

# THE HOPE AND DESPAIR OF SCIENCE AND TDM

@CHARTGERINK

TILBURG UNIVERSITY, NLD

THE HOPE

DECREASED MORTALITY OF  
THE PATIENTS SIGNIFICANTLY,  
 $F(1, 39) = 2.43, P < .05$ .



DECREASED MORTALITY OF  
THE PATIENTS SIGNIFICANTLY,  
 $F(1, 39) = 2.43, P < .05.$



DECREASED MORTALITY OF  
THE PATIENTS SIGNIFICANTLY,

$$F(1, 39) = 2.43, P < .05.$$

USE THIS INFORMATION  
TO RECALCULATE  
P-VALUE



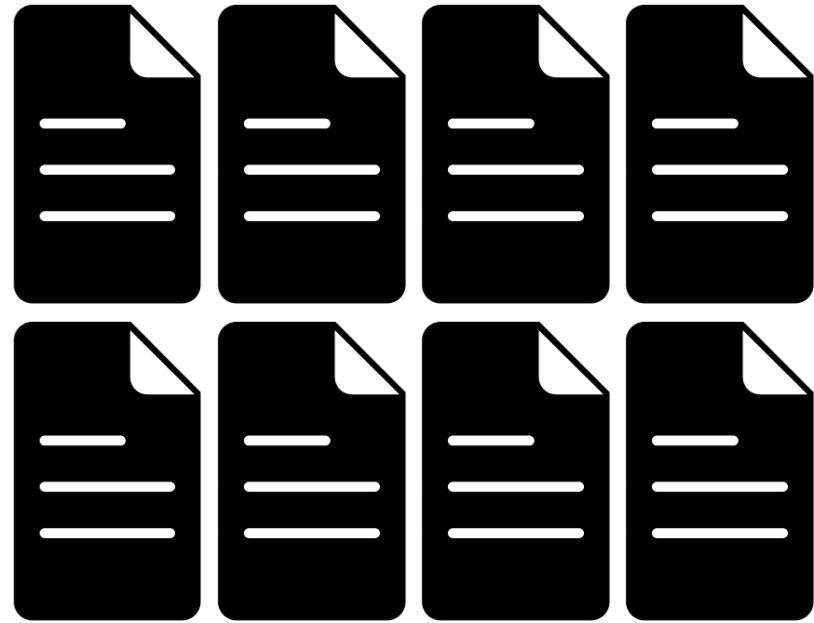
DECREASED MORTALITY OF  
THE PATIENTS SIGNIFICANTLY,

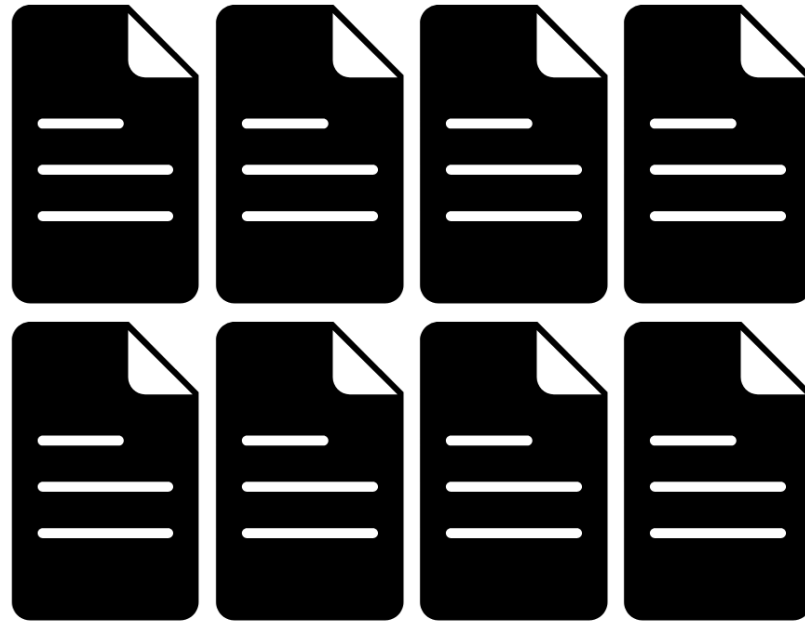
