Development of Japanese and American Gaze Behaviors for Robots and Virtual Agents, and Evaluation of Human Impressions
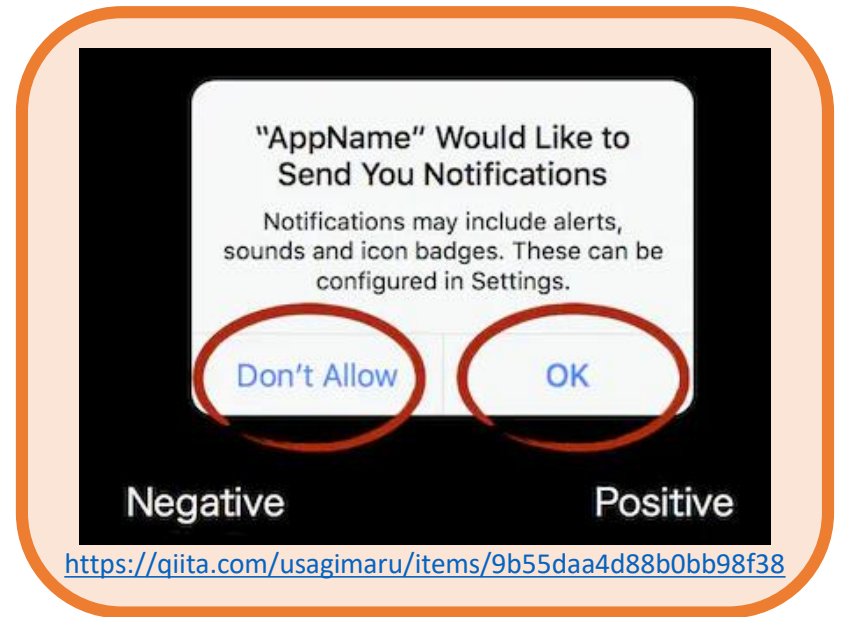
by
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What is **human-interface?**

Studies hardware and software that is easy to use for people

"AppName" Would Like to
Send You Notifications

Notifications may include alerts,
sounds and icon badges. These can be
configured in Settings.

Don't Allow | OK

Negative | Positive

https://qiita.com/usagimaru/items/9b55daa4d88b0bb98f38

BackGround

Recently this field has **increased opportunities** to people

communicate with **robots** or **agents**.

