Survey on emotional expression by robots.

s201856u@st.go.tuat.ac.jp （共有なし） アカウントを切り替える

*必須

Explanation of research and consent to participation.

Principal Investigator : Gentiane Venture
Venture Laboratory, Graduate School of Engineering, Tokyo University of Agriculture and Technology

This laboratory is conducting the following medical research for adults and minors accompanied by parents with the approval of the Tokyo University of Agriculture and Technology Ethics Review Committee and the permission of the President, ethical guidelines and laws and regulations. We will comply with the above, so we ask for your cooperation (Approval ID：No.210703-0319).
There is no undue burden on the subjects by conducting this study.
In addition, we will pay close attention to the protection of the personal information of the subjects.
This questionnaire is used in research in venture laboratories. This research is being taught by Professor Gentiane Venture of the Department of Mechanical Systems Engineering, Tokyo University of Agriculture and Technology. The main purpose of this questionnaire is to evaluate how humans perceive the movements of various robots. Please read the following before participating in this survey. The purpose of the research, the answers associated with participation, the confidentiality of personal information, and the right to decline are described below. You need to understand these before participating in this study.
Study period: From the date approved by the Ethics Review Board to September 2023

Purpose of research

The main purpose of this research is to understand the motion elements that robots need to express emotions to humans. We are studying this task using the motion of a robot that has performed a simple task. We believe that the findings from this and future studies will help robots determine expressive motor strategies and behaviors for humans.

Voluntary research cooperation and freedom of withdrawal

Participation in the study is voluntary and you can withdraw at any time. Refusal or cancellation will never cause you any disadvantage.
You can withdraw your consent at any time without any disadvantage, even after you have agreed to participate in the study. However, after the anonymization process of personal information is performed, the researcher himself will not be able to identify the individual subject, so it is virtually impossible to withdraw his consent.

Questionnaire contents

The questionnaire is divided into three parts.

1．Negative Attitude Toward Robots Scale（NARS） （14 questions）

It is a scale that evaluates how you honestly feel about the relatively new concept of robots. It is used for the purpose of observing the relationship between an individual's psychological bias and emotional recognition.

2. Emotion evaluation of robots by PAD parameters (SAM scale) (8 videos)

Ask the subject to estimate the emotion of the robot in the video and express it using the PAD parameters. The PAD parameter is an emotional index that quantitatively expresses one emotion by three parameters (Pleasure, Arousal, Dominance). At this time, the Self-Assessment Manikins Scale (SAM scale) is used so that the subject can intuitively

use the PAD parameters and answer using images related to each parameter.
If they decide to participate, they will be asked to watch a few short videos and answer a few questions in a six-step answer format about the quality of movement and expression they feel in each video. Participants can watch each video over and over again. However, once you move to the next video, you cannot go back to the previous video.

3. Big5 personality test (15 questions)
It quantitatively expresses human character and orientation used in the fields of psychology and cognitive engineering with five indicators. It is used for the purpose of observing the relationship between individual personality and orientation differences and emotional cognitive tendencies.

Benefits and disadvantages for study subjects
If you participate in this study, you will be asked demographic / background questions (eg age, occupation, gender, country of origin and country of residence). You may also suffer the following psychological disadvantages:
Experimental restraint time is estimated to be 30 minutes

Protection of personal information
All information provided by participants is anonymous and confidential. All data is summarized and the results cannot be personally identifiable. The non-personally identifiable information collected from this survey is temporarily stored on a third-party server (Google Drive) that hosts the survey. After the survey is completed, all data will be moved to a secure server at Tokyo University of Agriculture and Technology and stored for at least 3 years. Access to this server is limited to researchers involved in this project.

Disclosure of research plans, etc. ・ Methods for disclosing information related to research
Please refer to the website of the Venture Laboratory, Faculty of Engineering, Tokyo University of Agriculture and Technology.

Disclosure of the subject's own results
If he / she wishes, he / she will be notified when the analysis result of the experiment is published in the journal.

Publication of research results
Once all the data has been collected and analyzed, we plan to use it in the form of seminars, conferences, presentations, and journal articles and share this information with the research community. In addition, datasets that have been processed to be non-personally identifiable may be shared publicly.
The results of the research are statistically processed and displayed as charts, which are anonymized. These considerations will be published through academic societies and journals dealing with robotics and cognitive science.

Attribution of intellectual property rights resulting from research
Intellectual property rights arising from the research belong to the Venture Laboratory, Faculty of Engineering, Tokyo University of Agriculture and Technology.

