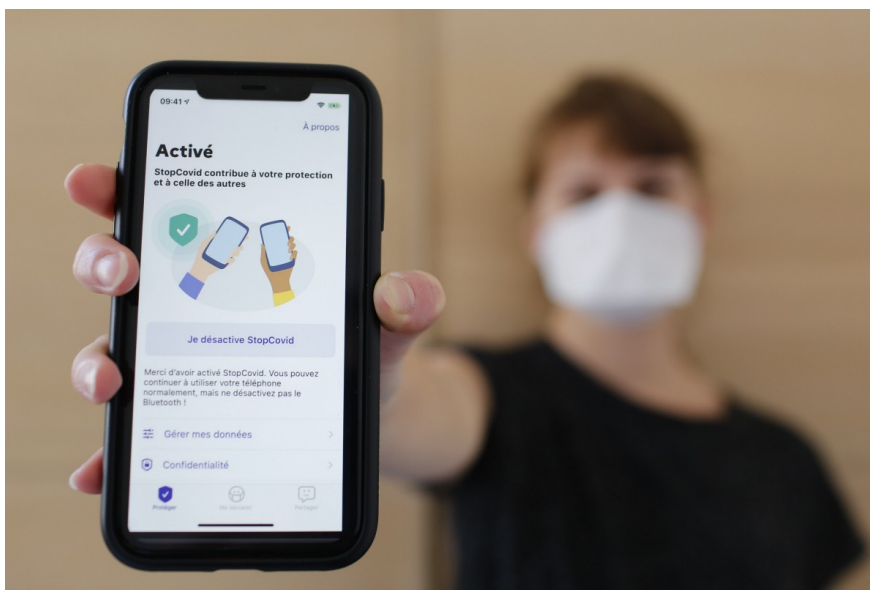


Covid-19 tracking apps and the behavioural battle between health and privacy

European countries continue to roll out Covid-19 tracking apps. It's argued that, if used effectively, they could slow down the spread of the coronavirus. But how ready are we to share our data for the benefit of public health? And how worried should we be about privacy? The tradeoff might not be so rational



Screenshot of the tracking application StopCovid developed by the French government

Would you be willing to install a corona tracking app? 53% of German smartphone users over 16 reported they would, some 28 million people. Now, eight weeks after the launch of the [Corona-Warn-App](#), 16.6 million Germans have downloaded it, a lot less than the number who said they would. So what can explain the apparent gap between people's intentions and behaviours?

What explains the gap between intentions and behaviours?

We see the same mismatch between intentions and actions when it comes to people's

privacy, both in the debate around Covid-19 apps and elsewhere. People generally consider their privacy to be important and worth protecting. However, when the benefits of information disclosure seem to outweigh the potential risks, many happily give up on our privacy concerns. This is also called the “[privacy paradox](#)”: we say we care about our personal data, but if there is an opportunity, we trade it for something that we think will benefit us.

We already share our location in return for navigation instructions, and let Spotify, for example, create playlists recommended just for the user. The tradeoff between privacy concerns and the benefits of sharing information is also a known phenomenon in the financial domain. We easily tell our bank how much we earn and have in savings for the best mortgage advice, but are hesitant to do so for simple money management tools. So what factors determine whether we also share our data with these tracing apps in return for a slowdown of the coronavirus?

