography, law, psychiatry and physical science. (Britannica)

Behaviorism

- Watson: psychology was to become a purely objective, experimental branch of natural science (~1924)
- Skinner:
 - Professor of Psychology at U.of Indiana
 - Skinner's box
 - Central concept of reinforcement, or reward
 - Great influence but controversial today

Human behavior is complex

- “We assumed we would start to make computers understand simple children’s stories and work our way to the complex fields like physics and astronomy. It turned out that the understanding of physics and astronomy is extremely simple compared to the problem of understanding children’s stories”. Bill Wood, a scientist who had struggled to make computers understand ordinary language.(quoted in ‘Wittgenstein’s Ghost’, article by Paul Trachtman, Smithsonian, April, 2002).

The Conclusions (1)

- There is an enormous potential to apply our work in HFE to broader issues of the day.
- Provide an introduction to the proceedings, which puts the subject and papers in context
- Provide a synopsis (executive summary) at the beginning of every paper
- Agree on a single definition of HFE

The Conclusions (2)

- Resolve the status and qualifications required of an “HFE Professional”
- Develop the appropriate relationship between HFE, and industry regulations and standards
- Try and offer a way forward for those people who want immediate tools

The Conclusions (3)

- Thank you for an outstanding job exceptionally well done
- Start planning for HFW2005