$$F(1, 39) = 2.43, P < .05.$$



USE THIS INFORMATION  
TO RECALCULATE  
P-VALUE

P-VALUE NOT  $< .05$   
BUT 0.13! → NO EFFECT  
WRONG CONCLUSION IN PAPER



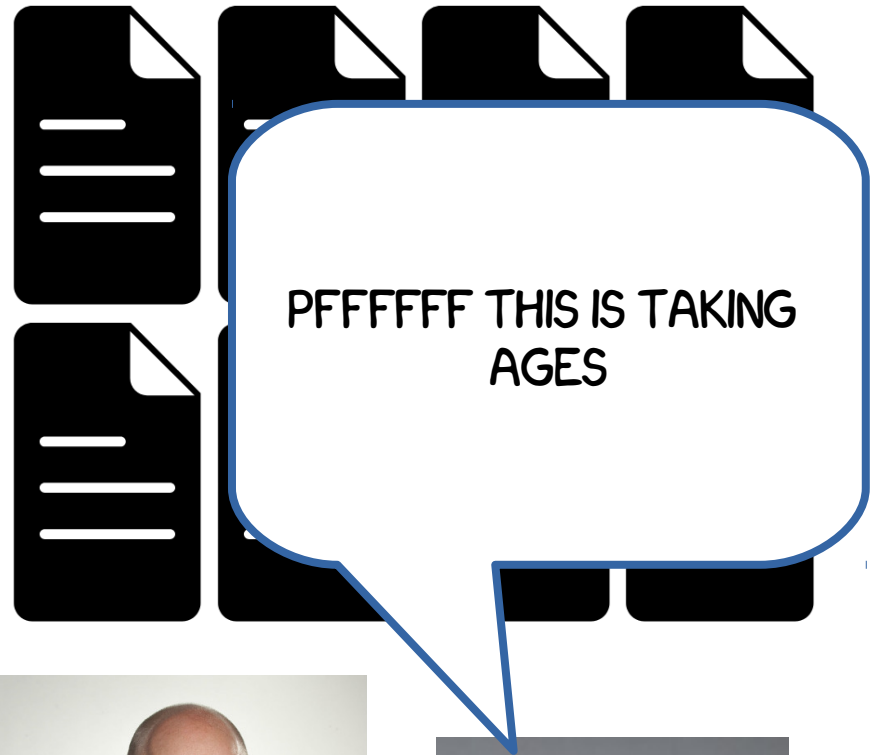




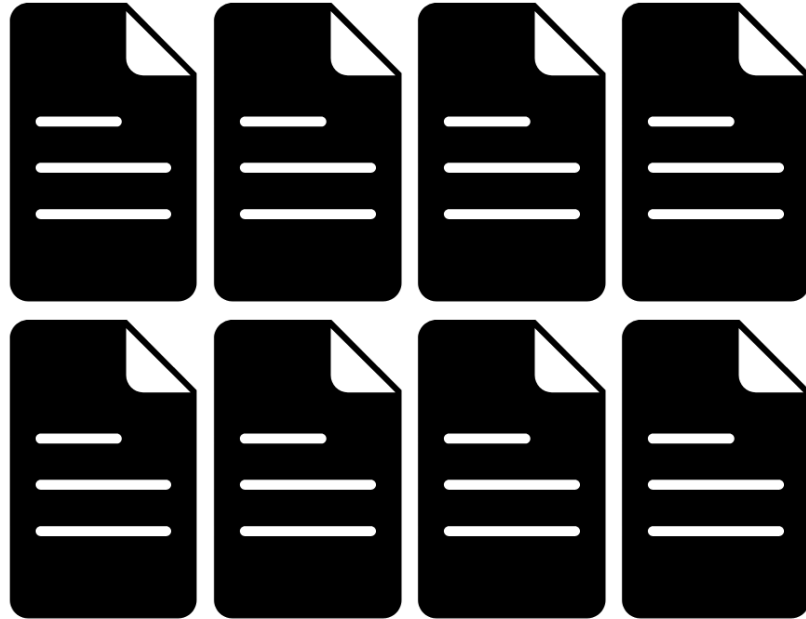
An illustration of a stack of papers. The top paper is white with a blue border and contains the text 'MARJAN, PLEASE CHECK ALL THESE PAPERS MANUALLY'. The papers below are black with white horizontal lines. A blue line points from the bottom of the speech bubble to the portrait of Marjan below.

