Eye Contact Matters for Consumer Trust – Even with Robots
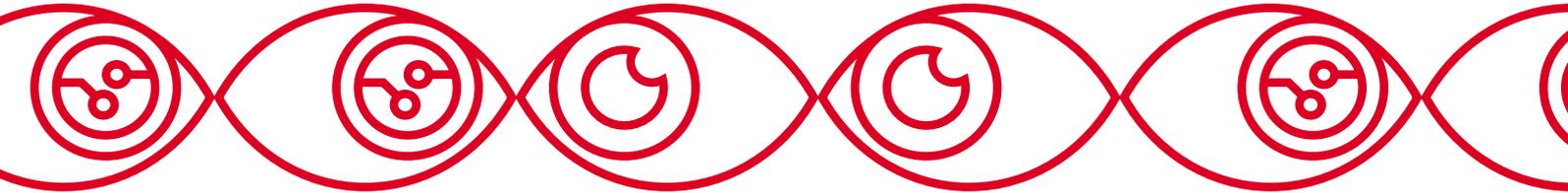
THE AUTHORS

Carolin Kaiser
Head of Artificial Intelligence

René Schallner
Senior Researcher and Technology Lab Manager

Vladimir Manewitsch
Senior Researcher

all: Nuremberg Institute for Market Decisions, Nuremberg, Germany

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A step into the future: Human-like AI is guiding consumer decisions ⤬ From your daily web searches to personalized email offers and investment advice, AI is no longer wishful thinking but an integral part of the consumer world. Now, AI is becoming even more human by the day. Chatbots can type, voice assistants can talk and some robots can even make eye contact. Robo-advisors have also been making waves in the finance world as new digital asset management tools. They offer convenience, reduced human intervention and high availability to investors in search of online investment services. Most robo-advisors that are currently in use are text-based interfaces. They collect information about a customer's financial situation and objectives through an online survey, propose a suitable investment plan and perform it automatically. But despite the significant market growth of robo-advisors, some investors remain skeptical. It is still a challenge to gain consumers´ trust. We investigated whether making virtual finance advisors more human-like leads to more trust. How does this growing ''human touch'' in AI advisory services shape consumer reactions? How do the human-like appearance and behavior of AI advisors affect consumers' trust and decision-making?

How consumers respond to humanoid robots ⤬ When we see machines with human-like features, like a face or a name, we often interact with them as if they were people.

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To enhance consumer trust and satisfaction, providers of humanoid robots should integrate eye contact and other non-verbal cues into their services.

