

PRESS RELEASE

## Knowledge of Algorithms Limited among Europeans

**Many citizens across the European Union lack a basic understanding of algorithms.**

**As part of a cross-national representative survey conducted in Europe, the Bertelsmann Stiftung has examined what Europeans know about algorithms, what they think of them, and what they hope algorithms can achieve.**

Gütersloh 06.02.2019. Nearly half of all Europeans do not know what algorithms are. Only 8 percent claim to know “a lot” about them. Most Europeans know very little about where and how algorithms are used. They are most likely to associate algorithms with personalized advertising or dating platforms and much less so with more sensitive areas, such as filtering in job application processes or in diagnosing illnesses. One-fifth of the respondents had absolutely no idea in which areas of life algorithms are used. These are the findings of a representative survey conducted by the Bertelsmann Stiftung in 28 EU member states with the support of the eupinions platform.

Most Europeans are relatively open to the use of algorithmic decisions in several areas, though this is limited primarily to technical areas such as spell-checking or navigation systems, which generally have no direct impact on people. A large majority – 64 percent – are uncomfortable with computer systems making decisions about them without involving a human being. According to Jörg Dräger, Member of the Bertelsmann Stiftung Executive Board, “People in Europe do not know enough about algorithms, even though they are increasingly more relevant in our daily lives.” Overall, Europeans express a fundamentally optimistic attitude toward algorithms: At least 46 percent see more benefits than problems associated with algorithmic decision-making, while only 20 percent see more problems than benefits. Among those who know “a lot” about algorithms, the ratio of positive votes is even higher. In addition, men and people with relatively high educational achievements place a stronger emphasis on the advantages associated with algorithmic decision-making processes.

### **Asynchronous use of algorithms across Europe**

Attitudes toward algorithms vary across EU states. For example, some 11 percent of Poles claim to know “a lot” about algorithms, which is the highest rate of all the surveyed countries. In contrast to their European neighbors, they express a particularly pragmatic attitude toward the use of algorithms. Only 3 percent of people in Poland find algorithms “scary.” In France, however, 21 percent find such machine-based decision-making worrying. The UK population has particularly sparse knowledge of algorithms. Some 25 percent of those surveyed in the UK state that they have never heard of algorithms.

In Germany, 46 percent saw no particular benefits or problems associated with algorithms in the spring of 2018. However, by the fall of the same year, only 36 percent expressed an undecided opinion. The European average for those with undecided views on algorithms is 34 percent. For Dräger, the figures show that “we need a pan-European discussion and strategy for the use of algorithms and artificial intelligence.” He sees developments in Germany as “a clear indication that discussing intensively the design of new technologies with people is a worthy endeavor.” He welcomes the fact that Germany’s government has taken up the issue.

## Europeans want more rigorous controls on the use of algorithms

Three-fourths of the Europeans surveyed want greater controls on the use of algorithms. For example, people want algorithmic decisions to be easier to understand and they want the right to have such decisions reviewed by a human being. They also think it sensible to have a requirement that algorithmic decisions be labeled as such, that is, transparency about when, where and how computer-based decisions are made.

Dräger shares this desire for oversight and calls for a "ban on masking algorithms." He sees the EU as bearing a particular responsibility in this regard: "As a global player, the EU must strike its own path into the age of algorithms." According to Dräger, the EU could send a strong political signal for using algorithms in the interests of the greater social good.

### Additional information

"eupinions" is our platform for European opinion surveys that was developed together with Dalia Research. We survey populations across all 28 EU member states for their views on issues regarding Europe's political future. The online survey for this study was carried out in September 2018 by Dalia Research. A total of 10,960 people took part in the survey, making it representative for the EU and its six largest member states: France, Germany, Italy, Poland, Spain, and the United Kingdom. Further information regarding survey methodology is provided in chapter one of the study.

More information about the Ethics of Algorithms project at the Bertelsmann Stiftung is available at [Website](#). In May 2018, a [survey](#) of German attitudes toward algorithms was published. Together with the independent think tank iRights.Lab, the Bertelsmann Stiftung is currently developing a catalogue of quality criteria for algorithms. More information on this is available [here](#).

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