https://www.appps.jp/284669/

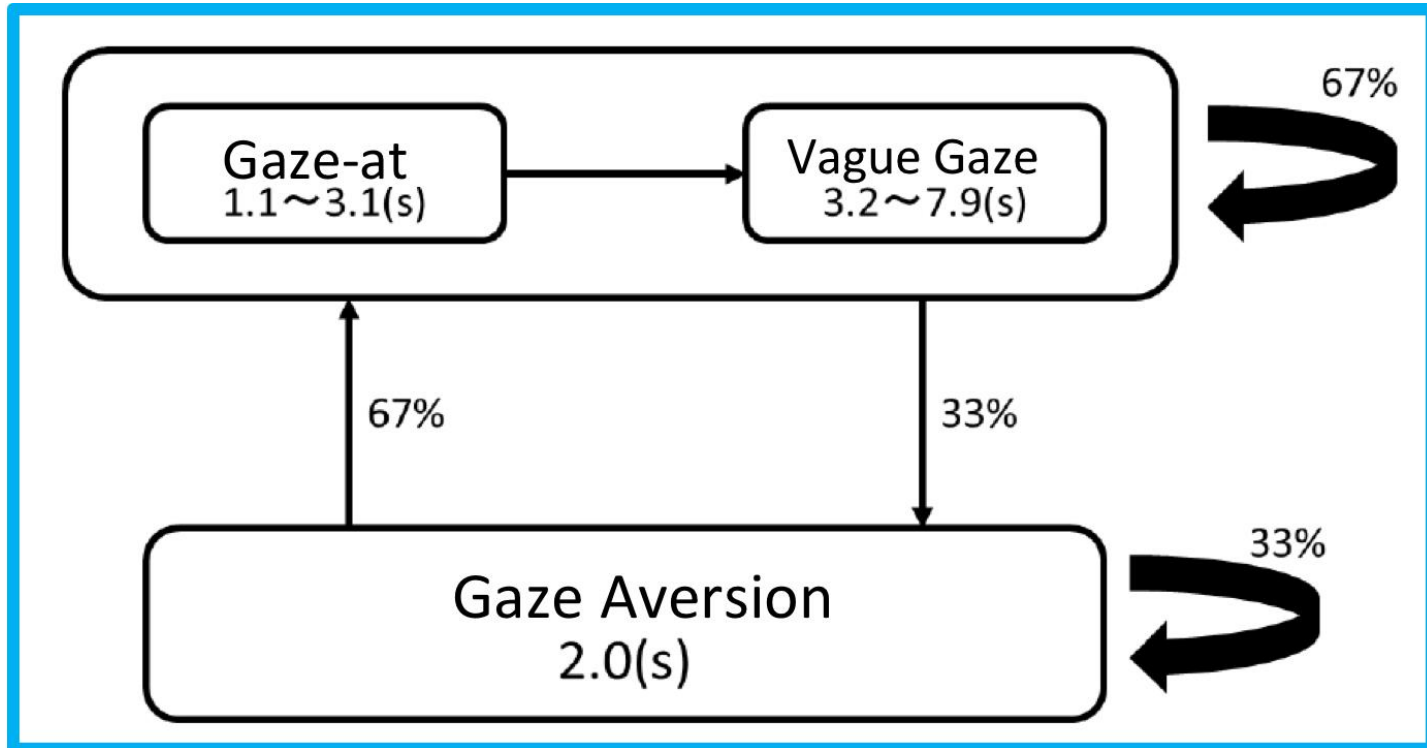https://robotstart.info/2018/08/31/gatebox-homelive-2.html
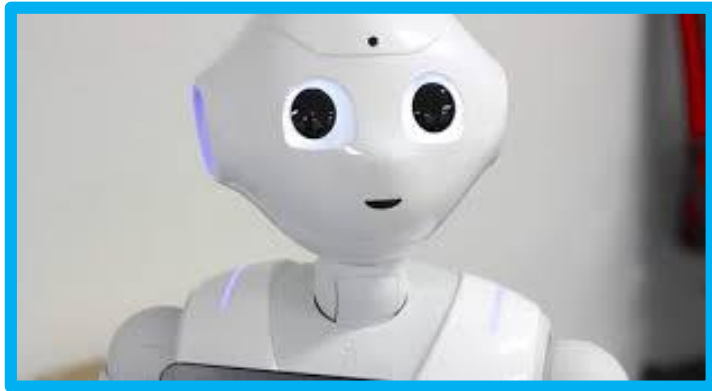
People don't feel like these have **intelligence** or **social ability**

