ONLINE TRACKING AND FREEDOM OF SCIENTIFIC RESEARCH

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I. FREEDOM OF SCIENTIFIC RESEARCH

Freedom of scientific research is "*the freedom of **researchers** to express their opinion **without being disadvantaged** by the system in which they work or by governmental or institutional **censorship** and **discrimination**.*"

Freedom of scientific research is related to "*freedom of expression, freedom of association, the freedom of movement and the right to education, among other rights. It encompasses the right to **freely define research questions**, choose and **develop theories**, gather empirical material and employ sound academic research methods, to **question accepted wisdom** and **bring forward new ideas**.*"

We will continue to express "*our conviction that **critical discourses are not disloyalty**, but essential elements of a **democratic society**. Freedom of scientific research is inseparable from a plurality of voices* […] *importance of having strong legal frameworks in place*".

Source: Bonn Declaration on Freedom of Scientific Research (available [here](#)).
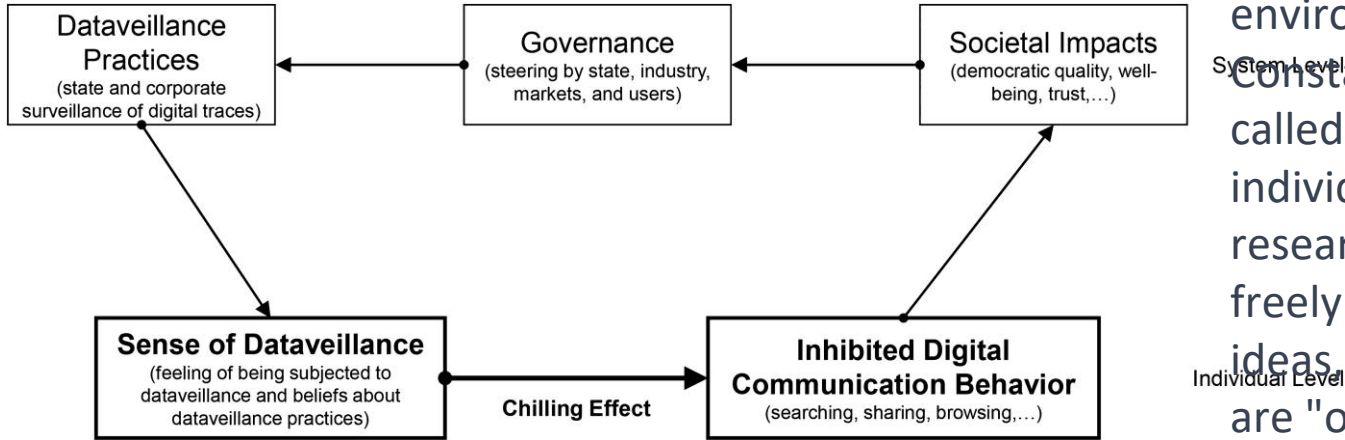
II. FREEDOM OF SCIENTIFIC RESEARCH AND TRACKING

Spoiler alert, rhetorical question: *How do these principles interact with pervasive tracking, detailed profiling, uncontrolled data sharing, and obscure content selection processes?*

Not so well… two main reasons:

(1) Chilling effects on researchers, and

(2) Structural control of the academic/research chain

III. CHILLING EFFECTS

Governance (steering by state, industry, markets, and users)

Dataveillance Practices (state and corporate surveillance of digital traces)

Societal Impacts (democratic quality, well-being, trust,…)

System Level

Sense of Dataveillance (feeling of being subjected to dataveillance and beliefs about dataveillance practices)

