The Fabulous History of Radiation Protection
Dr Jack Valentin

- Can we learn from the past?
- History of radiation: Panacea or curse?
- Bo Lindell’s ‘History’ books
- The translation project
- Can we learn from the past? We MUST!
Can we learn from the past?
### On Learning From History

Those who cannot remember the past are condemned to repeat it  
*George Santayana, 1905*

But do we actually learn from history?

<table>
<thead>
<tr>
<th>NO</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>The start of WW I</td>
<td>The Cuba crisis</td>
</tr>
<tr>
<td>'Peace in our time' 1938</td>
<td>The Milgram obedience experiment</td>
</tr>
<tr>
<td>Any family week-end outing!</td>
<td>The Marshall plan</td>
</tr>
</tbody>
</table>
The (Lindell) history of radiation
**Early Radiation Observations**

*Titus Lucretius, 99 BC – 55 BC:*
*Light is minute particles hitting the eye*

*Paracelsus 1530: Mala metallorum*

*G Agricola 1556: Mines need ventilation (early protection!)*
**Professor Röntgen’s Rays**

- **8 Nov. 1895** – x rays discovered
Professor Röntgen’s Rays

- 23 Jan. 1896 – public presentation + photo of Geheimrat von Kölliker’s hand
Professor Röntgen’s Rays

- 25 Mar. 1896 – Edison presents fluoroscopy equipment
- 12 Dec. 1896 – Fuchs advises Time-Distance-Shielding
- 12 Aug. 1897 – Mobile x-ray unit in Malakand late, damaged
- 2 Sep. 1898 – Omdurman battle, Sudan: Adadieh hospital
1920s: Escalating Radiation Safety Concerns

...and many injuries
(amputated hand of Paul Krause, Röntgen-Museum Remscheid)

1925-28 ICRU, ICRP created
1934 Rec/s: First dose limit
But The Spirit Of The Times Was Reckless
Many nuclear weapons tests

1954: ‘Bravo’ (Bikini), ‘第五福龍丸 (Lucky Dragon 5)’

1955: Excess leukaemia in Hiroshima, Nagasaki

1959: ICRP uses LNT; sets public dose limit

C. 1950, Public Perception Changed
Bosse, and his books
Bo Lindell, 1922-2016
Bo Lindell, 1922-2016

- SSI, the Swedish Radiation Protection Authority (1948) 1966–2008
  (1966 – 82 Director General)

- UNSCEAR 1956 – 1990
  (1957 – 58 Secretariat member, 1970 – 71 Chairman)

- ICRP 1957 until his passing
  (1957 – 62 Scientific Secretary, 1977 – 85 Chairman)

- Main author, ICRP 26 (1977) and the System of RP

- Founder member of IRPA; 1st winner of the Sievert Award

- Founder member of NSFS
The History of Radiation, Radioactivity, And Radiological Protection

Bo Lindell
The history of radiation, radioactivity, and radiological protection
PART 1: THE TIME BEFORE WORLD WAR I
PANDORA’S BOX

Bo Lindell
The history of radiation, radioactivity, and radiological protection
PART 2: THE 1930s
THE SWORD OF DAMOCLES

Bo Lindell
The history of radiation, radioactivity, and radiological protection
PART 3: 1930 – 1945
THE LABOURS OF HERCULES

Bo Lindell
The history of radiation, radioactivity, and radiological protection
PART 4: 1945 – 1990+
THE TOIL OF SISYPHUS

2 637 pages of accurate, important, exciting information
All with a Nordic perspective
What’s In Each Book?

- **Pandora’s Box**
  *Ancient Greece to 1930s: Röntgen, Becquerel, Curie…*
  *ICRP and ICRU*

- **The Sword of Damocles**
  *WWII, 1940s: ‘Atomic’ bombs; nuclear fusion devices*
  *Sievert*

- **The Labours of Hercules**
  *1950-1966: DNA; fallout; nuclear power; international bodies*
  *Sievert’s death*

- **The Toil of Sisyphus**
  *1967-2008: ICRP system of RP; NIR; Beninson & Dunster*
  *The rise and fall of SSI*
Nordiska Sällskapet För Strålskydd – Nordic Society for Radiation Protection
Other Sources

- Herbert Parker: *Publications and Contributions, 1986* (822 pp)
Lindell's History

- Nothing is comparable!!

- Other sources may give more detail on particular aspects

  BUT NOTHING ELSE...
  
  ...treats all time
  
  ...treats all kinds of radiation (admittedly, not much NIR)
  
  ...builds on so much personal participation
  
  ...is enjoyable for both professionals and lay people
  
  ...can be read from cover to cover like an exciting novel
The translation project
A Professional Translation Into English

Project commissioned by NSFS

Co-funding, additional sponsors

NSFS
NKS
GR, NRPA, SIS, SSM, STUK
IRPA
The Project/Editorial Committee

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Per Hedemann Jensen (DK)
Sigurður Magnússon (IS)
Wendla Paile (FI)
Sisko Salomaa (FI)
Gunnar Saxeboł (NO)

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Nordiska Sällskapet För Strålskydd – Nordic Society for Radiation Protection
Separated by A Common Language

George Bernard Shaw
Separated by A Common Language

Utrikesminister (Außenminister; ministre des affaires étrangères)

British translator: The Foreign Minister

US editorial adviser: The Secretary of State

US editorial adviser’s interpretation: 

British translator’s interpretation:
What Is A ‘Docent’?

In Sweden:

- Now ONLY an academic title, above PhD

- Formerly ALSO a senior research position, below professor
  - UK: Reader. US: Roughly, Assistant professor

In USA:

- A voluntary (unpaid) museum guide
But Where Can I Get These Books?

Part 1, Pandora’s Box:

- Paperback version immediately available at Amazon
  
  Price: About 6 EUR (printing costs only!)

- PDF file soon downloadable from nsfs.org and nks.org
  
  Free

Parts 2, 3, and 4:

- Currently being typeset, soon available
  
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CAN we learn from the past?
We MUST Learn From The Past!

- Encourage frank incident reporting
  *Aviation, nuclear safety*
  *Don’t punish, assist!*

- Intensify supervision when needed

- Disseminate results
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Many Thanks For Your Attention!