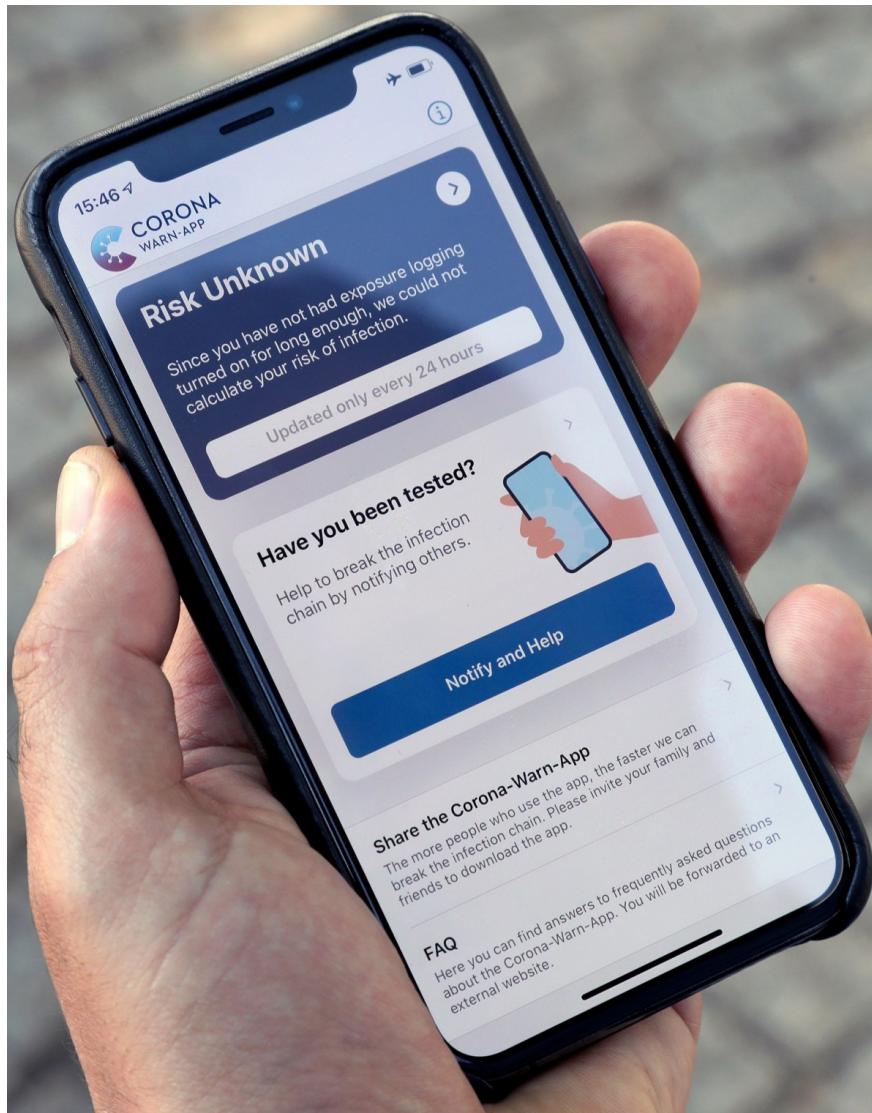
Before we look at the learnings from behavioural science and privacy dilemmas in other domains, we need to understand how a Covid-19 app actually works.

What data do we actually share?

Most of the coronavirus tracking apps being developed in Europe use Bluetooth to track and trace people with whom an infected person has been in closed contact. In contrast to common belief, and with the exception of [Norway's halted Smittestopp](#) app, they do not track people's location. The German Corona-Warn-App, for example, exchanges anonymised and randomly generated Bluetooth-ID numbers with nearby phones, a Bluetooth handshake if you will. Once a user reports symptoms or a positive test, the app sends notifications to phones they have been near.

A Bluetooth handshake

Many of these Bluetooth apps, however, are built onto a joint system from Google and Apple that allows the Bluetooth signals from Android and IOS to communicate with each other. If the app were to be actively used by enough people, it could reduce the coronavirus' reproduction number from three (during outbreaks) to below one. Sounds promising, doesn't it?



Germany's Corona-Warn-App

1 Engagement is key

For the apps to have an impact, people need to do more than just downloading it. Users need to turn on Bluetooth and take their phones everywhere they go. At the same time, they have to give consent for the exchange of data between their phones and those around them. Given that many people in Europe and Germany in particular, are [protective of their data](#), this step may already be more challenging than it sounds. People also need to actively and honestly report coronavirus-related symptoms or a positive test. And, perhaps most importantly, they must follow the instructions from the app to go into quarantine.

2 To share or not to share

When we look at the barriers and motivations for people to share, or not, their data, we know that at least three factors play an important role, regardless of the type of data concerned.

1. First, people need to trust the organisation that collects and monitors the data.
2. Second, the organisation collecting the data must be transparent about how the data is being handled and used.
3. Third, people need to feel they are in control of their data in order to feel comfortable

disclosing personal information.

It is important for people to know whether their data is in safe hands, but also who benefits from the information. Is it the companies with whom they have a primary relationship or third parties to which data is being sold? Or are the people sharing the data the main beneficiaries, for example, when receiving online healthcare advice based on reported symptoms?

Interestingly, the extent to which people understand how organisations handle their data is known to depend on how strongly data privacy is regulated in a country. In Belgium and Germany, [less than 20%](#) have a good comprehension of what companies do with their data, compared with more than 45% in China. Attitudes towards data sharing thus also depend on regional differences.

3 A behavioural science view

Even if all of the above criteria have been met, people find it difficult to weigh the potential risks of data sharing against the expected benefits for society. They are bound by cognitive limitations and rely on heuristics instead.

For example, individuals have difficulty [calculating](#) how valuable their data is, and therefore also the value of protecting it. Furthermore, people are subject to [immediate gratification bias](#). This means that they tend to value the present benefits of information disclosure more than the potential privacy risks in the future.

