February, 2020

ARTIFICIAL INTELLIGENCE IN ONLINE ENVIRONMENTS

Representative Survey of Public Attitudes in Germany

Anastasia Kozyreva*, Stefan Herzog*, Philipp Lorenz-Spreen, Ralph Hertwig, & Stephan Lewandowsky

Study information

Authors

Anastasia Kozyreva*[1], Stefan Herzog*[1], Philipp Lorenz-Spreen[1], Ralph Hertwig[1], & Stephan Lewandowsky[2]

[1]Center for Adaptive Rationality, Max Planck Institute for Human Development

[2]School of Psychological Science, University of Bristol

*First two authors contributed to the study and the survey report equally

Contact

English: Anastasia Kozyreva, E-mail: Kozyreva@mpib-berlin.mpg.de

German: Stefan Herzog, E-Mail: Herzog@mpib-berlin.mpg.de

Contents

Executive summary

Ben dislikes violent movies. Should his Internet movie provider suggest Chainsaw Massacre to him anyway? Anna likes to share stories on current events with her friends. Should her social media feed provide her with exciting stories that are untrue but that fit her political views?

People's experience on the Internet is shaped by machine-learning algorithms and other types of artificial intelligence (AI). These self-learning programs include a variety of algorithmic tools that analyze people's personal data in order to filter and mediate information online (e.g., customized social media feeds, targeted advertising, personalized recommender systems, algorithmic filtering in search engines). AI-assisted information architectures autonomously shape people's decision environments, often without their awareness: Intelligent recommender systems help people find movies or restaurants they will like, and search engines efficiently provide important financial or health-related information. But these algorithmic tools also open the door to manipulation and subterfuge. Manipulative choice architectures and "microtargeted" political messages, that use personal characteristics extracted from digital fingerprints, can exploit people's vulnerabilities without their knowledge, and without public scrutiny.

Despite the prevalence of these technologies on the Internet, it is unclear how aware people are of the impact algorithms have on their digital surroundings. Moreover, as yet there has been little democratic scrutiny of or public involvement in actively controlling the design of algorithms and the collection of personal data used for personalization. To date, most aspects of algorithms and the harvesting of personal data lie in the hands of software giants. Little is known about which aspects of personalization people find ethically acceptable and which they find unacceptable. We aimed to fill this gap with a survey of public awareness and attitudes about AI technologies in online environments.

We focused on four main aspects of public knowledge and attitudes: (1) People's general awareness of AI and personalization algorithms and their prevalence on the Internet, (2) people's attitudes towards algorithmic personalization and its areas of application, (3) people's attitudes towards the use of personal data and how they protect their own personal information, and (4) the impact of political leanings on attitudes towards personalization and data privacy. Dalia Research conducted the survey for the Max Planck Institute of Human Development between 13 and 27 September 2019. The representative sample of N=1,065 participants was drawn in Germany, taking into account current population distributions with regard to age (18–65 years), gender, and education. The survey was conducted online in German.

Main findings

Public awareness of the use of AI technologies online is relatively high: The German public is familiar with terms such as *artificial intelligence* (86%) and *targeted/personalized advertising* (70%). Fewer people have heard of *computer algorithms* (58%), and terms that are more technical and appear less often in the media, such as *machine learning* (42%) or *recommender systems* (34%), are even less known. People are, to some extent, aware of AI applications online, especially smart assistants (70%), results ranking by search engines (59%), and advertisement on social media (57%). Most people can identify environments that feature little or no personalization (e.g., Wikipedia).

Executive summary

Attitudes towards personalization are domain-dependent: Most people find personalization of political advertising and news sources unacceptable. For instance, 61% oppose customized political campaigning and 57% object to personalized news feeds on social media. At the same time, a majority approves of personalized entertainment (77%), shopping (78%), and search results (63%).

Discrepancy in personalization attitudes: People find personalized services (e.g., customized search, commercial advertising, or entertainment recommendations) more acceptable than the use of personal information and data (e.g., personal interests or location history) that is currently required for such personalization. A majority of respondents find the collection and use of many types of their personal information unacceptable, objecting to personalization based on sensitive information (e.g., religious or political views, personal events, personal communications).

High levels of concern about data privacy are not reflected in behavior: Levels of concern about privacy in Germany are very high, with 82% of respondents claiming that they are very or somewhat concerned about their data privacy. At the same time, significantly fewer respondents take steps to protect their privacy online: Just 37% adjust privacy and ad settings on online platforms, and a full 20% do not use any privacy-enhancing tools.

No political polarization in attitudes towards personalization and privacy: People across the political spectrum agree about which customized services are acceptable and which are not. People with different political leanings are also equally opposed to the collection and use of sensitive information and have similar levels of concern about data privacy.

