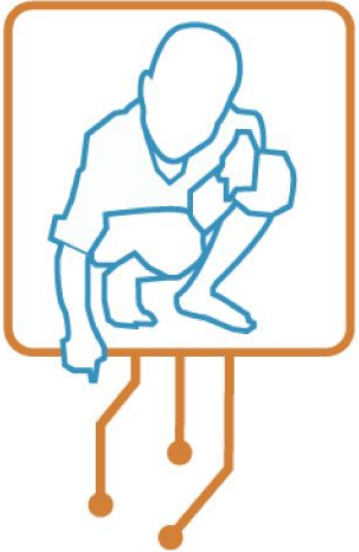# The Uses of Artificial Intelligence Tools by Social Science Researchers in Morocco

An Exploratory Field Study

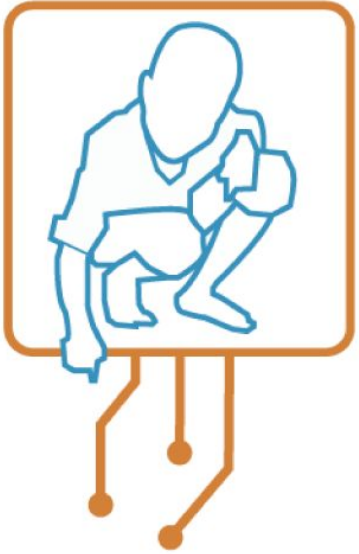Khadija Boufous (boufous.kh@gmail.com), Yassine Bouchouar (bouchouaryassine@gmail.com)

Introduction

- Technology, including AI tools, accelerates data collection, analysis, and literature review, increasing overall **research productivity** .

- Advanced software and AI applications allow researchers to **process large datasets** , perform complex statistical analyses, and uncover patterns that might be difficult to identify.

- Technology broadens access to research materials and collaborations, allowing social science researchers to **work globally** , share findings, and access a wider range of resources.

- However, the integration of technology raises **ethical issues** such as data privacy, intellectual property, and maintaining scientific integrity, especially with AI's role in content generation.
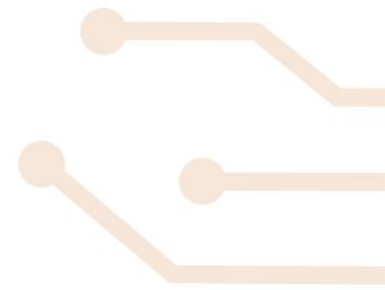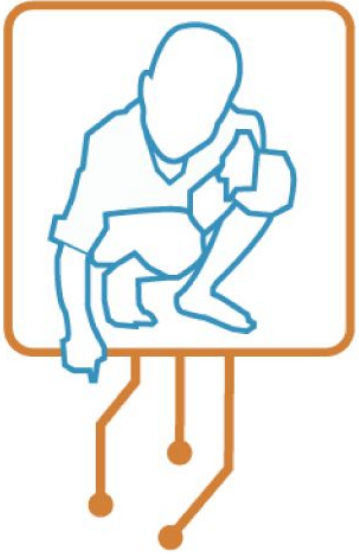
Nature of the Study

- Quantitative research-based study focusing on the use of AI tools by social science researchers in Moroccan universities.

- Focuses on measuring the extent, trends, and perceptions of AI tools usage in scientific research practices.
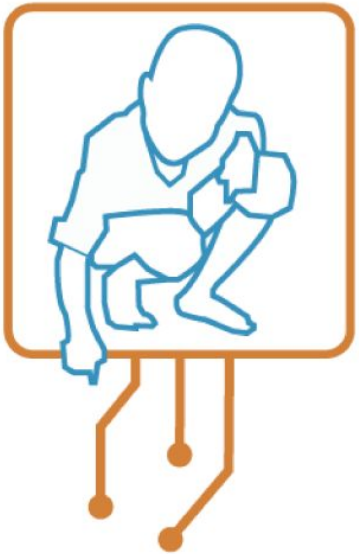
Purpose of The Study

- To monitor the extent of AI tool usage among social science researchers.

