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OELs as a Typical Case of Regulatory Expertise

Emmanuel Henry
Université Paris-Dauphine, PSL* Research University
CNRS, IRISSO

Research on OELs: A Quick Review

- Research on OELs focusing primarily on values published by ACGIH (American Conference of Governmental Industrial Hygienists) since the post-war period:
  - Reflections focused on the numbers: why OEL was set at this level?
  - Interrogations about potential conflicts of interests between expertise and industrial interests
    - Presence of scientists working for industry in expert groups
    - OELs derived from unpublished and industry-funded work

History and sociology of policy instruments

- Each instrument incorporates a specific representation of the world and of the problems to be addressed

- No instrument is neutral

Occupational exposure limits: a boundary object ?

- OELs =
- A pragmatic tool for industrial hygienists
  - *“It is a figment of the imagination to think that we can set down a precise limit below which there is complete safety and immediately above which there may be a high percentage of cases of poisoning among those exposed.”*
    - *Chairman of the Threshold Limit value (TLV) Committee of ACGIH, 1948*
  - *“It was rather well known in the l950s and 1960s, at least among occupational hygienists, that the TLVs were practical guides and were not necessarily protective of health. The reason why this perception would change in the 1970s and 1980s is not known.”*
    - Rappaport et al., “Variation of exposure between workers in homogeneous exposure groups”, *Am Ind Hyg Assoc J, 1993.*

Should OELs be used in regulation?

- Debates inside the *American Conference of Governmental Industrial Hygienists* (ACGIH) when TLVs became part of federal regulation in US:
  - *A member asked: "Did anybody on the Board show any signs of annoyance or displeasure or concern over the fact that the TLVs are being used by the Labor Department in contravention to a resolution passed by this body at the 20th Annual Meeting in 1958 at Atlantic City to the effect that the TLVs or any other such list should not be used in any code, rule, regulation or any such manner directly used in a regulation as a sole criterion for determination of a health hazard?"*
  - *The answer: "*Yes there was some concern expressed… The impression I had was that the Board, regardless of whether or not they approved this course, felt that the limits would be used, and that if ACGIH TLVs were going to be used in this manner they should use what the ACGIH now considers to be their TLVs. […] There is nothing in my opinion, that ACGIH can do to prevent or stop anyone, any state or federal agency, from using our ACGIH TLVs in standards. This has been discussed for a number of years. "

Other representations of OELs

- Used in the regulation, legitimized by the state, the limits tend to appear as protective for workers
  - compliance with values = safety
- In worst cases, they can be used as « Licenses to Expose »
  - compliance with values = observance of rules

Technoscientific definition of occupational health issues: a choice of field beneficial to industry

- Occupational risk sector is fairly specific:
  - This is a sensitive area for industry as it can generate increasing production costs or cause products to be banned.
  - Domain in which ignorance is preferred to a build-up of knowledge (unlike many other fields where R&D leads to the development of new products for new markets).
- Logics of production ignorance:
  - Industry's direct influence on knowledge production: "Doubt is our product", funding of research on peripheral but controversial issues (e.g. weak doses, differentiation between types of asbestos).
  - More fundamentally, industry's ability to not produce knowledge (non-decisions): monopoly of access to contaminated places and to exposed groups (employees).
  - "Undone science"
- Industry in capacity to monitor regulatory policies at different stages from upstream (production of scientific doubts and ignorance) to downstream (negotiation on the modalities of implementation)

Regulatory science: a trap for experts?

- 2 types of scientific errors
- Type I: false positive = A product designated as toxic when it is not
- Type II: false negative = A product designated as harmless when it is dangerous
- Inversion of the severity of both errors depending on whether one is in the logic of production of scientific knowledge or in the logic of regulating dangerous activities.
- Professional logics of scientists may conflict with public health interests

Bringing temporality back in: Science-based regulation giving always industry a step ahead?

- Take into account the issue of temporality
- 2 main strategies in response to increasing regulation:
  - Outsourcing of activities into less regulated areas
  - Substitution of regulated products by products for which there is yet no regulation

- It takes many years to demonstrate scientifically the dangers of chemicals.
- Therefore, industry is always one step ahead due to the time required to accumulate sufficient knowledge to regulate a new product.

For a better analysis of the effects of science-based regulatory instruments

- Taking into account temporality leads to relativize the question of the level of limit values, which is often the main angle of scientific interrogations on this topic.
- The main challenge of the regulation of occupational exposure is their actual application. Drawing most of the attention to the expertise prior to their elaboration leads to underestimating the importance of their implementation.
- How to regulate tens of thousands of chemicals when expert groups can at best propose a few limit values per year? Présentation Ignorance scientifique et inaction publiquebis Dauphine.pptx

Thank you for your attention.