The public perceives clear ethical boundaries in the use of algorithmic personalization online. Although people are willing to accept some personalized services (e.g., shopping and entertainement), they object to the use of personal data and sensitive information that is currently required for such personalization. They consistently oppose advertising that is customized based on this sensitive information. Public opinion is also against personalization in political campaigning, news sources, and social media feeds—which is one of the currently more heavily personalized environments online. These attitudes are not affected by political preferences; people across the political spectrum are equally concerned about their data privacy and the effects of personalization on news and politics. Yet despite high privacy concerns, the current information landscape does not provide people with simple tools to keep their data safe and make more consistent privacy behavior possible.

Highlights

AI ONLINE.GERMANY

Respondents in Germany...

86% know more or less what the term Artificial Intelligence (AI) means

57% are aware that AI is used for advertising on social media

AWARENESS OF ALGORITHMS ONLINE

The German public is mostly familiar with AI-related terminology and algorithmic appplications online.

77% accept personalized entertainment services

ATTITUDES TOWARDS PERSONALIZATION

Most people oppose personalized political advertising and news, but accept personalized entertainment, shopping, and online searches.

71% say the use of political views for personalization is unacceptable

61% say personalized political advertising is unacceptable

82% are concened about their data privacy

45% adjusted their privacy settings on Facebook within the last year

20% have not used any privacy tools within the last year

DATA PRIVACY

People in Germany are highly concerned about data privacy, yet take little action to ensure their data is private.

NO POLITICAL POLARIZATION

People across the political spectrum agree on the acceptability of online personalization and have similar levels of concern about data privacy.

left	center	right
70%	**69%**	**68%**
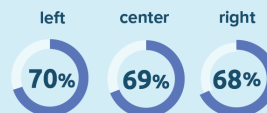
find the use of personal information for personalization unacceptable

Methodology

Survey design and data collection

Dalia Research conducted the survey on behalf of the Max Planck Institute for Human Development between 13 September and 27 September 2019. The representative sample of N=1,065 respondents was drawn in Germany, using quota sampling to account for current population distributions with regard to age (18–65 years), gender, and education.

The survey was conducted online in German. It included 4 prequalification demographic questions (age, gender, education, urban/rural), 36 survey questions, 1 postqualification question to check consistency (age), and 1 open comment question (for the survey questionnaire in English and German, see Appendix). Average interview length was 8.8 minutes (median length: 5.6 minutes). All results reported are weighted by survey weights provided by Dalia. Due to rounding, percentage values do not always add up to 100%.

The Ethics Committee of the Max Planck Institute for Human Development approved the study.

Survey questions covered three topics: (1) AI and personalization algorithms on the Internet, (2) attitudes towards algorithmic personalization, and (3) attitudes and behavior regarding online privacy. At the end of the survey we also asked about people's political leanings (on a scale from 1 [left-wing] to 7 [right-wing]) in order to check whether political orientation impacts people's attitudes towards personalization and privacy. In a preliminary question about what online services respondents use (including social media, e-commerce, and Google accounts), only 1% of the sample selected "none of the above."

Example of a survey question

For the purpose of this survey, whenever we speak of "artificial intelligence (AI) technologies" we mean self-learning computer programs ("machine learning") that analyze people's personal data in order to customize their online experience.

In which of the following situations do you think AI technologies are commonly used?
Select all that apply

- [ ] Recommendations in webshops
- [ ] Curation of news feeds on social media
- [ ] Ranking of results on search engines
- [ ] Recommendations on video streaming sites
- [ ] Answers given by smart assistants (e.g., Siri, Alexa, ...)
- [ ] Advertising on social media
- [ ] Suggestions of potential partners on dating platforms
- [ ] Content of Wikipedia articles
- [ ] Websites of local restaurants
- [ ] None of the above

