

SEMINAR

INTERACTIONS

Questions & Perspectives
on the use of mathematics and
data science
in the field of social intervention



FEBRUARY 22 & 23, 2024
NICE - FRANCE

The field of social intervention...

... encompasses a wide range of programs and services designed to improve the lives of individuals and social groups. The fields of intervention are very varied: poverty, disability, education, childhood, dependence, addictions, etc.

Mathematics and, more broadly, data science are powerful tools that are rarely used in research on social interventions, and there are few places for meetings and exchanges between actors and researchers in disciplines.

One of the central questions today in our opinion: how do we collect data on social interventions and how are they analyzed?

This data may include information about the participants in the intervention, the services they received, and the outcomes of the intervention. It can be difficult and challenging to quantitatively measure the scope and impact of these interventions. However, data science can be mobilized to improve their efficiency but also contribute to a better understanding of social phenomena and issues.

By proposing different frameworks for data collection, analysis and evaluation, researchers can support professional actors (institutions, associations, etc.) in designing, implementing and re-examining intervention methods.

However, the ambition to "put into equation" or to "model" society and intervention practices also implies questioning the ethics of the relationship between mathematics and society.

Objective:

Creating new interactions between different bodies
"Data Science, Philosophy, Ethics, Social Intervention Research and Actors in the Field" to propose methods and scenarios that lead to a more effective intervention in order to improve the lives of individuals in society

Notre volonté est d'organiser une série de séminaires d'interactions dont les deux premiers se tiendront en 2024 à Nice et à Bruxelles. Ils seront suivis par d'autres événements organisés au sein du réseau CERSO (Lille, Nantes, La Réunion, etc.)

Lors de ces rencontres nous discuterons des différentes façons dont les mathématiques sont utilisées dans la recherche dans le domaine de l'intervention sociale.

Nous nous concentrerons sur
trois domaines spécifiques :

Quantification of social problems

Historically, the quantitative approach has been little used in the field of social work and social intervention. Indeed, it appeared in the 2000s through the logic of evaluation and in a context of declining public finances and the emergence of managerial policies. As a result, actors in the field tend to associate quantitative approaches with managerial logics. Moreover, the work of proximity and human relations would by nature be impossible to quantify.

However, we believe that social issues would benefit from being studied in greater depth with a quantitative approach. Mathematics then appears to be essential for formalizing and possibly modeling certain dimensions of social problems. These methods can be used to identify the most affected populations and how factors interact.

Intervention design and evaluation

The practice of evaluation is now at the heart of our field of intervention. However, it is too often limited to the measurement (sometimes approximate) of the achievement of objectives formalized in plans (local public policies, establishment or service projects, etc.). The emergence of social impact measures has opened up new perspectives in terms of methodology for measuring the effects of actions. Indeed, it is now a question of going beyond the objectives initially set and understanding all the effects produced by the actions of social workers. In addition, the main players in the social sector (public institutions, associations, etc.) are increasingly waiting for tools to help with management and decision-making.

Mathematics can be used to model the impact of different social interventions. This can help researchers design interventions that may be more efficient. For example, the World Bank uses a mathematical model to assess the impact of different poverty reduction programs; or the United Nations Development Programme (UNDP) uses a mathematical model to track countries' progress towards achieving the Sustainable Development Goals (SDGs)... We wish to bring out new forms of interaction between these existing models or those to be created, and all the actors in the field of social intervention.

The use of AI in social interventions

AI can be used to automate the collection and organization of data, which can free up human resources to focus on other tasks. This can be particularly useful in social intervention settings, where data is often siloed and difficult to access. We believe that AI can enhance the work of the social worker without replacing it. AI can be used to:

- Identify and target populations in need of interventions. Design and
- evaluate social interventions.

For example, by simulating the impact of different social interventions.

- Tailor social interventions to the needs of beneficiaries.

Overall, AI has the potential to make research on social interventions more efficient but also more equitable. By automating many of the tasks related to social intervention research, AI can free up researchers and social intervention actors to focus on more creative and innovative work. For example, in Los Angeles, AI is being used to optimize HIV prevention awareness campaigns among homeless youth. Similarly, in Australia, AI is being used to evaluate the effectiveness of social programs.

However, we will need mathematics to simulate the effects of social interventions, to help stakeholders make the best decision, for example to help actors identify the most appropriate intervention for their target, and to help public policies develop better strategies and efficiently allocate existing resources. In addition, using AI will potentially lead us to improve our understanding of social issues. Thus, the uses of AI could allow us to articulate an understanding of the mechanisms of problems and the effects of experimentation through human intervention.

Organisation

Nice : 22 & 23 Février 2024
Bruxelles : Fin Juin 2024

Nantes, Lille, La Réunion : à définir

Organisés par : CERSO - HETIS
ASBL Convivial Planet - Bruxelles

Categories of Stakeholders

- Researchers and academics
- Public institutions
- Actors in the field (associations, etc.), private actors or similar (mutual insurance companies, insurance companies, etc.)

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