- To understand researchers' perceptions of AI tools in the production of scientific knowledge.

- To identify the ethical challenges linked to AI tools usage.

Target Sample

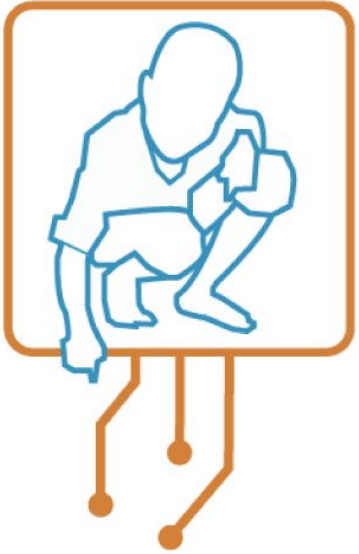- Social science researchers in Moroccan universities.

- Sample includes researchers at various stages of their academic careers (Master's, Doctoral, and Postdoctoral).

- Researchers from 14 disciplines, including:

Sociology, Psychology, History, Economics, Geography, Political Science, Law, Archaeology, Philosophy, Journalism & Media, Linguistics & Communication, Educational Sciences, Islamic Studies.

Research Gap

- Scarcity of specialized studies on social science researchers in the Moroccan context.

- Lack of focus on research practices in the post-digitalization era.

- Absence of a theoretical framework tracking the interaction between Moroccan researchers and modern technologies.

- Limited studies on the intersection of social sciences and AI within Morocco.

- The study provides an exploratory foundation for future, deeper investigations into AI's impact on research practices from a researcher's perspective.
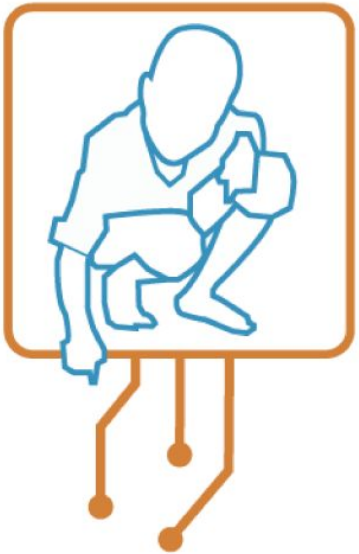
Data Collection Methodology

- Approach: Quantitative analysis with statistical methods.

- Study Instrument: Electronic survey.

- Number of Questions: 31 (Multiple-choice and open-ended).
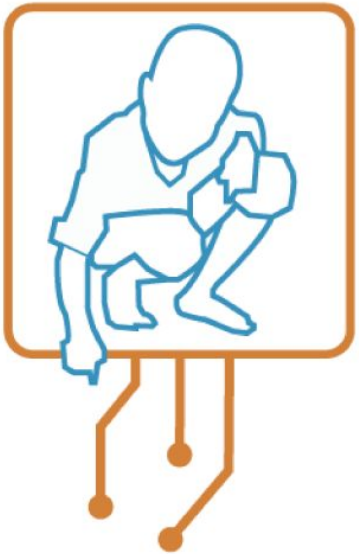
Methodological Limitations

- This study **does not** target a comprehensive representative sample.

- Focuses on **initial exploration** of the topic.

- Aims to provide a **deep understanding** of practices and perceptions, **rather than** a broad, generalizable study.
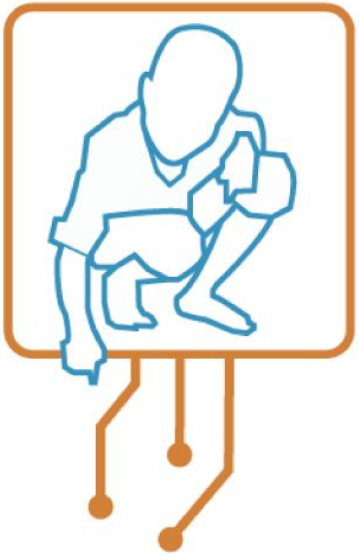
Main Objective of The Study

- To assess the extent and trends of AI tools usage by researchers.