← **Next**

Sample

Demographics and political leanings

Demographic information and political attitudes, Germany, N=1,065

Use of services

% respondents who use the service
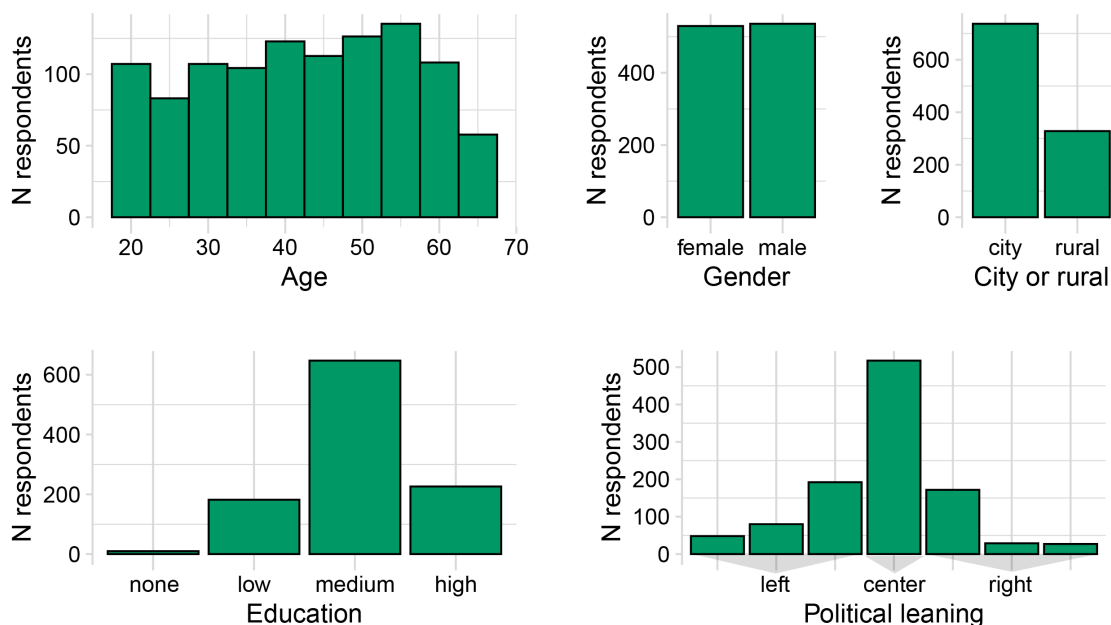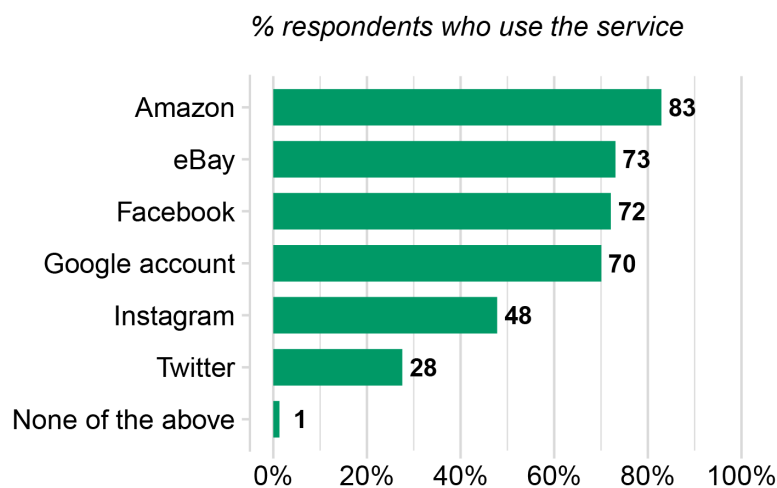
Results

Part 1: Awareness of AI technologies online

Familiarity with terms

% respondents indicating that they know more or less what the term means

Artificial intelligence	86
Targeted/personalised advertising	70
Computer algorithms	58
Machine learning	42
Recommender systems	34
None of the above	7

% respondents who are familiar with N of the five terms

N	%
0	7
1	12
2	18
3	27
4	18
5	18
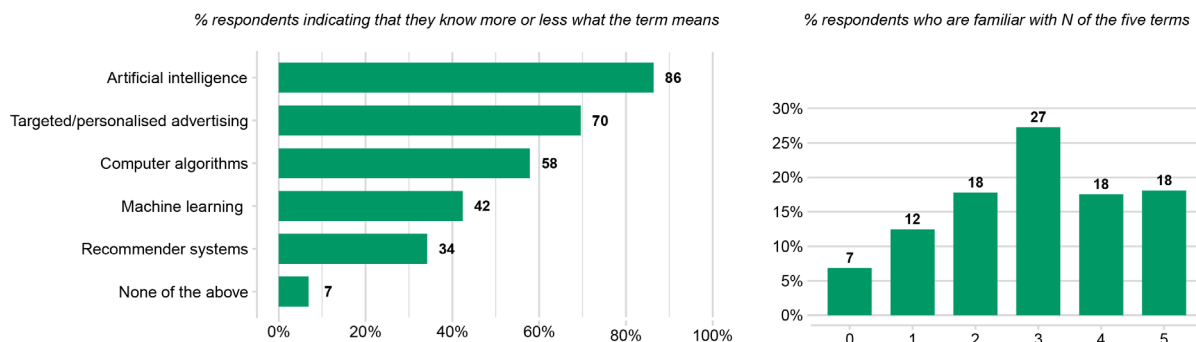
High awareness of terminology

In Germany, public awareness of AI-related terminology is relatively high, 86% of participants are familiar with the term *artificial intelligence* and 70% are familiar with the term *targeted/personalized advertising.* 58% of participants are familiar with the term *computer algorithms*, but only 34% are familiar with the term *recommender systems*. Most people are familiar with at least one term. Only 7% say they are not familiar with any of the terms.

Awareness of the use of AI technology online

We asked people whether they think that AI technologies are used in a variety of situations, such as in news feeds, advertising on social media, or product recommendations in online shops. We also included two control items (content of Wikipedia articles and website of a local restaurant) where we assumed that AI technologies are rarely to never used to customize the environment. For the purposes of the survey, we defined "artificial intelligence (AI) technologies" as self-learning computer programs ("machine learning") that analyze people's personal data in order to customize their online experience.