Policy for handling samples after the end of research
The raw data of this experiment will not be provided to other institutions after the research is completed.
The acquired information will be anonymized and stored under the control of the principal

investigator (on-campus Google Drive) for a minimum of 3 years and a maximum of 10 years.

Matters concerning cost burden and conflict of interest

This research is not funded by any particular company or organization and has no interests.
In addition, objective indicators are used to measure the effects so that arbitrary judgments cannot be made.

Please select Agree or Disagree below to indicate your willingness to participate in the study. If you choose Agree, you will be taken to the first page of the survey * *

Contact

[Consultation counter]
Venture Laboratory (+81) 42-388-7421
Faculty of Engineering Venture Laboratory Affiliation Shohei Hagane
s201856u@st.go.tuat.ac.jp

- (●) Agree
- ( ) Disagree

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Getting to Know You

Please answer the following demographic questions.

Age *

選択

Gender *

- Male
- Female
- Not above

Where do you live? *

選択

What is your cultural background (country of origin)? *

選択

Please tell us about your background in robotics. *

選択

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Please answer according to your intuition

There are 14 questions

I would feel uneasy if I was given a job where I had to use robots. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

The word "robot" means nothing to me. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I would feel nervous operating a robot in front of other people. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I would hate the idea that robots or artificial intelligence were making judgments about things. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I would feel very nervous just standing in front of a robot. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I would feel paranoid talking with robot. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I would feel uneasy if robots really had emotions. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

Something bad might happen if robots developed into living beings. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I feel that if I depend on robots too much, something bad might happen. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I am concerned that robots would be a bad influence on children. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I feel that in the future society will be dominated by robots. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I would feel relaxed talking with robots. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

If robots had emotions, I would be able to make friends with them. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I feel comfortable being with robots that have emotions. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

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This is a test question to help you understand the videos and questions displayed throughout this survey.

This survey answers how you perceive the movements expressed in the video, not your feelings after watching each video.

Watch the following video first. You can play the video as many times as you like. After watching the video, read each question and choose the one that most closely resembles the body movement you read. After answering all the questions, click Next.
After answering all the questions, click Next.
Click Next to go to the actual question.
You cannot change your answer after going to the next page.

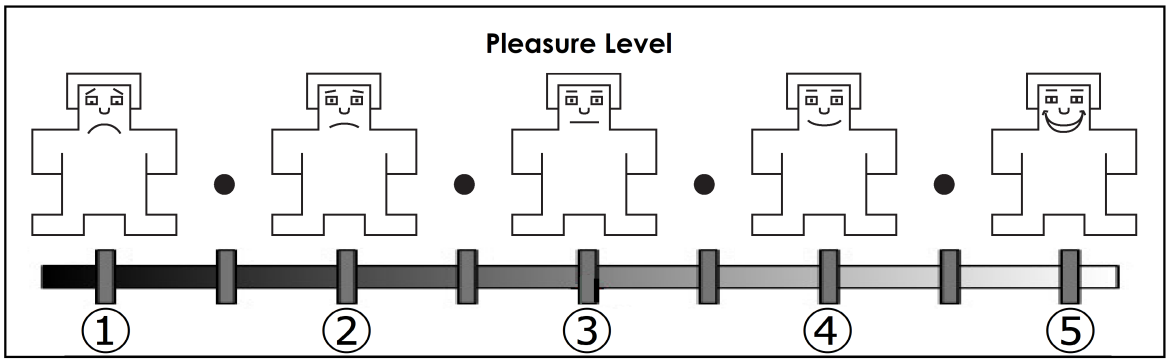
Please refer to the figure above the question as a guide to the strength of your emotions.

TrainingVideo

TrainingVideo

3PijjNH

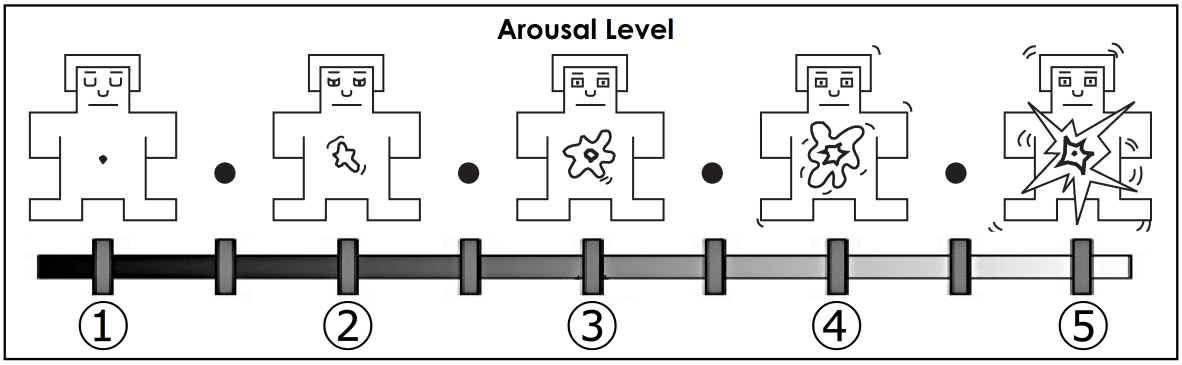
Is the robot's mood positive or negative?