and are **discouraged to interact with them**

Gaze Model

Two types of gaze models

Japanese gaze model   **American gaze model**

Fig. 1: The model of Japanese and American Gaze

Gaze Model

Japanese gaze model

Gaze Model

Japanese gaze model

Japanese people **look at the person**
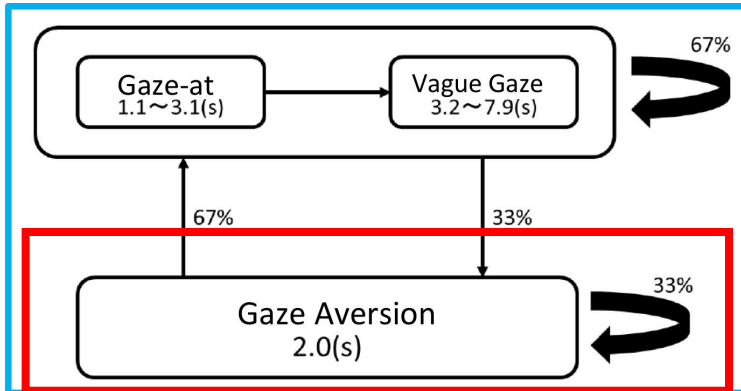they are speaking to from **1.1** seconds to **3.1** seconds
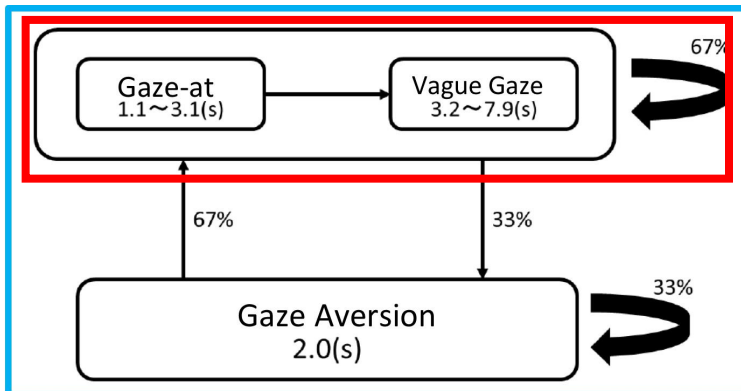
Vague Gaze
 the gaze is not direct eye contact
 but is directed at the person's face or body
  3.2 seconds to **7.9** seconds

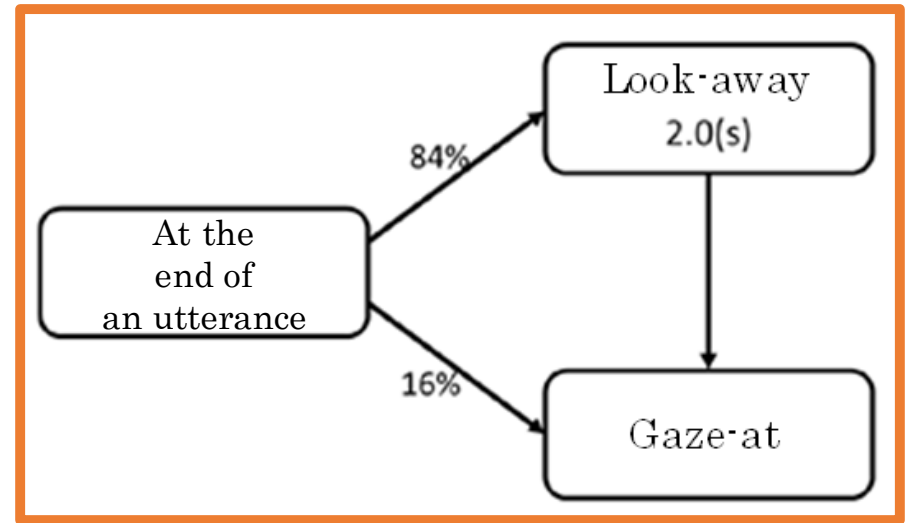**67%** chance that people
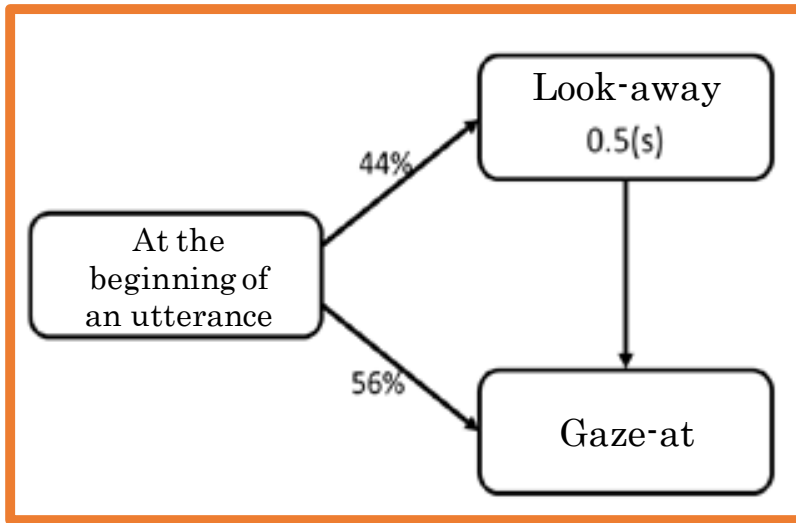return to gaze directly at the person