Results show that people are aware of AI applications online, especially in smart assistants (70%), ranking of results by search engines (59%), advertising on social media (57%), and product recommendations in online shops (55%). They are less aware of AI involved in partner recommendations on dating websites (38%), recommendations on video streaming platforms (43%), or curation of news feeds on social media (44%). Most people can identify environments that feature little or no personalization (e.g., Wikipedia).

AI technology is used

% respondents indicating that AI is used for / in

Smart assistants (e.g., Siri, Alexa)	70
Ranking of results on search engines	59
Advertisement on social media	57
Recommendations in webshops	55
Curation of news feeds on social media	44
Recommendations on video streaming sites	43
Suggestions for potential partners on dating platforms	38
Content of Wikipedia articles	14
Website of a local restaurant	11
None of the above	6

Results

Part 2.1: Attitudes towards personalization

Acceptability of personalizing a service
% respondents per acceptability level

Category	not acceptable at all	not very acceptable	somewhat acceptable	very acceptable
Personalized messages from political campaigns	27	34	30	9
Customized posts in social media feeds	22	35	32	11
Customized front pages of online newspapers	21	30	36	12
Personalized advertising for commercial products and services	19	30	41	11
Recommendations for people to follow/add on social media	18	25	41	15
Customized search results in search engines	16	20	41	22
Recommendations for movies or music	9	14	47	30
Recommendations for events	9	13	48	30
Recommendations for restaurants and shops	8	15	51	27

Acceptability of using information for personalization
% respondents per acceptability level

Category	not acceptable at all	not very acceptable	somewhat acceptable	very acceptable
Personal tragedies (e.g., death in the family, divorce)	58	25	12	5
Household income	50	27	17	6
Sexual orientation	44	27	20	9
Religious views	44	29	20	8
Political views	42	29	21	8
Personal events (e.g., pregnancy, marriage)	39	29	24	8
Personality (e.g., outgoing, cautious)	30	32	30	8
Ethnicity	27	34	29	10
Relationship/marital status	27	34	28	11
Age	19	22	44	15
Gender	16	20	43	21

Acceptability of collecting and using data
% respondents per acceptability level

Category	not acceptable at all	not very acceptable	somewhat acceptable	very acceptable
Content of e-mails and online messages	69	15	10	5
Interaction with people online (with whom and how often)	50	27	16	6
Location history	41	28	24	8
Browsing and search history	36	27	29	8
Typing and scrolling behavior	33	30	30	8
Likes and shares on social media	29	28	35	9
Videos watched	29	27	35	9
Purchasing history	28	28	35	9

Legend: not acceptable at all · not very acceptable · somewhat acceptable · very acceptable

Domain-dependent attitudes towards personalization

Respondents consistently find it acceptable to collect and use people's personal data and information about their online activities in order to personalize entertainment and leisure services, including recommending movies and music (77%), events (78%), and shops and restaurants (78%). Respondents oppose personalization in news and political campaigning. 61% are against personalized political advertising, 57% are against customized social media news feeds, and 51% are against customized online newspapers. 63% find customized search (e.g., in Google) somewhat or very acceptable.

Use of personal data and information

There is widespread opposition to the use of sensitive personal data and information for personalized advertising. While age and gender information are mostly considered fair game (59% and 64%, respectively), most people oppose the use of all other types of personal information, including personal tragedies (83%), household income (77%), religious views (73%), political views (71%), and sexual orientation (71%). Personality traits such as extraversion or cautiousness are also seen as unacceptable (62%). Similarly, most respondents object to the collection and use of all types of data that companies might collect about them on their platforms—in particular information about personal communications.
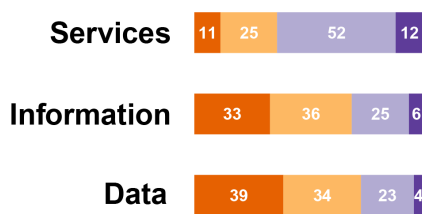
Most people oppose personalized political advertising and news, but accept personalized entertainment, shopping, and online searches. At the same time, people do not want their sensitive personal data and information to be collected and used.

