

Dear participant,

as already mentioned during our last meeting, it is important for us to also learn about your perspective on the voice assistant.

Naturally, the same rules apply here with regards to data processing and security: When it comes to studies, your voluntarily given written consent according to DS-GVO (art. 6, paragraph 1a) serves as legal grounds for the processing of your personal data. These data will be anonymised and used exclusively for scientific research and can be made available to other researchers in an anonymised form. The data will be stored for at least 10 years after it has been analysed or at least 10 years after the publication of research about this study. The data will be stored in an anonymised form and will not allow any identification of your person.

You can stop this survey any time without explanation of reasons.

When responding to the questions, please, remember that there are no right or wrong answers here, as we are asking for your personal opinions. Please try to respond intuitively and as quickly as you can. Filling in this questionnaire will take about 10 minutes of your time.

Please click “Next” if you wish to participate in this study and are consenting to the described processing of your anonymised data.

Thank you very much in advance,
Clara Strathmann, Sarah Schlüter, Prof. Dr. Nicole Krämer and Dr. Jessica Szczuka.

SD15. Please put down the number of the device that the experimenter gave you (a number between 1-20)

SD14. In order to match all questionnaires throughout the course of this study to the corresponding families, we would ask you to create a personalised, yet anonymised code and write it down here. This code consists of the first two letters of your first name and the day (without month or year) on which you were born (e.g., JE13).

NU13. How many times a day do you or your partner use the voice assistant? Please, estimate an average number. (If you think the number will be smaller than once a day, please specify a value between 0 and 1, for instance, 0.25 times meaning once every four days.)

NU12. How many times a day do your child(ren) use the voice assistant? Please, estimate an average number. (If you think the number will be smaller than once a day, please specify a value between 0 and 1, for instance, 0.25 times meaning once every four days.)

NU16. How often do you use the voice assistant for functions concerning these topics?

Never Rarely Sometimes Often Very often

Shopping (for example, creating shopping lists, ordering products online, looking for stores)

Travelling (for example, getting travel information, navigation)

Entertainment and leisure (for example, playing games, listening to music, being told jokes and trivia by the assistant)

Planning and organising (for example, setting an alarm clock/timer, creating to-do lists, writing emails, listening to the voice assistant read emails aloud, making calls)

Asking for facts and everyday knowledge (for example, asking questions about facts, news, traffic and weather)

Mathematics (for example, percentage calculations, conversion of currency)

Languages (for example, translating, asking for definitions and spelling)

Controlling devices and smart home (for example, controlling connected devices, regulating temperature and lighting, using security applications)

Communication with/about the voice assistant (for example, requests about voice assistant's opinions or its nature)

NU17. How often does your child/do your children use the voice assistant for functions concerning these topics?

Never Rarely Sometimes Often Very often

Entertainment and leisure (for example, playing games, listening to music, being told jokes and trivia by the assistant)

Planning and organising (for example, setting an alarm clock/timer, creating to-do lists, writing emails, listening to the voice assistant read emails aloud, making calls)

Asking for facts and everyday knowledge (for example, asking questions about facts, news, traffic and weather)

Mathematics (for example, percentage calculations, conversion of currency)

Languages (for example, translating, asking for definitions and spelling)

Controlling devices and smart home (for example, controlling connected devices, regulating temperature and lighting, using security applications)

Communication with/about the voice assistant (for example, requests about voice assistant's opinions or its nature)

The following questions concern your satisfaction with the voice assistant. Please respond to them or specify how much you agree with the following statements.

ZH06. How satisfied are you with the voice assistant?



NU15. How much fun is it for you to occupy yourself with the voice assistant?

None at all	Little	Moderately	Quite a bit	A lot
-------------	--------	------------	-------------	-------

NU14. How much fun is it for your child(ren) to occupy themselves with the voice assistant?

None at all	Little	Moderately	Quite a bit	A lot
-------------	--------	------------	-------------	-------

ZH07.

How satisfied are you with...

Very
dissatisfied Dissatisfied Neither
dissatisfied
nor
satisfied Satisfied Very
satisfied

...with the level of understanding of the voice assistant (how well your speech was understood)?

...with the speech output (words, intonation) of the voice assistant?

ZH08. How certain are you that you will reach your goal when you submit a request to the voice assistant?

Very uncertain	Uncertain	Undecided	Certain	Very certain
----------------	-----------	-----------	---------	--------------

KO01. Now, we would like to ask you how you and your family communicate with the voice assistant.

Please estimate the frequency of the following situations in your family's everyday life.