Gaze Model

Japanese gaze model

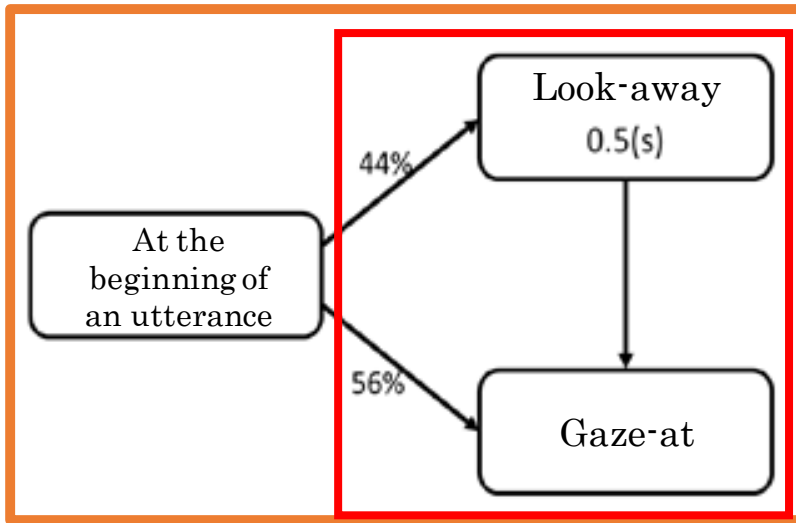
33% chance that they avert their gaze for **2** seconds