Results

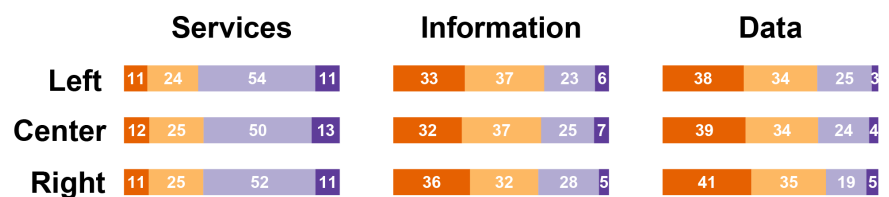## Part 2.2: Overall attitudes to personalization

Acceptability of personalizing services vs. using information and data to do so

% respondents per overall acceptability level

|	not acceptable at all	not very acceptable	somewhat acceptable	very acceptable
Services	11	25	52	12
Information	33	36	25	6
Data	39	34	23	4

Acceptability of personalizing services vs. using information and data to do so by political leaning

% respondents per overall acceptability level

	Services				**Information**				**Data**			
Left	11	24	54	11	33	37	23	6	38	34	25	3
Center	12	25	50	13	32	37	25	7	39	34	24	4
Right	11	25	52	11	36	32	28	5	41	35	19	5

The overall acceptability level of a respondent is calculated as the median acceptability rating across questions.

not acceptable at all **not very acceptable** **somewhat acceptable** **very acceptable**
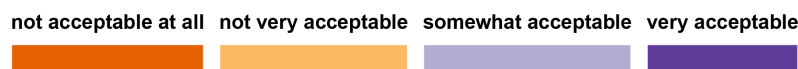
The overall acceptability level of a respondent is their median acceptability rating across questions. For example, respondents who chose "not acceptable at all" for at least half of the questions were deemed to have an overall acceptance level of "not acceptable at all."

Discrepancy in personalization attitudes

People find personalized services such as customized search, commercial advertising, or entertainment recommendations more acceptable than the use of personal information and data (e.g., personal interests or location history) that is currently required to provide such personalization.

Acceptability of services is similar across the political spectrum

People across the political spectrum agree about which customized services are acceptable and which are not. They also equally oppose the collection and use of sensitive information and have similar levels of concern about data privacy.

In Germany, data privacy and opposition to personalized political advertising are not partisan issues.

Results

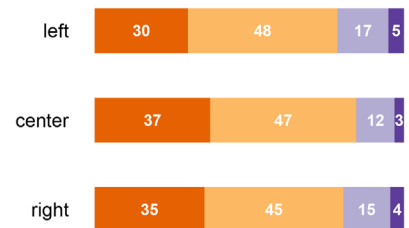## Part 3: Privacy attitudes and behavior

High concern about data privacy

82% are either very or somewhat concerned about their data privacy on the Internet. Only 4% are not at all concerned. There is no political polarization on concerns about privacy online.
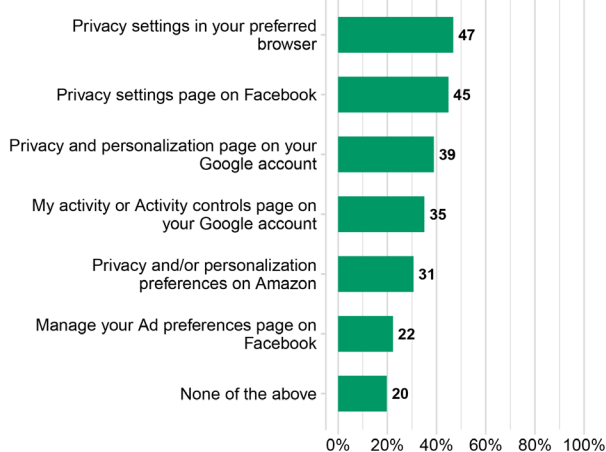
Privacy concern
% respondents who are ...

| 35 | 47 | 14 | 4 |

- ■ very concerned
- ■ somewhat concerned
- ■ not very concerned
- ■ not concerned at all
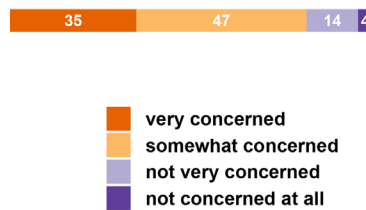
Privacy concern by political leaning
% respondents who are ...

left	30	48	17	5
center	37	47	12	3
right	35	45	15	4

Privacy settings
% respondents indicating that they engaged with the setting within the last year

Privacy settings in your preferred browser	47
Privacy settings page on Facebook	45
Privacy and personalization page on your Google account	39
My activity or Activity controls page on your Google account	35
Privacy and/or personalization preferences on Amazon	31
Manage your Ad preferences page on Facebook	22
None of the above	20

0% 20% 40% 60% 80% 100%

Privacy tools
% respondents indicating that they used the privacy tool within the last year

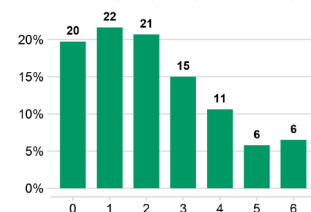|	
Software that protects you from seeing online advertising (e.g., ad blockers)	38
Adjusting privacy and ad settings on online platforms	37
Incognito mode in your browser	33
Software that prevents your online activities from being monitored (e.g., VPN)	26
Deliberately avoiding certain websites sites and platforms (e.g. Google, Facebook)	25
None of the above	20
Search engines that protect your privacy (e.g., DuckDuckGo)	16