Please answer how much it is represented in the figure above. *
Movie(TrainingVideo)

	①	②	③	④	⑤
Is the robot's mood positive or negative?	○	○	○	○	○

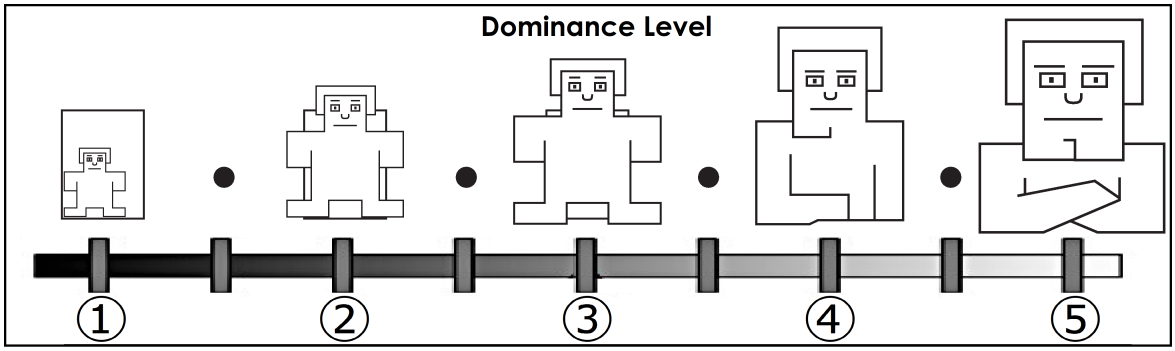
How much does the degree of vitality (excitement) the robot have?



Please answer how much it is represented in the figure above. *
Movie(TrainingVideo)

	①	②	③	④	⑤
How much does the degree of vitality (excitement) the robot have?	○	○	○	○	○

How confident (dignified) is the robot?



Please answer how much it is represented in the figure above. *
Movie(TrainingVideo)

	①	②	③	④	⑤
How confident (dignified) is the robot?	○	○	○	○	○

Was the robot's mood in the video easy to read? *

	0	1	2	3	4	5	6	
Not expressive at all.	○	○	○	○	○	○	○	Very expressive.

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Start of questionnaire.

The questionnaire starts here.
You can watch the video as many times as you like.
You cannot change past answers after moving the page.

What time is it now? (hour/min/sec) *
Please put '00' in section of 'sec'

時間 分 秒

__ : __ : __

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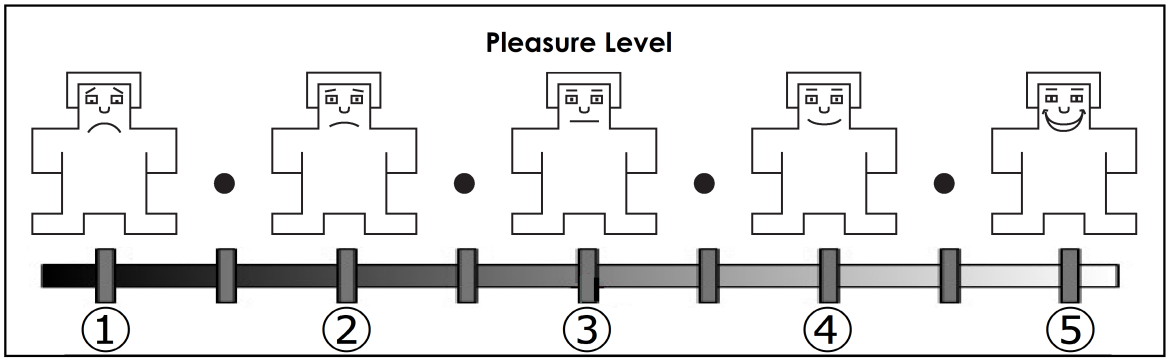
Test Question 3PrrrWH

This is for the actual survey.
You can play the video as many times as you like, but you cannot change the answer after going to the next page.
Please refer to the figure above the question as a guide to the strength of your emotions.