Chilling Effect

Inhibited Digital Communication Behavior (searching, sharing, browsing,…)
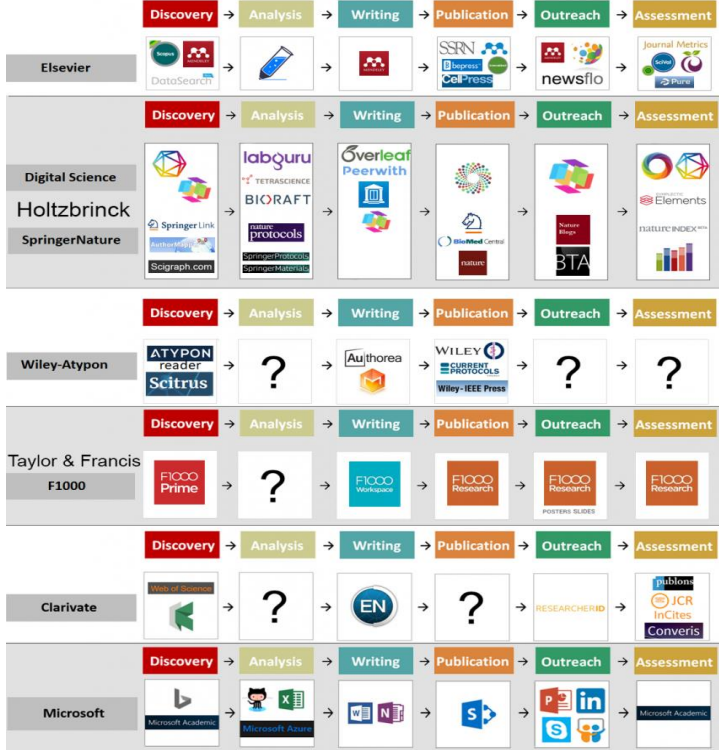
Individual Level

Source: Büchi, M., Festic, N., & Latzer, M. (2022). The Chilling Effects of Digital Dataveillance: A Theoretical Model and an Empirical Research Agenda. *Big Data & Society*, *9*(1). https://doi.org/10.1177/20539517211065368

Researchers are subject to environmental factors. Constant tracking entails a so-called "chilling effect" on the individual's ability to think, research information, and freely communicate their ideas, especially those that are "out of the box" - an essential element for democracy, public debate and, in particular, scientific debate.

IV. CONTROLLING THE RESEARCH PROCESS

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The tracking of the researcher and research activities also has another consequence (linked to the first one but somehow different, as it is more structural and less individual).

Tracking is generally carried out by editorial platforms that are now able to control and influence all stages of research, from the ideation of the hypothesis, collection and verification of data, publication, and dissemination of results.

V. CONTROLLING THE RESEARCH PROCESS

Loss of control over the technical infrastructure → The leading publishers are now acquiring start-ups that cover the entire research process, enabling them to collect data on both research fields and individual scientists. They accomplish this by deploying a range of trackers, audience tools, and web analytics tools at different stages of the research process.

VI. CONTROLLING THE RESEARCH PROCESS

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These tools not only track researchers when they visit their servers but also when they use their research tools (remember, unique IDs generated by OS and software). In some cases, even trying to convince libraries to install trackers within university networks, resulting in real-time recording of the research behavior of all individuals.

- **Microtargeting**, that is data from the direct user traces combined with data purchased, which in turn is condensed into precise data profiles by third parties, especially the large Internet companies.

- **Harvesting of Bidstream Data** (real time bidding data), which is the collection of data running in the background on localization data, IP numbers, device information and much more, transmitted and linked with an identifier in order to reliably identify people without the need to set a cookie

- **Trojans** which libraries are offered in connection with discounts for other services. The additional software to be installed in the libraries collects biometric data such as typing speed or type of mouse movement in order to be able to personalize users despite the use of proxy servers and VPN tunnels

Source: https://stoptrackingscience.eu

VII. CONTROLLING THE RESEARCH PROCESS

Display Advertising Technology Landscape

Uncontrolled data sharing concerning both research and personal interests → The major academic publishers have made collection and trading of data about the research interests of individuals, groups and research institutions their new business model. The data obtained is traded for various purposes, such as selling emerging research trends or informing governments about dissident intellectuals.

Unverified content selection → This dynamic obviously influences the output. What is relevant and what not is oftentimes decided by some far-away algorithm/AI system.

VIII. TRACKING SCIENCE: SOLUTIONS

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- Limit tracking → GDPR litigation, but in general intersectional approach (human rights litigation, IP protections, sector-specific frameworks)

- Dialogue with IT departments (ask them to check what is actually being shared during your work, it is possible)

- Open/public infrastructures

- Public debate, articles, MEP contacts, etc.

QUESTIONS ?

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