MARJAN, PLEASE CHECK ALL  
THESE PAPERS MANUALLY

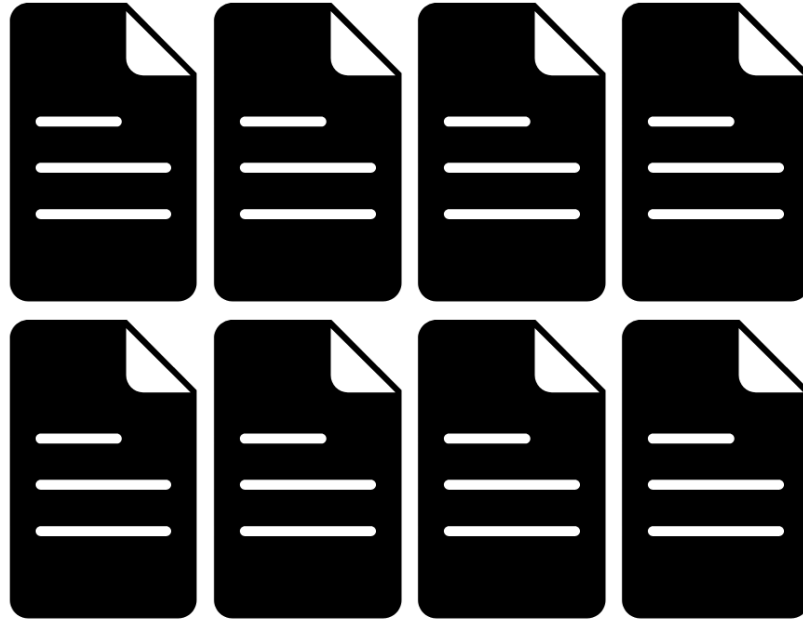




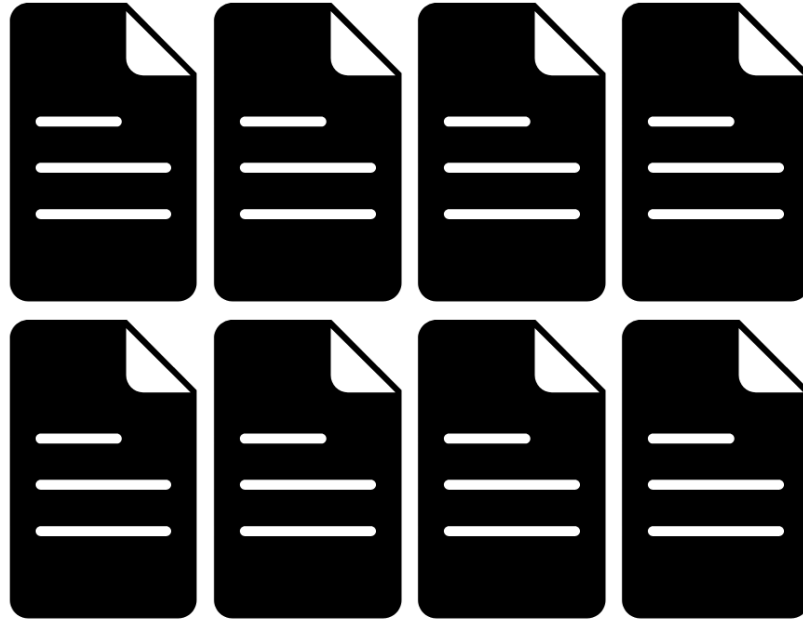
~2010



# 2012



# 2012



NOT TO WORRY! COMPUTERS CAN DO IT!





# 2013



# 2013



IT TAKES ONLY 10 SECONDS  
FOR 100 PAPERS!



# 2013

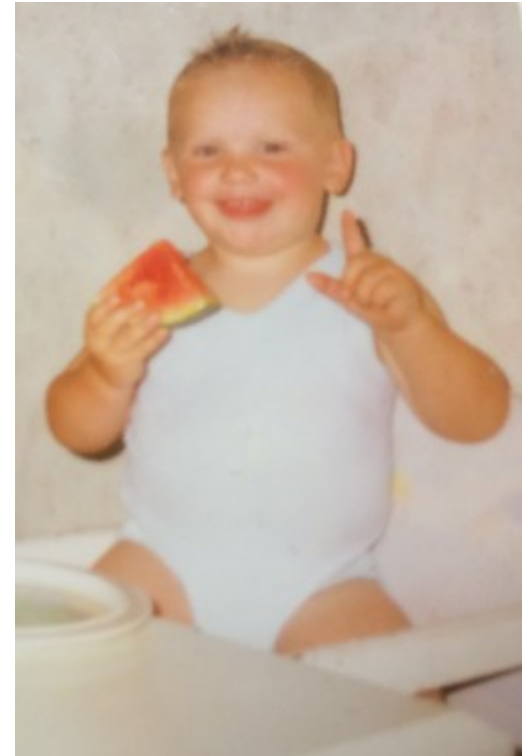


NOW WE JUST NEED MORE PAPERS!