3PrrrWH

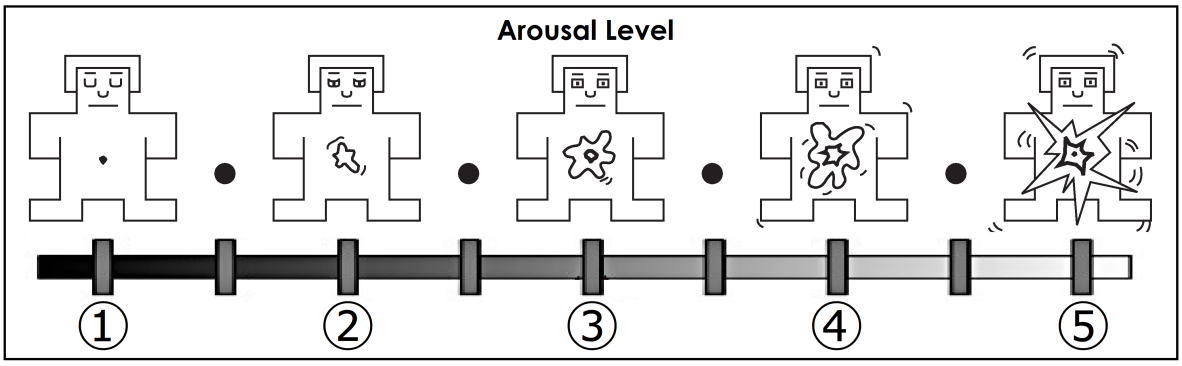
Is the robot's mood positive or negative?



Please answer how much it is represented in the figure above. *
Movie(3PrrrWH)

	①	②	③	④	⑤
Is the robot's mood positive or negative?	○	○	○	○	○

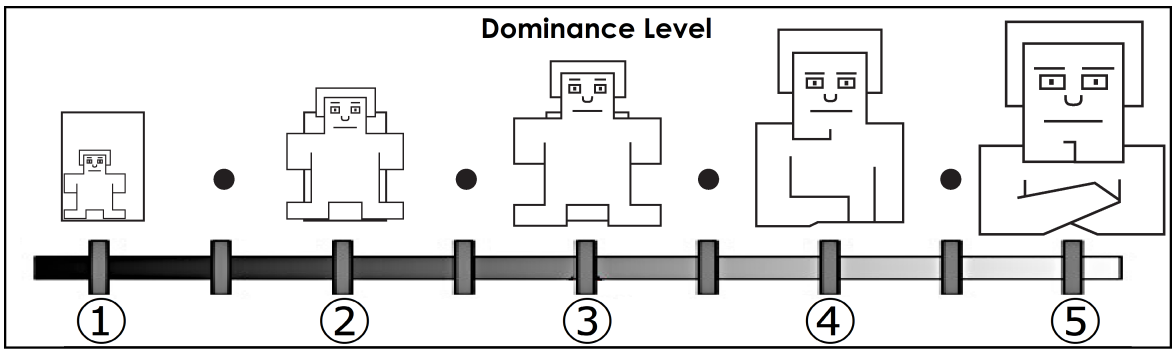
How much does the degree of vitality (excitement) the robot have?



Please answer how much it is represented in the figure above. *
Movie(3PrrrWH)

	①	②	③	④	⑤
How much does the degree of vitality (excitement) the robot have?	○	○	○	○	○

How confident (dignified) is the robot?



Please answer how much it is represented in the figure above. *
Movie(3PrrrWH)

	①	②	③	④	⑤
How confident (dignified) is the robot?	○	○	○	○	○

Was the robot's mood in the video easy to read? *

	0	1	2	3	4	5	6	
Not expressive at all.	○	○	○	○	○	○	○	Very expressive.

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Please answer following questions

There are 15 questions

I like to talk. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I like being busy. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I am healthy and active. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I don’t worry about many things. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I usually don’t get hurt (emotionally). *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I rarely feel nervous. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I have a lot of imagination. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I am flexible. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I am curious. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I like to plan. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I work hard on issues. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I respect rules and promises. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I think from other’s perspectives. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I like to collaborate with others. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

I like to communicate my feelings. *

	1	2	3	4	5	
Disagree	○	○	○	○	○	Agree

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Comments and opinions

The question is almost over! If you have any opinions or suggestions regarding the research, please let us know. Your opinions will be used for future research.

Was it difficult to answer the question? *

	0	1	2	3	4	5	6	
Easy	○	○	○	○	○	○	○	Difficult

Please let us know if you have any other opinions or comments.

回答を入力

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That's all for the questionnaire.
Questionnaire Code : GVlab2021

Thank you for your cooperation.

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