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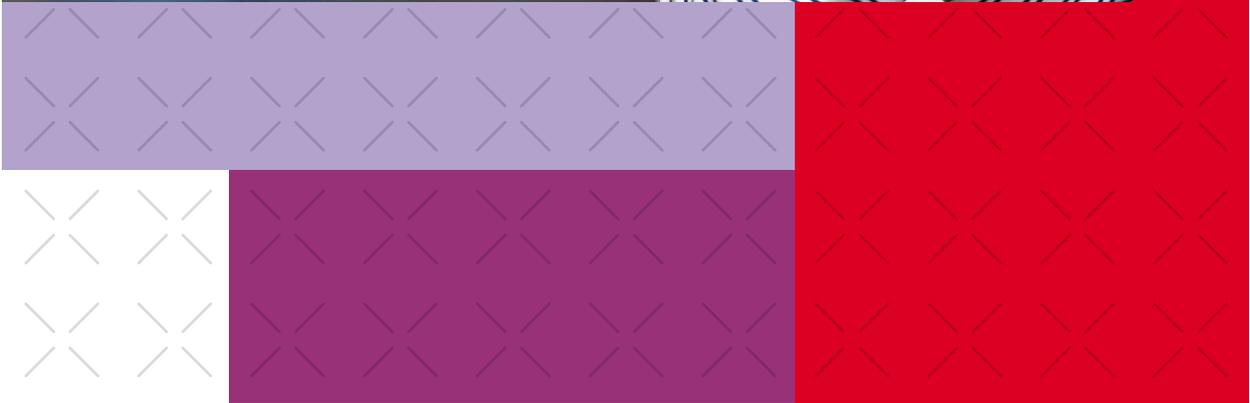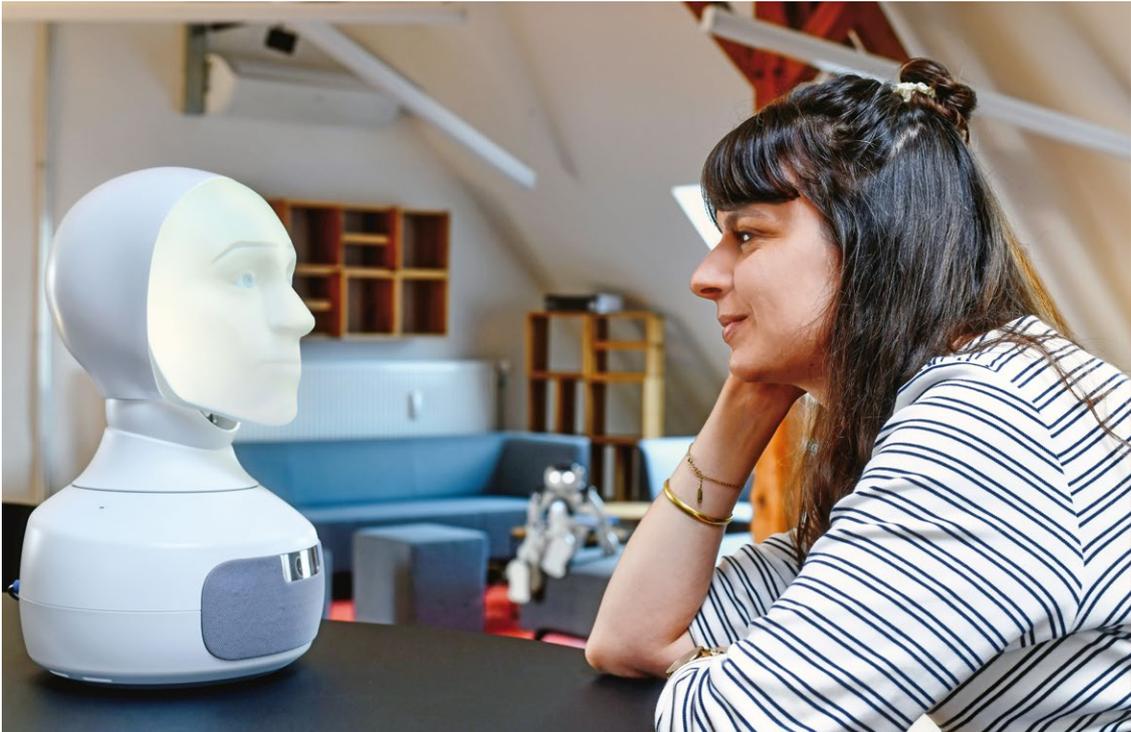
BOX 1

Experiment: Financial consultation with a human and a robo-advisor

To better understand how appearance, behavior, and in particular, the eye contact of a robo-advisor can affect people's investment decisions, we conducted an online experiment. We recruited 4,500 participants in the US, where robo-advisors have grown in popularity in recent years. We assigned the participants randomly to nine groups, each experiencing a different version of a financial advisor. These versions differed in terms of the advisor's appearance and behavior, ranging from human to various types of robots with and without eye contact with the participants and a website with text-based inquiry and advice. Figure 1 shows the different settings of the study.

FIGURE 1 > Nine experimental settings to test how consumers react to financial robo-advisors
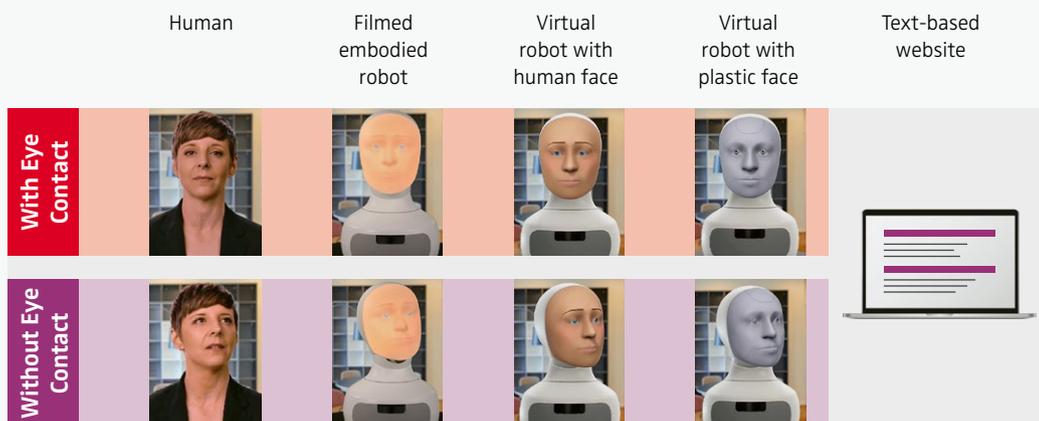
To create a realistic financial consultation scenario, we employed a professional actress to act as a human advisor and the fully programmable social robot "Furhat" as a robo-advisor in its different variations. To "train" the robot and the human, we recorded typical speaking segments and merged them into a virtual advisory dialogue.

