

## Unit 1

## The Uncanny Valley

不気味の谷

**Scanning for Useful Words & Phrases**

本文から以下の文を探し、空所の語を書きなさい。さらに文全体の意味を言いなさい。

1. Such an object both \_\_\_\_\_ and \_\_\_\_\_ us until, eventually we reject it altogether.
2. Jentsch said that an uncanny object \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ two different feelings.
3. What \_\_\_\_\_ the Uncanny Valley reaction?
4. Some have \_\_\_\_\_ it to the feeling we get when we look at the dead.
5. Evolutionary psychology \_\_\_\_\_ another possible explanation.
6. Today, designers of video games \_\_\_\_\_ \_\_\_\_\_ take Professor Mori's advice.

**Skimming for the Main Ideas**

以下の質問に日本語で答え、本文の各パラグラフの主題を捉えなさい。

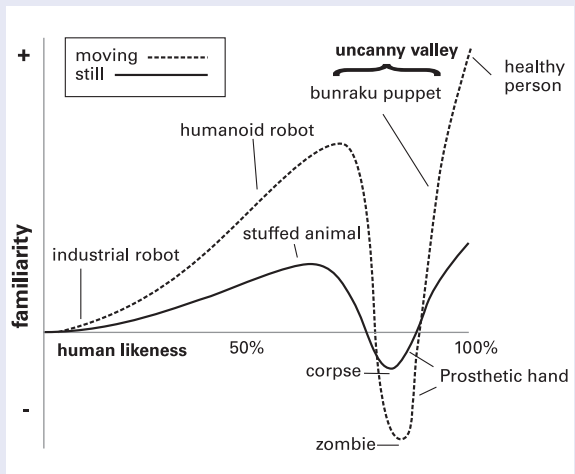
1. What kinds of feeling does an uncanny object cause?
2. What is the Uncanny Valley?
3. What happens to the observer as an object becomes more human-like?
4. Is there more than one possible explanation for the Uncanny Valley?
5. What other scientific field can help explain why the Uncanny Valley takes place?
6. What was Dr. Mori's conclusion?

## Reading

1 Something that is uncanny is especially disturbing. It causes feelings of dread or disgust, as if it were not quite human or from another world. Sigmund Freud, the Austrian psychoanalyst, described the uncanny in a 1919 essay. It is the feeling we experience when we see an object that is both familiar and foreign. Such an object both attracts and repulses us until, eventually, we reject it altogether.

2 The Uncanny Valley is a theory about how we feel when we see a human-like robot or character in a computer game. The concept was formulated in the 1970s by Japanese roboticist Masahiro Mori. Dr. Mori found the inspiration for his ideas in an essay by Ernst Jentsch. Jentsch said that an uncanny object gives rise to two different feelings. The first is doubt about whether an animate being is really alive. The second is the feeling that a lifeless object might actually be alive. Dr. Mori developed Jentsch's hypotheses into a full-fledged theory.

3 The phenomenon is best explained as follows: When an object is only slightly life-like, its more human features and characteristics stand out to the observer. This creates emotional sympathy for it. But the more human the object becomes, the more apparent its "zombie-like" features become. These generate feelings of weirdness and disgust. When plotted on a graph, this point takes the shape of a steep, deep valley.



4 What causes the Uncanny Valley reaction? Various ideas have been suggested. Some have compared it to the feeling we get when we look at the dead. The flaws of humanoid robots remind us of the "creepy" imperfections of a corpse. Another possible explanation is that a robot's flaws make us think of abnormalities caused by physical and mental disability. These have always caused an instinctive feeling of fear and disgust in us.

5 Evolutionary psychology offers another possible explanation. Some

robots or animated computer game characters are so life-like that they seem to be part of the human species. But evolution has given us specific “survival” mechanisms for recognizing something “wrong” in other humans’ faces. Thus, a life-like, computer-generated entity’s slight differences from the real tell us that something isn’t quite right about it. These flaws could indicate genetic disorders or disease. This would mean that the entity is unsuitable for reproduction. It could even be a threat to the human gene pool. Most people find the idea of sexual activity between human-like characters particularly disgusting. This evolutionary response could help explain why.

6 Dr. Mori reached the conclusion that robot designers should not work too hard to make their creations too human in appearance. Today, designers of video games might well take Professor Mori’s advice. The more realistic these games become, the more likely they are to fall into the Uncanny Valley. As Clive Thompson of Slate magazine says: “The Uncanny Valley can make games less interesting.” Just when gamers get caught up in the action, they begin to detect flaws in their avatar. They begin to see it as a “strange parody of humanity.” It is at that moment, says Thompson, that gamers become disgusted and lose interest in the game itself.



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NEDO 技術開発機構の「次世代ロボット実用  
化プロジェクト」の一環で（株）ココロが開発

## Notes

the Uncanny Valley 不気味の谷 Sigmund Freud シグムント・フロイト (1856-1939)、精神分析学を樹立した精神医学者 full-fledged 成熟した、本格的な zombie-like ゾンビのような creepy imperfections 身の毛がよだつような不完全さ gene pool 遺伝子プール（給源）。同じ種の集まりが持つ遺伝子の総量のこと。遺伝子プール内の各遺伝子の比率の変化が進化と見なされる avatar ユーザー自身の分身としてコンピューターゲームなどの画面に登場するキャラクター Slate 1996年に創刊されたウェブ上の日刊誌