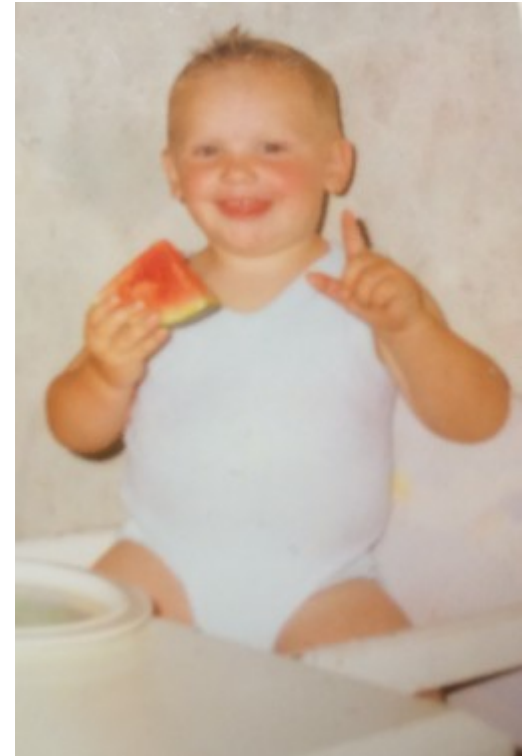




# 2013



# 2014



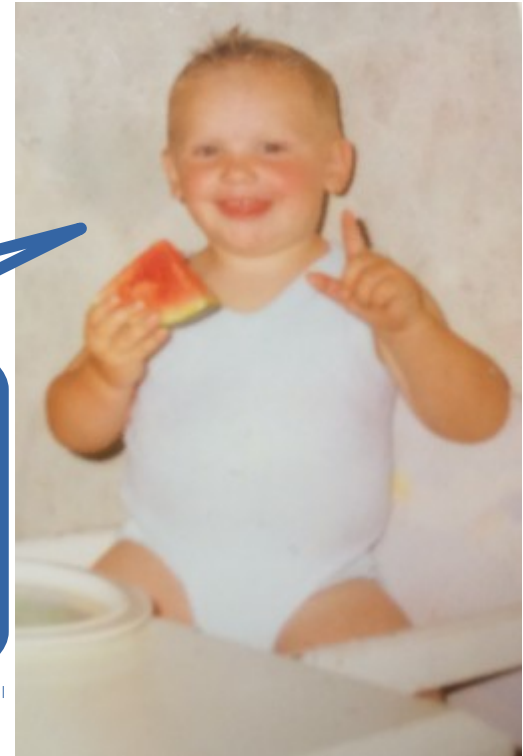
CHRIS, DOWNLOAD TENS OF THOUSAND  
PAPERS, MANUALLY



# 2014

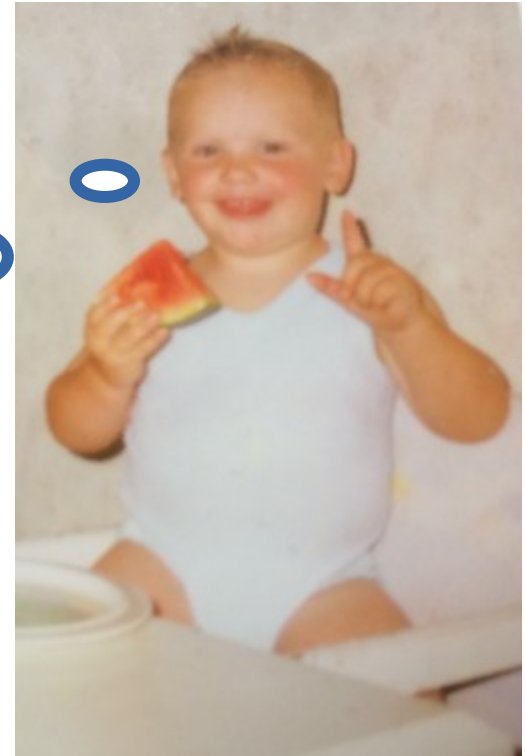


**\*CLICK CLICK DOWNLOAD\***  
**TIMES 30,000**



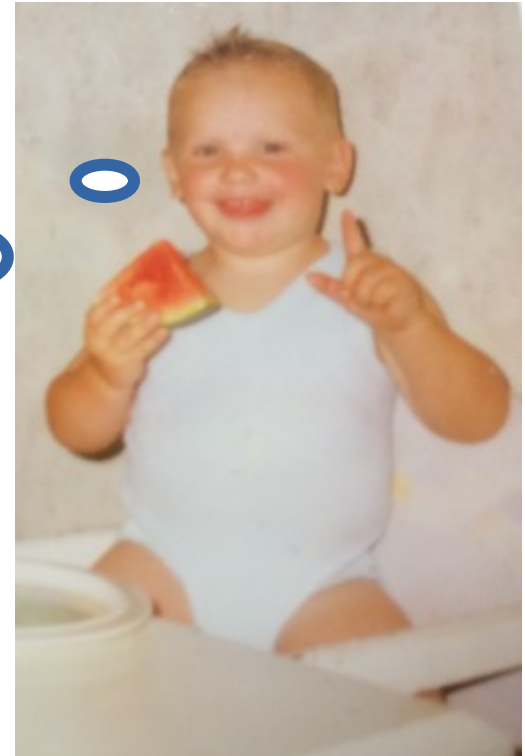
2014

THERE MUST BE AN EASIER WAY



