Research integrity at the interface with policy-making

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Policy and legislation

- The policy cycle at European and different national levels is long and complex.
- It goes from initial ideas, discussions, surveys and press reports to impact (economic, social, environmental) of enacted legislation and its political consequences.
- The legislative cycle is part of the policy cycle and is generally well structured and documented.
- It goes from a legislative proposal (accompanied by an ex-ante impact assessment) to an ex-post impact assessment, setting possibly in motion a new legislative cycle.
- Policy may also be steered through other means, e.g. regulatory guidelines or voluntary codes of conduct.

Outline

I. From expert guidelines to legislation (AI Act as an example)

II. The challenges of new technologies for science advice

III. How to approach legislators and other policy-makers

IV. Next steps

I. FROM EXPERT GUIDELINES TO LEGISLATION
AI Act as an example: Biometric identification

ETHICS GUIDELINES FOR TRUSTWORTHY AI
High-Level Expert Group on Artificial Intelligence
April 2019

Identifying and tracking individuals with AI

… **Identification of individuals is sometimes the desirable outcome** … (… fraud, money laundering, or terrorist financing). However, **automatic identification raises strong concerns of both a legal and ethical nature** … . A **proportionate use of control techniques** in AI is needed … . Clearly defining if, **when and how** AI can be used for automated identification of individuals and **differentiating between the identification of an individual vs the tracing and tracking of an individual** and **between targeted surveillance and mass surveillance**, will be crucial … . **The application of such technologies must be clearly warranted in existing law**.

AI Act as an example: Biometric identification (2)

AI ACT, CHAPTER II
Article 5
Prohibited AI Practices
March 2024

… purposefully **manipulative** or **deceptive** techniques …

… exploit[ing] any of the **vulnerabilities** of … persons …

… **evaluation … of … persons** … based on their **social behaviour** or … **personality characteristics** …

… making risk assessments … in order to **assess or predict the likelihood of a natural person committing a criminal offence** … [exception:] criminal activity … based on objective and verifiable facts …

… create or expand **facial recognition databases** through the **untargeted scraping of facial images** from the internet or CCTV footage …

… **infer emotions of a natural person** in the areas of **workplace** and **education institutions**, except … [if] intended … for medical or safety reasons …

AI Act as an example: Biometric identification (3)

The use of **'real-time' remote biometric identification** … in publicly accessible spaces …

- … shall be deployed only … to confirm the identity of the specifically targeted individual, and it shall take into account …: (a) … the **harm that would be caused** if [it] were not used; (b) the **consequences** … **for the rights and freedoms of all persons concerned** … .
- … shall be authorised only if the law enforcement authority has completed a **fundamental rights impact assessment** … and **has registered the system in the EU database** … .
- … subject to a prior **authorisation granted by a judicial authority or an independent administrative authority** whose decision is binding …
- … remains **limited to what is strictly necessary** concerning the period of time as well as the geographic and personal scope.

No decision that produces an **adverse legal effect** on a person may be taken **based solely on the output of the 'real-time' remote biometric identification system**.

AI Act as an example: Biometric identification (4)

AI ACT, CHAPTER V
GENERAL-PURPOSE AI MODELS
Articles 51-56

A general-purpose AI model shall be classified as a **general-purpose AI model with systemic risk** if … it has high impact capabilities … [i.e.] … when **the cumulative amount of computation used for its training measured in FLOPs is greater than 10^{25}**.

Article 56

Codes of practice

1. The **AI Office shall encourage and facilitate the drawing up of codes of practice** at Union level [by nine months from the date of entry into force of the AI Act, with the potential participation of providers, national competent authorities, and the support of civil society organisations, industry, academia and other relevant stakeholders]. …

4. The AI Office and the [AI] Board shall aim to ensure that the codes of practice clearly set out their **specific objectives** and contain **commitments or measures** … [and]

5. … shall **regularly monitor … the achievement of the objectives** of the codes of practice … The Commission may … approve a code of practice [with] general validity [in] the Union.

II. THE CHALLENGES OF NEW TECHNOLOGIES FOR SCIENCE ADVICE

The consequences of new technologies (• AI in healthcare / energy / transport / manufacturing / finance / media • Automatic generation /editing of text / images, • blockchain, • genome editing) are:

- Dizzyingly rapid and profoundly uncertain/unpredictable;
- Disruptive, upending economic and social relations.

How can policy-making anticipate this kind of future?

- How can science advice better prepare the policy-makers?
- How can consistent research integrity standards apply to the translation of research?

II. THE CHALLENGES OF NEW TECHNOLOGIES FOR SCIENCE ADVICE (2)

Science advice has evolved: It opened up to **various kinds of impact**:

- Intended: facilitating access to information, curing congenital diseases; or
- Unintended: personal data leaks, increasing social divide in healthcare access → Hard: causally linked, physical, measurable, e.g. car crash or pathogen release; or
  Soft: use of technology, psychological, less measurable, e.g. anxiety or addiction.

… and a **wider range of stakeholders** (+ relevant experts):

- Developers, providers, regulators, SMEs, industry, policy-makers, end-users, civil society;
- Natural scientists, engineers, legal experts, political scientists, psychologists, sociologists, ethicists, philosophers.