On top of that, the sooner people experience the present benefits (today rather than tomorrow), the more they perceive these benefits to be higher and risks to be lower. This is referred to as benefit immediacy. In other words, the sooner the benefit, the more we perceive the risk of data sharing to be worth it. Think of accepting cookies on a website; you can access the website immediately afterwards. Since the benefits of data sharing via the Covid-19 app are only visible after a while - when the spread of coronavirus slows down - the bias for immediate benefits could be an additional barrier for people to start using the app.

Doing it for them

Clearly, there are many factors which influence whether coronavirus apps will be adopted and whether we will give Bluetooth handshakes the benefit of the doubt. And with good reason, so long as we know little about what type of data is being collected, by whom, and how our privacy is protected.

The power of others

But if we are open to trying a new app, we may only need one more thing to change intentions into behaviour: the power of others. While we are used to weighing privacy risks against the benefits for ourselves (e.g., with financial apps), as far as coronavirus apps are concerned, the benefits lie in the health of the people around us – friends, family, neighbours, and so on. Emphasising the benefits for society, and the social norm to care about others could stimulate people to start using the app. After all, if there is one example that shows individuals are prepared to sacrifice a little bit of themselves for the health of others, let's remember the global lockdowns

and hope we can prevent more in the future.

Author

Alissa Lefebre

Economist

alissa.lefebvre@ing.com

Deepali Bhargava

Regional Head of Research, Asia-Pacific

Deepali.Bhargava@ing.com

Ruben Dewitte

Economist

+32495364780

ruben.dewitte@ing.com

Kinga Havasi

Economic research trainee

kinga.havasi@ing.com

Marten van Garderen

Consumer Economist, Netherlands

marten.van.garderen@ing.com

David Havrlant

Chief Economist, Czech Republic

420 770 321 486

david.havrlant@ing.com

Sander Burgers

Senior Economist, Dutch Housing

sander.burgers@ing.com

Lynn Song

Chief Economist, Greater China

lynn.song@asia.ing.com

Michiel Tukker

Senior European Rates Strategist

michiel.tukker@ing.com

Michal Rubaszek

Senior Economist, Poland

michal.rubaszek@ing.pl

This is a test author

Stefan Posea

Economist, Romania

tiberiu-stefan.posea@ing.com

Marine Leleux

Sector Strategist, Financials

marine.leleux2@ing.com

Jesse Norcross

Senior Sector Strategist, Real Estate

jesse.norcross@ing.com

Teise Stellema

Research Assistant, Energy Transition

teise.stellema@ing.com

Diederik Stadig

Sector Economist, TMT & Healthcare

diederik.stadig@ing.com

Diogo Gouveia

Sector Economist

diogo.duarte.vieira.de.gouveia@ing.com

Marine Leleux

Sector Strategist, Financials

marine.leleux2@ing.com

Ewa Manthey

Commodities Strategist

ewa.manthey@ing.com

ING Analysts

James Wilson

EM Sovereign Strategist

James.wilson@ing.com

Sophie Smith

Digital Editor

sophie.smith@ing.com

Frantisek Taborsky

EMEA FX & FI Strategist

frantisek.taborsky@ing.com

Adam Antoniak

Senior Economist, Poland
adam.antoniak@ing.pl

Min Joo Kang
Senior Economist, South Korea and Japan
min.joo.kang@asia.ing.com

Coco Zhang
ESG Research
coco.zhang@ing.com

Jan Frederik Slijkerman
Senior Sector Strategist, TMT
jan.frederik.slijkerman@ing.com

Katinka Jongkind
Senior Economist, Services and Leisure
Katinka.Jongkind@ing.com

Marina Le Blanc
Sector Strategist, Financials
Marina.Le.Blanc@ing.com

Samuel Abettan
Junior Economist
samuel.abettan@ing.com

Franziska Biehl
Economist, Germany
Franziska.Marie.Biehl@ing.de

Rebecca Byrne
Senior Editor and Supervisory Analyst
rebecca.byrne@ing.com

Mirjam Bani
Sector Economist, Commercial Real Estate & Public Sector (Netherlands)
mirjam.bani@ing.com