- To uncover how researchers view the role of AI in generating scientific knowledge in the social sciences.

- To explore the ethical challenges linked to AI usage.
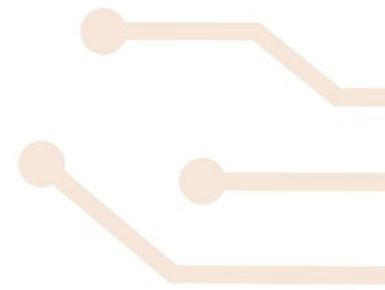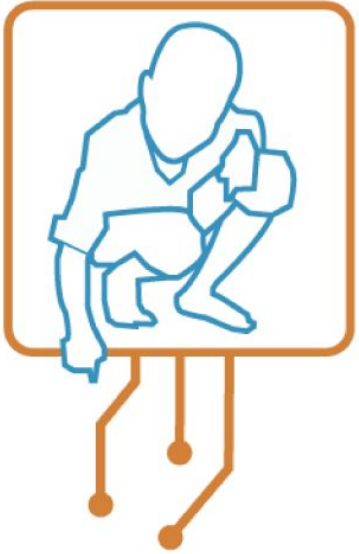
Focal Questions

- How do researchers perceive the use of AI tools in social science research?

- What impact do AI tools have on the accuracy of research results?

Main Hypothesis

Overuse and unethical application of AI tools may:

- Negatively affect the researcher's identity and intellectual autonomy.

- Diminish the quality of scientific research.

- Over-simplify complex social phenomena.
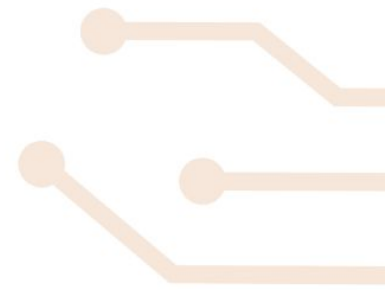
An analysis was conducted to explore the relationship between AI tools usage in researchers' daily lives and their research/academic activities.

- The study found a significant correlation between the two.

- **AI in Daily Life:** 73.3% of researchers use AI tools in various daily transactions.

- **AI in Research:** 74.4% of the same researchers apply AI tools in their research and academic work.

- The findings highlight a strong connection between the use of AI tools in everyday life and their application in academic and research tasks.

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Analysis of AI Use:

- Researchers show reluctance to adopt AI tools for research purposes, despite their widespread use in daily life.
- This suggests that AI has not yet been consistently integrated into research and academic work.

Lack of Specialized Training:

- Researchers in this study do not have specialized training in technical or technological fields.
- This lack of training could affect their full utilization of AI tools in both daily tasks and research.

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Self-Reported AI Expertise:

- Researchers reported levels of AI expertise, ranging from weak understanding to moderate familiarity.
- Only 17.8% of researchers had a strong understanding of AI techniques.

Need for Further Exploration:

- The findings highlight **the need for further research** into the factors that influence the adoption and integration of AI tools in research and academic settings

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Experience and AI Use:

- Experience significantly influences AI tools use.

- Researchers with less than 1 year of experience: 7.7% use AI.

- Researchers with 2-5 years of experience: 42.3% use AI.

- In other high experience levels, AI use decreases as experience increases.

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AI Tools Application in Research:

- AI tools are primarily used in early research stages: **data searching, article reading, text editing, and idea and content generating.**

- Use rates are high in these activities but **decline in more technical stages** like preparing presentations, enhancing style, and analyzing data.

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Impact of AI on Research Results:

- Researchers expressed concerns about AI's impact on accuracy, scientific integrity, cybersecurity, and the ease of producing knowledge.
- In Morocco, these concerns are likely to be exacerbated due to weak digital infrastructure and ineffective efforts to detect AI misuse.