0% 20% 40% 60% 80% 100%

Privacy-enabling behavior is uncommon

In contrast to the high levels of concern about data privacy, the majority of people do little to protect their privacy. Some of the more popular measures are changing privacy settings on Facebook (45%) and in web browsers (47%) and using ad blockers (38%). A full 20% of respondents do not use any privacy-protecting tools or settings, and 12% do not use either (number not shown in the figure).
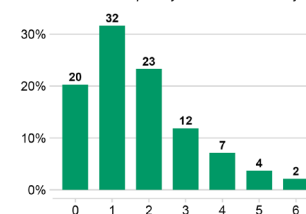
Privacy paradox and the need for simple privacy measures

There are several potential reasons for the discrepancy between what people say about online privacy and what they actually do (known as the privacy paradox): e.g., a lack of transparency and understanding surrounding how online platforms collect and use people's data; platform design that makes privacy-friendly options deliberately complex; and a dearth of simple, universal privacy settings and tools.

Privacy settings
% respondents indicating that they have engaged with ... of the six privacy settings within the last year

0	1	2	3	4	5	6
20	22	21	15	11	6	6

Privacy tools
% respondents indicating that they have used ... of the six privacy tools within the last year

0	1	2	3	4	5	6
20	32	23	12	7	4	2

Appendix

Study questionnaire

English version

1. Which of the following terms are you familiar with (that is, you know more or less what they mean)?
Select all that apply
- Artificial intelligence
- Computer algorithms
- Machine learning
- Recommender systems
- Targeted/personalized advertising
- None of the above

2. Which of the following applications have you used within the past year?
Select all that apply
- Facebook
- Twitter
- Instagram
- Google account
- Amazon
- eBay
- None of the above

For the purpose of this survey, whenever we speak of "artificial intelligence (AI) technologies" we mean self-learning computer programs ("machine learning") that analyze people's personal data in order to customize their online experience.

3. In which of the following situations do you think AI technologies are commonly used?
Select all that apply
- Advertising on social media
- Curation of news feeds on social media
- Recommendations in webshops
- Recommendations on video streaming sites
- Ranking of results on search engines
- Answers given by smart assistants (e.g., Siri, Alexa, …)
- Suggestions of potential partners on dating platforms
- Content of Wikipedia articles
- Websites of local restaurants
- None of the above

German version

1. Welche der folgenden Begriffe sind Ihnen bekannt (d. h. Sie wissen mehr oder weniger, was sie bedeuten)?
Alle zutreffenden Antworten auswählen
- Künstliche Intelligenz
- Computer-Algorithmen
- Maschinelles Lernen
- Empfehlungsdienste
- Gezielte / personalisierte Werbung
- Keine der Genannten

2. Welche der folgenden Anwendungen haben Sie während des letzten Jahres verwendet?
Alle zutreffenden Antworten auswählen
- Facebook
- Twitter
- Instagram
- Google-Benutzerkonto
- Amazon
- eBay
- Keine der Genannten

Für den Zweck dieser Umfrage handelt es sich bei Technologien, die mit „Künstlicher Intelligenz" arbeiten, um selbstlernende Computerprogramme („maschinelles Lernen"), die personenbezogene Daten analysieren, um das Online-Erlebnis von Personen individuell anzupassen.

3. Zu welchem Zweck werden Ihrer Vermutung nach Technologien, die mit Künstlicher Intelligenz arbeiten, häufig eingesetzt?
Alle zutreffenden Antworten auswählen
- Werbung in sozialen Netzwerken
- Kuratierung von Neuigkeiten in sozialen Netzwerken
- Empfehlungen in Onlineshops
- Empfehlungen auf Videostreaming-Seiten
- Ranking der Ergebnisse in Suchmaschinen
- Antworten von intelligenten Assistenten (z. B. Siri, Alexa, …)
- Vorschläge über potenzielle Partner auf Dating-Plattformen
- Inhalt von Wikipedia-Artikeln
- Website eines lokalen Restaurants
- Keiner der Genannten

Study questionnaire

AI technologies are often used to help choose which posts you see on social media platforms such as Facebook, Twitter, and Instagram.

4. What do you think are the main criteria used to customize which posts you see?
Select all that apply
- Time of posting
- Number of likes the post received so far
- Number of common friends you share with post's author
- Topics and content you have previously shown an interest in
- Recent increase in the number of likes on the post
- Number of clicks on the post
- Geographic proximity between you and the post's author
- The way you scroll and type

How acceptable do you think it is for social media and other websites to collect and use data about you and your past online activities to...

5. ... show you personalized advertising for commercial products and services?
- Very acceptable
- Somewhat acceptable
- Not very acceptable
- Not acceptable at all

6. ... show you personalized messages from political campaigns?

7. ... recommend events in your area?

8. ... recommend someone you might want to follow or add as a friend on social media?

9. ... suggest restaurants and shops?

10. ... recommend movies or music?