We asked participants to imagine a scenario where they had a large sum of money and needed to invest it and invited them to get investment advice in a virtual session in one of our nine settings. After the session, participants had to decide on the amount they would like to invest and whether they preferred a human or a machine to manage their assets. To make the experiment more realistic, the selected investment was simulated based on their investment decisions and reflected in the compensation each participant received for taking part in the experiment. After the consultation, the participants filled out a questionnaire on the quality of the financial advice and on evaluation criteria such as trust, liking, decision satisfaction and willingness to recommend, as well as on their technical, financial and socio-demographic background.

The results showed that the human advisor was trusted most and that robots were preferred over the website version. They also indicated that eye contact matters even for robots – see Figure 2.

FIGURE 2 › Robots with eye contact are rated better by consumers than robots without eye contact

Robotic Advisor with Eye Contact

Recommendation	4.94
Satisfaction	5.53
Liking	5.51
Trust	5.16
Advisor Competence	5.46

Robotic Advisor without Eye Contact

Recommendation	4.75
Satisfaction	5.36
Liking	5.29
Trust	5.03
Advisor Competence	5.31
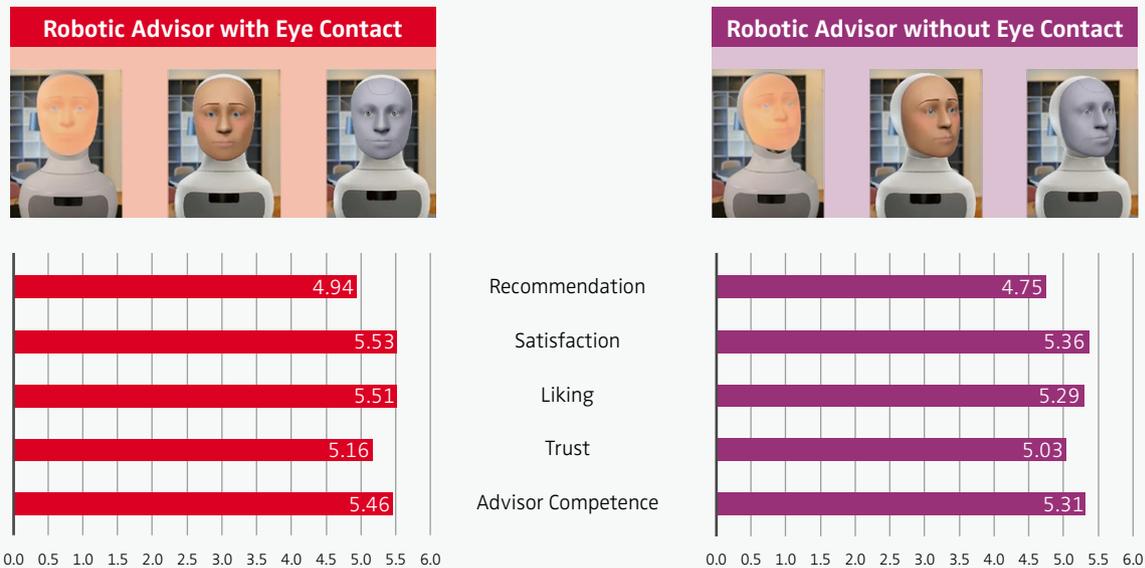
Evaluation on a 7-point Likert Scale

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People trusted human advisors more than robotic ones, but robotic advisors performed better than text-based websites.

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For example, in a voice shopping experiment, we found that a happy artificial voice can elicit similar positive emotions and consumer satisfaction as a happy human voice. The more human-like an artificial agent appears, the more likely we are to trust it. For example, people have higher trust in autonomous driving if the self-driving car has a name, gender and voice. On an e-commerce site, people find virtual shopping assistants more likable, appropriate and trustworthy when they look more like humans than like cartoons. However, there are many factors that make us human, such as gestures, facial expressions, speech and behavior.

In this study (see Box 1), we investigated how employing human-like agents as financial robo-advisors impacts consumer trust and investment decisions compared to human agents or text-based services. We further tested how eye contact, which is one of the most important non-verbal signals of social interaction between people (see Box 2), affects trust and investment decisions when it comes to robots.