Main Concerns:

- Loss of research control: 80% of responses.
- Intellectual property violations: 67%.
- Impact on researcher independence: 60%.
- Other concerns: misinformation, manipulation, and conflicts with integrity.

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Opinions on AI and Scientific Integrity:

- The research community has not yet reached a clear position on whether AI use in social science research violates scientific integrity or conflicts with ethical norms.

AI Replacing Researchers in Social Sciences:

- 80.2% of respondents believe AI cannot replace human researchers in social sciences due to the need for technical skills and human social interaction.
- 19.8% expressed uncertainty, likely due to rapid technological advancements and uncertainty about future developments.

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Effectiveness of AI Detection Apps:

- 63.4% of respondents believe AI detection apps are insufficient to prevent unethical use.
- 36.6% think these apps are adequate in minimizing unethical and dishonest AI usage.

Documentation of AI Usage in Research:

- 84.2% of researchers support documenting AI usage in research papers.
- 15.8% oppose AI documentation.
- These results raise concerns about ethics, scientific integrity, and plagiarism.
- AI tools can reproduce existing work with rephrased content, and failure to document usage may lead to ethical issues.
- The integration of AI in Morocco is inconsistent, and researchers with moderate AI understanding may not fully grasp these ethical concerns.

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Key Ethical Issues:

- Respecting authorship ethics.
- Maintaining scientific integrity.
- Protecting intellectual property rights.

Recommendations:

- Establish ethical controls for AI use.
- Train researchers on responsible AI usage.
- Develop clear standards for AI citation and documentation.

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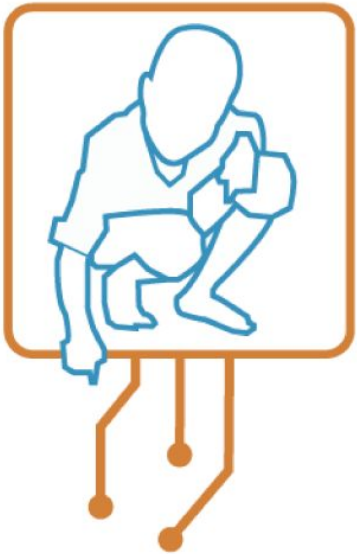
Conclusion

- AI tools use in scientific research, including social sciences, is growing but remains underdeveloped in Morocco, both logistically and pedagogically.

- There is a need to promote responsible and ethical AI use, especially at the master's and doctoral levels.

- Efforts should ensure effective, credible, and high-quality use of AI, while preserving ethical principles in social science research.
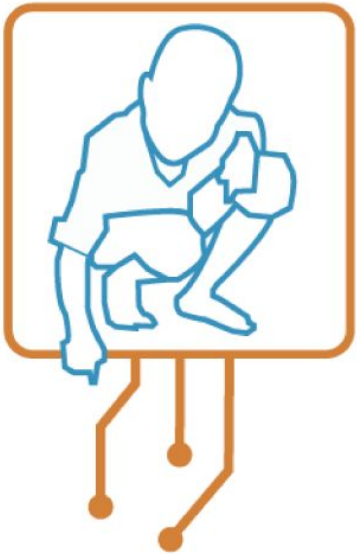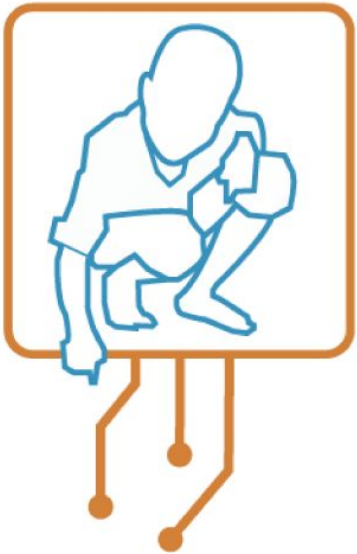
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Thank you

Khadija Boufous, Yassine Bouchouar