11. ... customize the posts you see in your social media feed?

12. ... customize the search results returned by search engines (e.g., Google search)?

13. ... customize front pages of online newspapers?

Technologien, die mit Künstlicher Intelligenz arbeiten, werden häufig verwendet, um zu bestimmen, welche Beiträge in Sozialen Netzwerken wie Facebook, Twitter und Instagram angezeigt werden.

4. Was sind Ihrer Vermutung nach die Hauptkriterien, anhand derer die angezeigten Beiträge angepasst werden?
Alle zutreffenden Antworten auswählen
- Zeitpunkt der Veröffentlichung
- Anzahl der Likes, die der Beitrag bisher erhalten hat
- Anzahl der Freunde, die Sie mit dem/der Verfasser/in des Beitrags gemeinsam haben
- Themen und Inhalte, für die Sie sich interessieren
- Kürzlich gestiegene Anzahl an Likes für einen Beitrag
- Anzahl der Klicks auf den Beitrag
- Geografische Nähe zwischen Ihnen und dem/der Verfasser/in des Beitrags
- Ihre Art zu scrollen und zu tippen

Wie akzeptabel ist es Ihrer Meinung nach, dass Soziale Netzwerke und andere Webseiten, Daten über Sie und Ihre vergangenen Online-Aktivitäten sammeln und nutzen, um ...

5. ... Ihnen personalisierte Werbung für kommerzielle Produkte und Dienstleistungen anzuzeigen?
- Sehr akzeptabel
- Einigermaßen akzeptabel
- Nicht sehr akzeptabel
- Überhaupt nicht akzeptabel

6. .. Ihnen personalisierte Nachrichten aus politischen Kampagnen anzuzeigen?

7. ... Ihnen Veranstaltungen in Ihrer Nähe zu empfehlen?

8. ... Ihnen Leute zu empfehlen, denen Sie folgen oder die Sie als Freund in einem sozialen Netzwerk hinzufügen könnten?

9. ... Ihnen Restaurants und Geschäfte vorzuschlagen?

10. ... Ihnen Filme oder Musik zu empfehlen?

11. ... die in Ihrem Social Media-Feed angezeigten Beiträge anzupassen?

12. ... die Suchergebnisse in Suchmaschinen (z. B. Google-Suche) anzupassen?

13. ... die Titelseiten von Online-Zeitungen anzupassen?

Study questionnaire

Personalized advertising is a type of online advertising that shows ads to people based on their online activity and profile (gender, age, interests, political views, etc.).

How acceptable do you think it is for online web platforms to use any of the following information about you to create personalized advertising?

14. Age
- Very acceptable
- Somewhat acceptable
- Not very acceptable
- Not acceptable at all

15. Gender
16. Ethnicity
17. Relationship/marital status
18. Sexual orientation
19. Religious views
20. Political views
21. Household income
22. Personality (e.g., outgoing, cautious, …)
23. Personal events in your life (e.g., pregnancy, marriage, …)
24. Personal tragedies in your life (e.g., death in the family, divorce, …)

How acceptable do you think it is for web services and applications to record and use the following types of information that they collect about you on their platform?

25. Your browsing and search history
- Very acceptable
- Somewhat acceptable
- Not very acceptable
- Not acceptable at all

26. Your purchasing history
27. Your location history
28. Videos you have watched
29. Your typing and scrolling behavior
30. Interaction with people online (who you communicate with and how often)
31. Content of your e-mails and online messages
32. Your likes and shares on social media

Personalisierte Werbung ist eine Art von Online-Werbung, bei der Personen, aufgrund ihrer Online-Aktivität und ihres -Profils, Werbung angezeigt wird (d. h. Geschlecht, Alter, Interessen, politische Ansichten usw.).

Wie akzeptabel finden Sie es, dass Online-Internet-Plattformen die folgenden Online-Informationen über Sie nutzen, um personalisierte Werbung zu schalten?

14. Alter
- Sehr akzeptabel
- Einigermaßen akzeptabel
- Nicht sehr akzeptabel
- Überhaupt nicht akzeptabel

15. Geschlecht
16. Ethnizität
17. Beziehungsstatus / Familienstand
18. Sexuelle Orientierung
19. Religiöse Ansichten
20. Politische Gesinnung
21. Haushatseinkommen
22. Charakter (z. B. extrovertiert, introvertiert, …)
23. Persönliche Ereignisse in Ihrem Leben (z. B. Schwangerschaft, Heirat, …)
24. Persönliches Unglück in Ihrem Leben (z. B. Todesfall in der Familie, Scheidung, …)

Wie akzeptabel finden Sie es, dass Webdienste und -anwendungen, die folgenden Informationstypen, die sie über Sie auf ihrer Plattform sammeln, erfassen und verwenden?