Never Rarely Sometimes Often Very often

I extend polite gestures towards the voice assistant
(such as saying "thank you" and "please")

My child extends/my children extend polite gestures
towards the voice assistant (such as saying "thank you"
and "please")

I give orders to the voice assistant

My child gives/my children give orders to the voice
assistant

I happen to insult the voice assistant.

I saw my child(ren) insult the voice assistant.

I have at least once started a conversation with the
voice assistant because I felt lonely.

Please choose the option "never" here.

My child has/my children have at least once started a
conversation with the voice assistant because they felt
lonely.

I have at least once started a conversation with the
voice assistant because I felt bored.

My child has/my children have at least once started a
conversation with the voice assistant because they felt
bored.

KO02. Now, we would like to learn more about your opinion on you or your children transferring the speaking style of the voice assistant in your everyday life.

Strongly disagree Disagree Undecided Agree Strongly agree

I noticed that I adopt some features of the speaking
style of the voice assistant in my everyday life.
(Meaning the transfer of language that you've learnt
directly from the voice assistant.)

I noticed that my child adopts/my children adopt some
features of the speaking style of the voice assistant in
their everyday life. (Meaning the transfer of language
that your child(ren) learnt directly from the voice
assistant.)

KO03. In case you noticed that you or your child(ren) transfer some peculiarities from conversations with the voice assistant to your regular speech, can you provide an example?

KO04. Please, respond to the following questions or indicate how much you agree with the following statements.

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
If my child uses/my children use the voice assistant frequently in a successful way, I notice that they communicate with me less.					
Having a voice assistant leads to more conversations within a family (for example, it prompts conversations between family members)					

KO05.

	Never	Rarely	Sometimes	Often	Very often
Did you ask your child(ren)...					
...whether the voice assistant is a human being?					
...where the voice assistant gets the information from?					
...what happens to the stored data?					

KO06.

	Never	Rarely	Sometimes	Often	Very often
How often do you have educational conversations with your child(ren) regarding the following topics...					
...whether the voice assistant is a human being?					
...where the voice assistant gets the information from?					
...what happens to the stored data?					

KO07. Please, summarise how much the communication within your family changed since you've started using the voice assistant.

Not at all	A little	Moderately	Quite a bit	Very much
------------	----------	------------	-------------	-----------

BW09. Please specify how much you agree with the following statements based on your perception of the voice assistant.

	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
The voice assistant can be happy.					
The voice assistant can be friendly.					
The voice assistant can be respectful.					
The voice assistant can be funny.					
The voice assistant can be caring.					
The voice assistant is capable of speaking like a human.					
I treat my voice assistant like a human.					
I yelled at my voice assistant when it did something that I did not like.					

My voice assistant has at least once done something to just make me angry.

My voice assistant can feel lonely without me.

My voice assistant likes certain people more than others.

I have apologised to my voice assistant.

BW06. Please specify how much you agree with the following statements about your cohabitation with the voice assistant.

Strongly disagree Disagree Undecided Agree Strongly agree

I believe the voice assistant is a sort of friend for me.

I believe the voice assistant is a sort of friend for my child(ren).

I believe my child sees/my children see the voice assistant as a toy.

I would be worried if my child(ren) was/were friends with the voice assistant.

I noticed that the relationship with the voice assistant got better over time.

TV01. How much do you agree with the following statements?

Strongly disagree Disagree Undecided Agree Strongly agree

The voice assistant recognises my wishes.

The voice assistant understands my behaviour.

The voice assistant can predict my future behaviour based on my previous requests.

The voice assistant is aware that I have my own wishes, thoughts and feelings.

The voice assistant is following its own interests and wishes.

The behaviour of the voice assistant seems to follow strict rules.

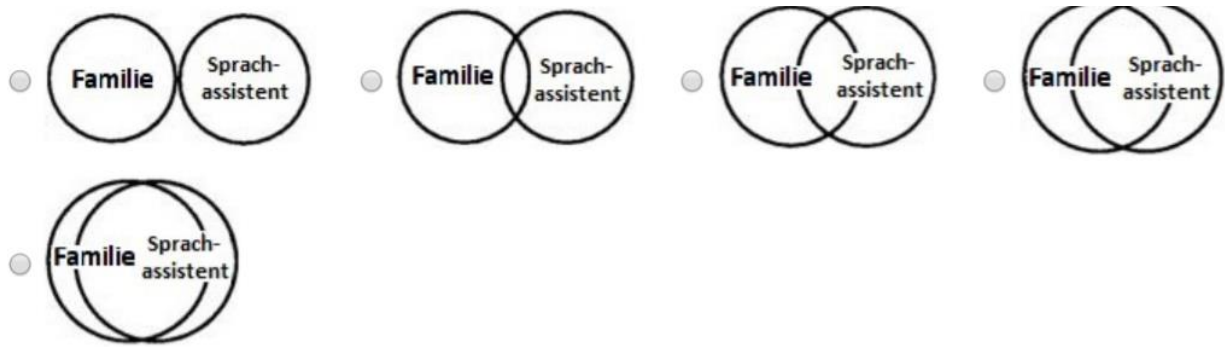
The voice assistant shows its own emotions, motivation and beliefs.