Gaze Model

American gaze model
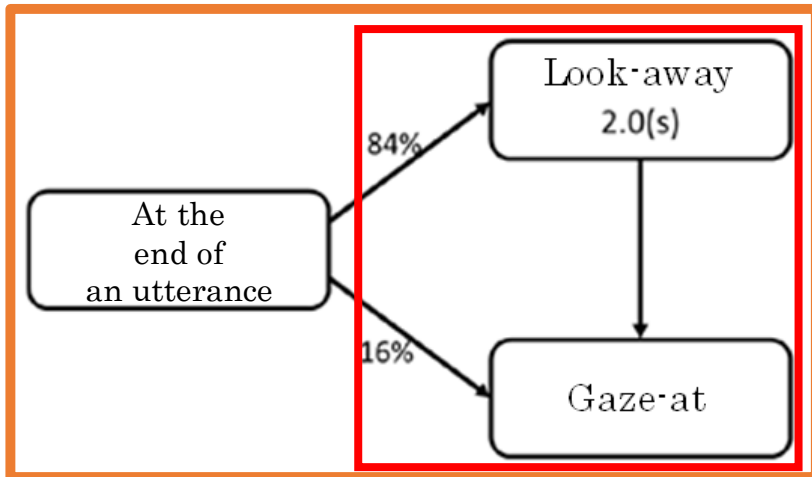
Gaze Model

American gaze model

there is a **44%** chance that they look away for **0.5** seconds or gaze at the person
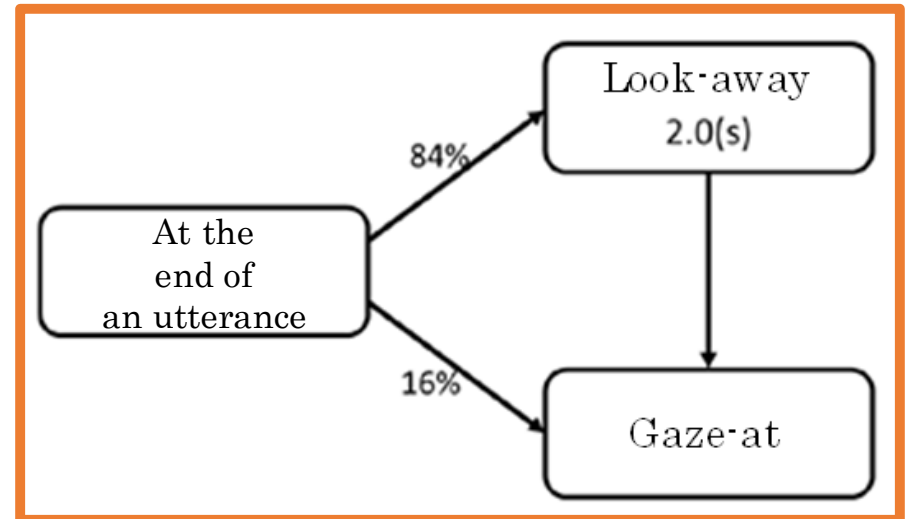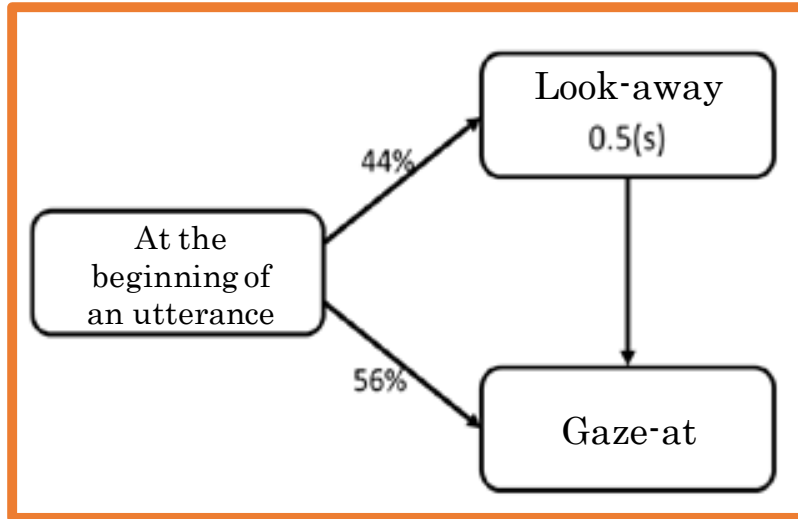
Gaze Model

American gaze model

there is an **84%** chance to look away for **2** seconds and then gaze at the listener

Gaze Model

American gaze model

In the US and the UK, they are taught to look someone in the eye when speaking.

This is one of the **reasons** of this **gaze behavior**.

Method

CommU   **Ryota**

Fig. 2: The robot and virtual agent

Method

CommU

Communication robot

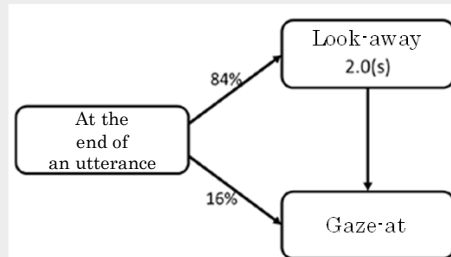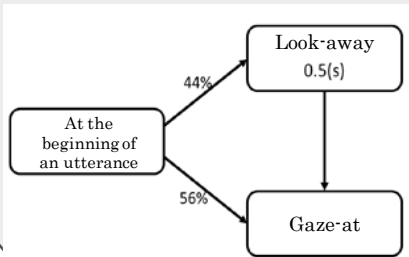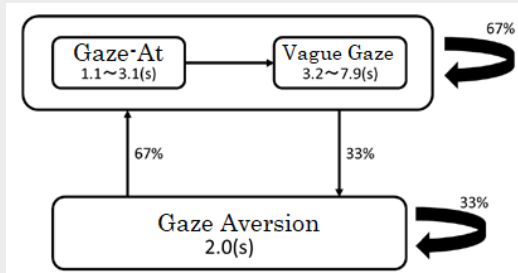CommU can **interpret reactions**

developed by Vstone

Method

Ryota

Virtual agent of Unity

Can make **a human behavior**

Method

Two types of gaze models

https://thiscalifornianlife.com/2018/12/18/java11-01/

https://ja.m.wikipedia.org/wiki/C_Sharp