25. Ihren Browser- und Suchverlauf
- Sehr akzeptabel
- Einigermaßen akzeptabel
- Nicht sehr akzeptabel
- Überhaupt nicht akzeptabel

26. Ihre Kaufhistorie
27. Ihren Standortverlauf
28. Videos, die Sie sich angesehen haben
29. Ihr Tipp- und Scrollverhalten
30. Online-Interaktion mit Personen (mit wem und wie oft Sie kommunizieren)
31. Inhalt Ihrer E-Mails und Online-Nachrichten
32. Ihre Likes und Beiträge in Sozialen Netzwerken

Study questionnaire

Online data privacy refers to a set of rules for how Internet companies collect, share, and use information about their users. One important aspect of data privacy is whether users choose to reveal or protect their personal information.

In den Online-Datenschutzbestimmungen sind Richtlinien darüber festgelegt, wie Internetunternehmen Informationen über ihre Online-Nutzer erfassen, teilen und verwenden. Ein wichtiger Aspekt des Datenschutzes betrifft die Wahlfreiheit der Nutzer, ihre persönlichen Daten preiszugeben oder zu schützen.

33. How concerned are you about your data privacy when using the Internet?
• Not concerned at all
• Not very concerned
• Somewhat concerned
• Very concerned

33. Wie besorgt sind Sie, bei der Benutzung des Internets, über den Schutz Ihrer Daten?
• Überhaupt nicht besorgt
• Nicht besonders besorgt
• Ein bisschen besorgt
• Sehr besorgt

34. Which of the following have you used in the last year to check and/or adjust what kind of data on you can be used by Internet companies?
Select all that apply
• "My activity" or "Activity controls" page on your Google account
• "Privacy and personalization" page on your Google account
• "Privacy settings" page on Facebook
• "Manage your Ad preferences" page on Facebook
• Privacy and/or personalization preferences on Amazon
• Privacy settings in your preferred browser
• None of the above

34. Welche der folgenden Methoden haben Sie im letzten Jahr genutzt, um zu überprüfen und / oder zu bestimmen, welche Art von personenbezogenen Daten über Sie derzeit von Internetunternehmen verwendet werden?
Alle zutreffenden Antworten auswählen
• Die Seite „Meine Aktivität" oder „Aktivitätssteuerung" in Ihrem Google-Konto
• Die Seite „Datenschutz und individuelle Anpassung" in Ihrem Google-Konto
• Die Seite „Privatsphäreeinstellungen" auf Facebook
• Die Seite „Werbepräferenzen verwalten" auf Facebook
• Datenschutz- und / oder Personalisierungseinstellungen bei Amazon
• Datenschutzeinstellungen in Ihrem bevorzugten Browser
• Keine der Genannten

35. Which of the following measures and tools do you currently use to protect your data privacy online?
Select all that apply
• Software that protects you from seeing online advertising (e.g., ad blockers in your browser)
• Incognito mode in your browser
• Software that prevents the monitoring of your online activities (e.g., Tor Browser, VPN)
• Search engines that protect your privacy (e.g., DuckDuckGo)
• Deliberately avoiding certain websites and platforms (e.g., Google, Facebook, ...)
• Adjusting privacy and ad settings on online platforms
• None of the above

35. Welche der folgenden Maßnahmen und Werkzeuge verwenden Sie normalerweise, um Ihren Datenschutz online zu gewährleisten?
Alle zutreffenden Antworten auswählen
• Software, die die Anzeige von Online-Werbung verhindert (z. B. Werbungsblocker in Ihrem Browser)
• Inkognitomodus in Ihrem Browser
• Software, die verhindert, dass Ihre Online-Aktivitäten überwacht werden (z. B. Tor Browser, VPN)
• Suchmaschinen, die Ihre Daten schützen (z. B. DuckDuckGo)
• Bewusstes Vermeiden bestimmter Webseiten und Plattformen (z. B. Google, Facebook, ...)
• Anpassen der Einstellungen zum Datenschutz und Werbung auf Online-Plattformen
• Keine der Genannten

Study questionnaire

36. People sometimes use the labels 'left' or 'left-wing' and 'right' or 'right-wing' to describe political parties, party leaders, and political ideas. Where would you place yourself on this scale?)

1 (left-wing)
2
3
4 (center)
5
6
7 (right-wing)

37. In what year were you born?
[Open text]

38. Please feel free to share your thoughts on this survey and the topic.

___[open comment field]

36. Man verwendet manchmal die Bezeichnungen „Links" oder „Linksaußen" und „Rechts" oder „Rechtsaußen", um politische Parteien, Parteichefs und politische Ideologien zu beschreiben. Wo würden Sie sich auf dieser Skala einstufen, die von 1 (links) über 4 (Mitte) bis 7 (rechts) reicht?

1 (links)
2
3
4 (Mitte)
5
6
7 (rechts)

37. In welchem Jahr wurden Sie geboren?
[Open Text]

38. Bitte teilen Sie uns etwaige Gedanken zu dieser Umfrage und diesem Thema mit.

___[open comment field]