The voice assistant considers earlier experiences to enhance the interaction.

The voice assistant adapts to my person.

BW11. Select a picture that depicts how strongly the voice assistant is integrated into your family.

(“family” is to the left and “voice assistant” to the right)



BW12.

Not at all A little Moderately Quite a bit A lot

How sad will you be when the voice assistant is gone?

How sad do you think your child(ren) will be when the voice assistant is gone?

Would you like the voice assistant to show a stronger personality?

BW07. Please estimate how much you agree with the following sentences.

Not at all Rather not Undecided Rather yes Very much

How masculine is the voice assistant in your opinion?

How feminine is the voice assistant in your opinion?

The voice assistant is dominant.

The voice assistant is cheerful.

BW08. Please rate the expertise of the voice assistant in following topics. (5-point scale)

No expertise Moderate expertise A lot of expertise

Languages

Geography

Weather

Technology

Bringing up children

Repairs

Cooking/recipes

Sports

Caring for the sick

Cars & motorcycles

Housekeeping

Biology

TV03. Now we would like to ask you how you feel about the protection of privacy by the voice assistant

Never Rarely Sometimes Often Very often

I have concerns that we are eavesdropped on without our consent.

I worry that our device can be hacked/manipulated by a third party.

I do not like that our voices are being recorded.

Have you ever relocated an interpersonal conflict to another room or turned off the voice assistant because you were worried it is eavesdropping?

Have you ever relocated a monologue with yourself to another room or turned off the voice assistant because you were worried it is eavesdropping?

How often do you deactivate the microphone of the voice assistant?

Please evaluate the following statement: The voice assistant seems to sometimes listen in, even without permission, and creates personalised recommendations based on that.

Did you inform people visiting your house that you are using a voice assistant?

Did you have critical conversations about the voice assistant with the people visiting your house?

Have you ever looked up your child(ren)'s interaction with the voice assistant in the history of interactions?

Did you have a feeling of deceiving your child(ren) if you looked up their requests to the voice assistant?

TV03. Now we would like to ask how much trust you have in the voice assistant and how much you know about this technology.

Not at all A little Moderately Quite a bit Very much

How much do you scrutinise the output of the voice assistant?

How much does your child/do your children scrutinise the output of the voice assistant?

How certain are you that you know what happens to your data?

How certain are you that you know how the voice assistant functions?

How important is it for you to understand the functionality of the voice assistant in its entirety?

Have you explained to your child(ren) that you can see their interactions with the voice assistant?

TV04. How much do you trust your voice assistant in general?

Not at all	A little	Moderately	Quite a bit	Very much
------------	----------	------------	-------------	-----------

TV05. Please specify with the help of this slider whether you see the voice assistant as an independent entity or as software controlled/programmed by an organisation.

Independent/autonomously acting entity		Software controlled/programmed by an organisation
--	--	---

TV06. Now we would like to know what your opinion is on the organisations behind voice assistants (Google, Amazon, Apple, etc.). Please specify how much you agree with the following statements.

Strongly disagree Disagree Undecided Agree Strongly agree

I can trust people and organisations that are concerned with the development of voice assistants.

People and organisations concerned with the development of voice assistants have good intentions.

People and organisations concerned with the development of voice assistants will respect the needs, thoughts and feelings of their users.

NF02. Despite the pleasure of using the voice assistant, any technology might have drawbacks. Please indicate how much you agree with the following disadvantages and concerns regarding voice assistant usage.

Strongly disagree Disagree Undecided Agree Strongly agree

I cannot estimate whether the things my voice assistant is saying are correct/truthful.

People and organisations concerned with the development of voice assistants have good intentions.

People and organisations concerned with the development of voice assistants will respect the needs, thoughts and feelings of their users.

Thank you very much for participating!

Your responses have been recorded. You can now close the tab of the browser and wait until the experimenter comes back to get you, so you could proceed to the interaction with your child(ren).

Clara Strathmann, Sarah Schlüter, Dr. Jessica Szczuka and Prof. Dr. Nicole Krämer, University of Duisburg-Essen – 2019