# 2014

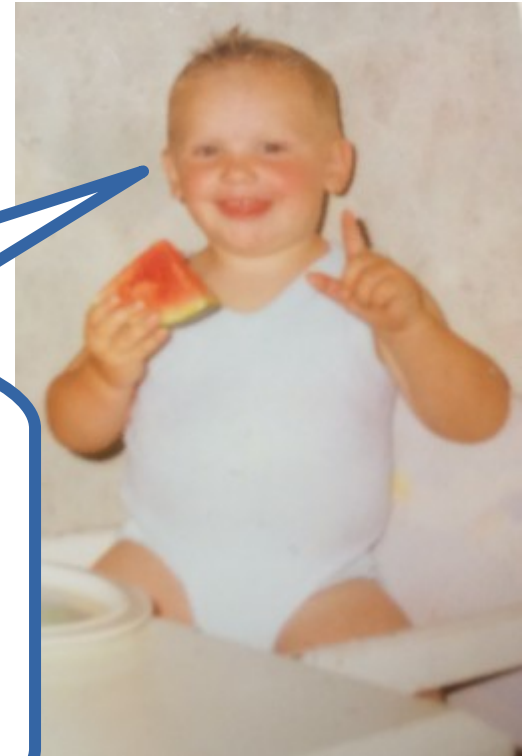
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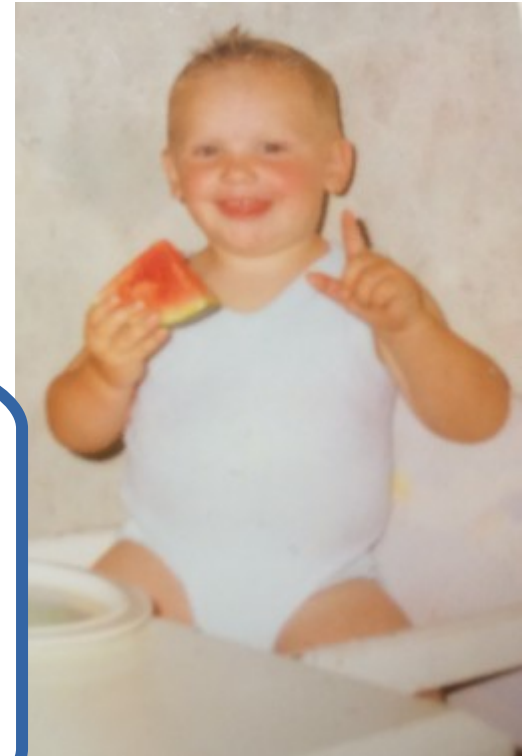
# 2015

JELTE, I LEARNED HOW TO SCRAPE ARTICLES  
AND AM READY TO DOWNLOAD 900,000  
ARTICLES FOR OUR RESEARCH



# 2015

THAT'S BEYOND A SCALE I EVER IMAGINED  
POSSIBLE!