II. THE CHALLENGES OF NEW TECHNOLOGIES FOR SCIENCE ADVICE (3)

Steps for building a solid science-advice case:

- Start with a technical analysis of the case. Ensure the highest quality and integrity of the research underlying the evidence.
- Place technical developments in the current economic, social and political context: stakeholders, interests, opportunities, risks.
- Seek the widest consensus possible, based on scientific evidence.
- Develop draft scenarios on all aspects of the case and test them with stakeholders and experts → expectations and concerns.
- Turn the validated scenarios into policy options and design legislative roadmaps for attaining the desired outcomes.

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS

- Keep in mind:
  - Legislators and other policy-makers have different priorities, pressures and ambitions than scientists.
  - Their accountability is exercised differently from that of scientists.
  - Timelines for running legislative processes are different from those scientists require to resolve uncertainties & disagreements.
  - Achieving a timely, desirable outcome (possibly after tortuous negotiations and compromises) is more important to them than pursuing 'watertight' scientific or even ethical justification.

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS (2)

- Keep in mind (continued):
  - Legislators have different backgrounds and diverse agendas.
  - They are laypersons on all or most scientific subjects.
  - They manifest similar emotional and reflected reactions, emanating from their fears, hopes, moral principles and personal interests, to the people electing them.
  - Science is one among many factors that steer their decisions.
  - Social (not only technical) innovation may also interest them.
  - They have their favourite science advisors that they know & trust.
  - They are surrounded by lobbyists (industry, NGOs etc.).

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS (3)

- Keep in mind (continued):
  - Legislators are always busy.
  - Their focus areas and priorities change continually.
  - The depth of their attention and commitment varies according to the priority they assign to the subject at the moment.
  - A lot of work is done by their personal & political-group advisors …
  - … who influence their work, but can be overruled at any time.
  - They generally want to be re-elected and hence ...
  - ... care about what mainstream and social media say about them.

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS (4)

- Some practical tips (food for thought, with no promise of success):
  - Prepare your case well, respecting the highest scientific, transparency and integrity standards, because:
    - anything else would compromise the quality of the outcome,
    - competition is fierce but does not always apply the same standards …
    - … so this establishes you as a serious, honest and reliable interlocutor,
    - you can stand by your case independently of the political response,
    - you put pressure on other scientists and lobbyists to do the same, ...
    - … which is an effective way of campaigning for research integrity.

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS (5)

- Some practical tips (continued):
  - Use accurate, authoritative, succinct and comprehensible language.
  - Focus on a few properly selected items rather than being exhaustive.
  - Choose a structured discourse, prioritising the main message, so that you will have made your point if you must break off half way through.
  - Try to latch onto the legislator's current agenda and interests.
  - Remember Faraday's reply ("Why, Sir, one day you may tax it!") to Chancellor Gladstone, when asked what electricity could be good for.
  - Make sure you establish good contact with the people surrounding legislators (personal and external advisors, other legislators etc.).

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS (6)

- Some practical tips (continued):
  - You have to be confident, resourceful and flexible, ready to adjust your ambition to what is feasible.
  - Make sure you understand well the legislative process and keep abreast of the latest developments in relevant files.
  - Do not be discouraged if you fail a few times, …
  - … but learn from your own experience.
  - You have alternative ways of influencing a legislator, e.g. …
    - … via their private office of advisors, or …
    - … via the media (mainstream and social).
  - Do not underestimate the competence and eloquence of lobbyists.

III. HOW TO APPROACH LEGISLATORS AND OTHER POLICY-MAKERS (7)

- Some practical tips (continued):
  - There are alternative ways of influencing policy: regulatory guidelines, voluntary codes of conduct, application checklists or …
  - … if you are in a fighting mood, court judgements.
  - It is generally advisable to try alternative routes in parallel.
  - Talk to various people while designing your strategy, trust nobody unconditionally, and weigh carefully and calmly their advice.
  - The impact of your input may range from none to fragments of ideas appearing (e.g. as footnote) in pieces of legislation or softer policy documents, to creating a new chapter in a legislative text.
  - Appreciate what you have achieved and plan your next steps.

IV. NEXT STEPS

- Communicate the conference outcomes thoroughly and transparently to policy-makers (e.g. Commission officials, integrity officers in public & private organisations) who are likely to take an interest and act on them.
- Work out and bear in mind the ramifications of these outcomes for the specific cases you will present to legislators when you next meet them.
- With the extension of the scope towards translation and policy-making, it should be easier to find connections with specific cases and explain them in a language accessible to your interlocutors.
- Work with them inductively, going from the applications that interest them and their consequences to general principles and practices.
- Their reactions and your feedback to the research integrity community would be valuable, real-life input for future adjustments.

IV. NEXT STEPS (2)

- Get legislators' advisors interested and arrange follow-up discussions with them on concrete plans, always explaining "what is in it for them".
- As both translation and policy-making involve actors from normative systems different from those of researchers, a major challenge will be to convince them that their involvement is worth their precious time.
- Campaign for the conference outcomes within the scientific and technical community to ensure that what legislators hear about research integrity and ethics is consistent and emanates from a coherent source.
- While being confidently prepared for successes and reversals, be ready to adjust, and learn to recognise and appreciate the progress made, even if it does not fully correspond, in scope and depth, to what you had in mind.
- The process may be long and tedious, but the goal is worthwhile and the chances of progress significant enough to justify the effort.

Thank you

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