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Article / Book Information

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Title(English)	Interactions between patterns of social attention, funding, and emerging technologies: case study of robotics research
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Type(English)	Summary

論 文 要 旨

THESIS SUMMARY

専攻： Department of	INNOVATION　専攻	申請学位（専攻分野）：　博士　(Philosophy) Academic Degree Requested　Doctor of
学生氏名： Student's Name	MEJIA CABALLERO, CRISTIAN ANDRES	指導教員（主）： Academic Supervisor(main)　Kajikawa, Yuya
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要旨（英文 300 語程度）
Thesis Summary（approx.300 English Words ）

This thesis explores the underlying dynamics between social attention, funding, and emerging technologies in order to discover patterns that may improve funding allocation strategies when it comes to select emerging research trends.

It is argued that social expectations of technologies represented by levels of attention extracted from printed media may play a role in the configuration of emergent research topics. To discover if such relation exist data from academic publishing and news articles are used, and analyzed by applying methods grounded in network theory, artificial intelligence, and text mining. Objectives and research background and are discussed in the introductory Chapter 1.

The target of analysis is robotics research. Robotics is known for its social engagement and broad discussions in the media, and also for the greater interest of governments in funding robotics related technologies. Making it an exemplary case study. In chapter 2 it is identified the taxonomy of robotics, and research trends. This is done through a comprehensive bibliometric study of academic literature.

Even though bibliometrics help us to reveal the landscape of robotics, little can be inferred on how specific research clusters are connected to society as a whole. Chapter 3 takes steps in that direction. It is explored the interconnection of publishing patterns of academic articles in the previously identified clusters to actual levels of social expectations. News data is incorporated as representation of social opinion, from where levels of attention and sentiment polarity are observed. Peaks of inflated expectations in relation to robotics were revealed. Moreover, it was found how positive discussions in the media are reflected as an increase of publications for specific robotics topics in a posterior time.

In the interface of solving social issues and promoting academic research, lies funding. Public and private organizations reconfigure their funding allocation strategies in response to what they believe are the most pertinent topics to target. Chapter 4, develops a method to assess whether funding organizations target innovative research.

Finally, Chapter 5 brings together emergence, expectations, and funding. Parting from observations collected in the previous chapters it is attempted to stablish a theory of funding of emergent technologies based on social attention.　It is expected that the findings discussed in this research serve to identify technologies that timely bring solution to the social concerns at hand, and provide a reference for better funding allocation strategies.

備考：論文要旨は、和文 2000 字と英文 300 語を 1 部ずつ提出するか、もしくは英文 800 語を 1 部提出してください。

Note：Thesis Summary should be submitted in either a copy of　2000 Japanese Characters and 300 Words (English) or 1copy of 800 Words (English).

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