THE DESPAIR



# Chris H.J. Hartgerink's Notebook

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HOME

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## Elsevier stopped me doing my research

[92 Replies](#)

 [0000-0003-1050-6809](#)

I am a statistician interested in detecting potentially problematic research such as data fabrication, which results in unreliable findings and can harm policy-making, confound funding decisions, and hampers research progress.

# Chris H.J. Hartgerink's Notebook

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HOME

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## Wiley also stopped me doing my research

[9 Replies](#)

 [0000-0003-1050-6809](#)

In November, I wrote about how [Elsevier wanted me to stop downloading](#) scientific articles for my research. Today, Wiley also ordered me to stop downloading.

900,000  
BECAME  
300,000

# UK HAS AN EXCEPTION SINCE 2014

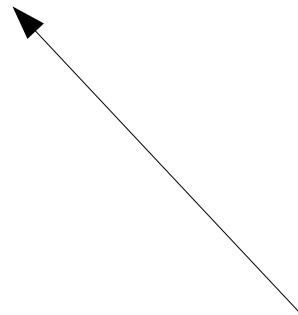
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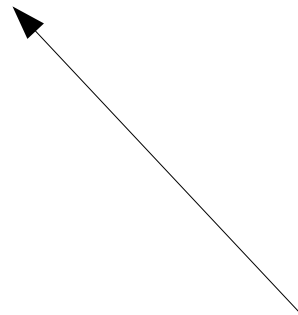


PROBLEM SOLVED?

# UK HAS AN EXCEPTION SINCE 2014

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  - (b) the copy is accompanied by a sufficient acknowledgement (unless this would be impossible for reasons of practicality or otherwise).



PROBLEM SOLVED?  
I TRIED UK COLLABORATION  
UK UNI SHUT US DOWN DESPITE EXCEPTION  
(MANAGEMENT ALSO AVOIDS IMAGINED RISKS)

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RETURN OF THE HOPE

(THE CONDITIONAL)  
RETURN OF THE HOPE



TDM NOT ONLY HAS  
RESEARCH POTENTIAL

TDM CAN CREATE THE  
MARKET FOR SERVICES ON  
INFORMATION CONSUMPTION

TDM CAN CREATE THE  
MARKET FOR SERVICES ON  
INFORMATION CONSUMPTION

BUT ONLY WITH WIDE EXCEPTION  
INCLUDING COMMERCIAL USE

REUSE OF UK  
PUBLIC SECTOR DATA ALONE HAS  
ESTIMATED MARKET CAP OF  
> HALF A BILLION EUROS

WIDE EXCEPTION FOR TDM ALLOWS  
EU TO BECOME HUB OF TDM  
INNOVATION AND ECONOMIC GROWTH

HOW MANY WAYS TO CAPITALIZE ON  
SELLING ACCESS TO INFORMATION?

HOW MANY WAYS TO CAPITALIZE ON  
HOW TO CONSUME THAT  
INFORMATION

IN LONG RUN ENCOURAGES POOLING  
OF RESOURCES INSTEAD OF  
CURRENT MONOPOLIES/ISLANDS  
CAUSES RICHER SERVICES

TDM NO PROBLEM IN OPEN ACCESS

GIVES US A GLIMPSE INTO THE  
FUTURE





# OPEN KNOWLEDGE MAPS

A visual interface to the world's scientific knowledge



BETA

## VISUALIZE A RESEARCH TOPIC

Choose a library:

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europaean commission

GO

Options



# OPEN KNOWLEDGE MAPS

A visual interface to the world's scientific knowledge

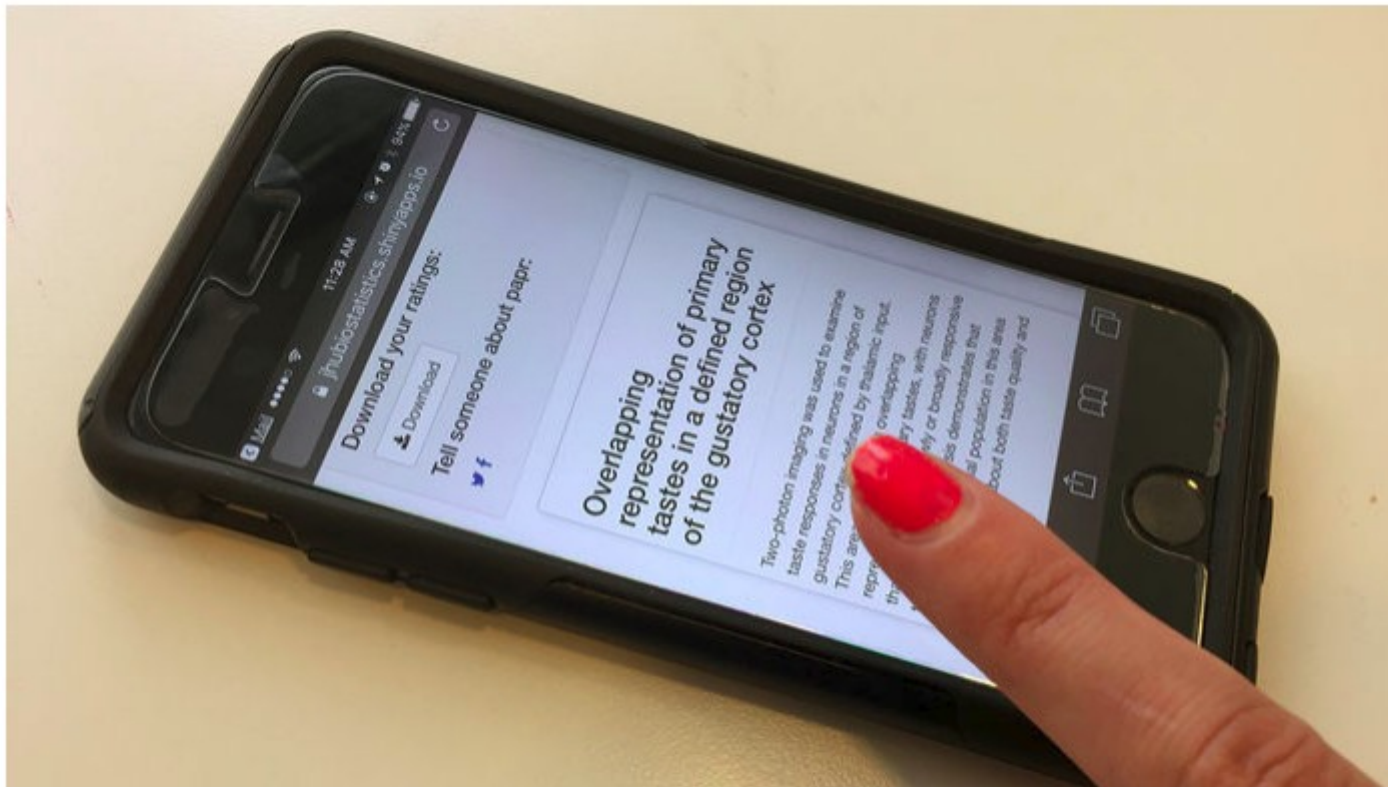
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Science/AAAS

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By **Dalmeet Singh Chawla** | Jun. 15, 2017, 5:00 PM

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Exciting and  
Questionable



Boring and Probable



Boring and  
Questionable

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## Inference of cell-cell interactions from population density characteristics and cell trajectories on static and growing domains

A key feature of cell migration is how cell movement is affected by cell-cell interactions. Furthermore, many cell migratory processes such as neural crest stem cell migration [1, 2] occur on growing domains or in the presence of a chemoattractant. Therefore, it is important to study interactions between migrating cells in the context of domain growth and directed motility. Here we compare discrete and continuum models describing the spatial and temporal evolution of a cell population for different types of cell-cell interactions on static and growing domains. We suggest that cell-cell interactions can be inferred from population density characteristics in the presence of motility bias, and these population density characteristics for different cell-cell interactions are conserved on both static and growing domains. We also study the expected displacement of a tagged cell, and show that different types of cell-cell interactions can give rise to cell trajectories with different characteristics. These characteristics are conserved in the presence of domain growth, however, they are diminished in the presence of motility bias. Our results are relevant for researchers who study the existence and role of cell-cell interactions in biological systems, so far as we suggest that different types of cell-cell interactions could be identified from cell density and trajectory data.

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