Timothy Rahill
Credit Strategist
timothy.rahill@ing.com

Leszek Kasek
Senior Economist, Poland
leszek.kasek@ing.pl

Oleksiy Soroka, CFA

Senior High Yield Credit Strategist
oleksiy.soroka@ing.com

Antoine Bouvet

Head of European Rates Strategy
antoine.bouvet@ing.com

Jeroen van den Broek

Global Head of Sector Research
jeroen.van.den.broek@ing.com

Edse Dantuma

Senior Sector Economist, Industry and Healthcare
edse.dantuma@ing.com

Francesco Pesole

FX Strategist
francesco.pesole@ing.com

Rico Luman

Senior Sector Economist, Transport and Logistics
Rico.Luman@ing.com

Jurjen Witteveen

Sector Economist
jurjen.witteveen@ing.com

Dmitry Dolgin

Chief Economist, CIS
dmitry.dolgin@ing.de

Nicholas Mapa

Senior Economist, Philippines
nicholas.antonio.mapa@asia.ing.com

Egor Fedorov

Senior Credit Analyst
egor.fedorov@ing.com

Sebastian Franke

Consumer Economist
sebastian.franke@ing.de

Gerben Hieminga

Senior Sector Economist, Energy
gerben.hieminga@ing.com

Nadège Tillier

Head of Corporates Sector Strategy
nadege.tillier@ing.com

Charlotte de Montpellier
Senior Economist, France and Switzerland
charlotte.de.montpellier@ing.com

Laura Straeter
Behavioural Scientist
+31(0)611172684
laura.Straeter@ing.com

Valentin Tataru
Chief Economist, Romania
valentin.tataru@ing.com

James Smith
Developed Markets Economist, UK
james.smith@ing.com

Suvi Platerink Kosonen
Senior Sector Strategist, Financials
suvi.platerink-kosonen@ing.com

Thijs Geijer
Senior Sector Economist, Food & Agri
thijs.geijer@ing.com

Maurice van Sante
Senior Economist Construction & Team Lead Sectors
maurice.van.sante@ing.com

Marcel Klok
Senior Economist, Netherlands
marcel.klok@ing.com

Piotr Poplawski
Senior Economist, Poland
piotr.poplawski@ing.pl

Paolo Pizzoli
Senior Economist, Italy, Greece
paolo.pizzoli@ing.com

Marieke Blom
Chief Economist and Global Head of Research
marieke.blom@ing.com

Raoul Leering

Senior Macro Economist

raoul.leering@ing.com

Maarten Leen

Head of Global IFRS9 ME Scenarios

maarten.leen@ing.com

Maureen Schuller

Head of Financials Sector Strategy

Maureen.Schuller@ing.com

Warren Patterson

Head of Commodities Strategy

Warren.Patterson@asia.ing.com

Rafal Benecki

Chief Economist, Poland

rafal.benecki@ing.pl

Philippe Ledent

Senior Economist, Belgium, Luxembourg

philippe.ledent@ing.com

Peter Virovacz

Senior Economist, Hungary

peter.virovacz@ing.com

Inga Fechner

Senior Economist, Germany, Global Trade

inga.fechner@ing.de

Dimitry Fleming

Senior Data Analyst, Netherlands

Dimitry.Fleming@ing.com

Ciprian Dascalu

Chief Economist, Romania

+40 31 406 8990

ciprian.dascalu@ing.com

Muhammet Mercan

Chief Economist, Turkey

muhammet.mercan@ingbank.com.tr

Iris Pang

Chief Economist, Greater China

iris.pang@asia.ing.com

Sophie Freeman

Writer, Group Research
+44 20 7767 6209

Sophie.Freeman@uk.ing.com

Padhraic Garvey, CFA

Regional Head of Research, Americas

padhraic.garvey@ing.com

James Knightley

Chief International Economist, US

james.knightley@ing.com

Tim Condon

Asia Chief Economist

+65 6232-6020

Martin van Vliet

Senior Interest Rate Strategist

+31 20 563 8801

martin.van.vliet@ing.com

Robert Carnell

Regional Head of Research, Asia-Pacific

robert.carnell@asia.ing.com

Karol Pogorzelski

Senior Economist, Poland

Karol.Pogorzelski@ing.pl

Carsten Brzeski

Global Head of Macro

carsten.brzeski@ing.de

Viraj Patel

Foreign Exchange Strategist

+44 20 7767 6405

viraj.patel@ing.com

Owen Thomas

Global Head of Editorial Content

+44 (0) 207 767 5331

owen.thomas@ing.com

Bert Colijn

Chief Economist, Netherlands

bert.colijn@ing.com

Peter Vanden Houte

Chief Economist, Belgium, Luxembourg, Eurozone

peter.vandenhoute@ing.com

Benjamin Schroeder

Senior Rates Strategist

benjamin.schroeder@ing.com

Chris Turner

Global Head of Markets and Regional Head of Research for UK & CEE

chris.turner@ing.com

Gustavo Rangel

Chief Economist, LATAM

+1 646 424 6464

gustavo.rangel@ing.com

Carlo Cocuzzo

Economist, Digital Finance

+44 20 7767 5306

carlo.cocuzzo@ing.com