Human-like advisors are preferred over text-based services ✕ People trusted human advisors more than robotic ones, but robotic advisors performed better than text-based
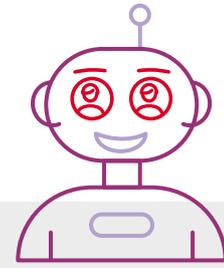
BOX 2

The importance of human eye contact

Eye contact is a fundamental aspect of human social interaction. During conversations, people tend to look at each other about 60% of the time, with half of that time being mutual. Eye contact signals turn-taking, expresses intimacy and exercises social control. Our brain has dedicated areas for interpreting eye contact, making it a critical non-verbal signal in social interactions. Even newborns react to eye contact, showing its importance in early development. Eye contact impacts cognitive processing, including attention, arousal, memory and trust. People who make eye contact are perceived as more likable, attractive and trustworthy than those who do not.

Eye contact is important not only in social interactions but also in marketing. Salespeople who make eye contact are viewed as more empathic, personal and trustworthy, and their sales presentations are perceived as more believable and interesting. Conversely, when frontline employees avoid eye contact, it can create a negative first impression and decrease consumers' satisfaction with the service. Additionally, consumers remember more information about products when presented by salespeople who maintain direct eye contact. Even in online advertising, models with directed eye gaze can increase consumer arousal. It's worth noting that the impact of eye contact can vary depending on cultural and gender differences. For instance, a study found that direct gaze in advertisements may shift male attention to the model's face and female attention to the brand name.

websites. Participants who had a consulting session with a robotic advisor were more satisfied with their decision and the overall service and found the recommendation more relevant than participants with a text-based website consulting session.

When deciding between machine- or human-managed assets, participants who consulted with a robotic advisor were more likely to choose the machine-managed assets than participants who consulted with a text-based website. This shows that the human-likeness of the consulting interface impacts not only peoples' attitude toward the consulting service but also their decision whom to entrust with the management of their assets – robot or human. The impact of the human-likeness of the interface is small but significant and should not be neglected. The human-like appearance of the advisor makes a difference – and if he behaves more like a human, it makes even more difference.

Eye contact is key even when consumers are dealing with robots ✕ Eye contact is important for pleasant and productive social interactions. Previous studies have shown that a robot that looks at you with its plastic eyes can evoke a similar response as human eye contact. People tend to react positively to robots making eye contact, perceiving them as more social and intelligent. Additionally, people tend to be more honest when in the presence of a robot making eye contact. Our study also reveals that eye contact with a robotic advisor has similar effects as eye contact with a human advisor and is essential for trust and satisfaction.

Human-likeness increases consumers' trust in robots ✕ The participants who had eye contact with the robotic advisor (see the red column in Figure 2) rated the advisor as more competent, trustworthy and likable and showed a higher overall satisfaction and willingness to recommend the service in contrast to participants who did not have eye

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contact with the robotic advisor (see the purple column in Figure 2). The impact of eye contact is subtle and small but significant and should not be ignored. However, eye contact did not directly lead to higher investments. There was no significant difference in the amount of money invested between participants with and without eye contact with their robo-advisor. There is only a weak indirect connection between eye contact and the invested amount of money: Eye contact increases trust, and greater trust, together with increased risk affinity, goes hand in hand with higher investments.

Takeaways for companies and consumers
Service robots might be game-changers and are predicted to transform the service industry. They can provide many advantages, like being available 24/7 and high efficiency. But will people actually embrace them? In our study, we gained valuable insights that could help managers and consumers in their decision-making concerning service robots and other related AI advisory services.

› **Make artificial advisors human-like** ✕ Companies have the chance to use humanoid robots to improve the quality of their advice and interactions with consumers beyond that of text-based websites. Online providers of financial services, in particular, should consider using humanoid advisors rather than text-based services to gain wider acceptance and make the consultancy experience more pleasant for their customers.

› **Ensure eye contact** ✕ The findings of our study also suggest that eye contact is important not only between consumers and human advisors but also between consumers and robotic advisors. Providers of robotic services should incorporate eye contact at appropriate times and other non-verbal cues, such as nodding and smiling, in their services to enhance consumer trust and satisfaction.

› **Consider the influence of human-like AI** ✕ Consumers should be aware that they tend to trust and follow the advice of human-like artificial intelligence more compared to more traditional forms of presentation and should consider this when making decisions. It is important to know that even tiny social cues, such as eye contact with a robot, may affect people's attitudes and potentially their decision-making.

› **Stay informed about AI developments** ✕ Consumers should be aware of these effects and stay alert to developments and findings related to the effect of robotic services. This can help them make more informed decisions about whether to use these services and how to best interact with them.

Our findings have implications for society as well. Understanding the possibilities and limitations of how AI can influence consumer decisions is important for the discourse about the role of AI in society and the regulations this new field might require.   ✕

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FURTHER READING

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