

## [Part1]あなたの心が読める／ビジネス応用にあやうさも



カーネギーメロン大教授のマーセル・ジャスト / photo:Nakagawa Hitoki

「テントの後」にジャガイモ「洞窟の後」にブドウ」。スパコンが、次々と単語を読み上げた。ある男性が見た単語の順番を、脳の血流の変化から推測して、男性の「心を読んだ」というのだ。

「10問中、全部正解だった」。米カーネギーメロン大教授のマーセル・ジャスト（66）が説明した。

ジャストによると、単語を見たり、考えたりすると、その意味に関係する脳の部分が活発になる。「赤いリンゴ」なら食や赤色などに関係する部分、手で動かす「鉛筆」なら手の動きなど運動に関係する部分の活動量が増える。

まだ、「嫉妬」といった複雑な感情や長い文章は推測できない。それでも、「脳が反応する部分は、言語や文化が共通する人なら、ほとんど同じ」。こうしたデータを蓄積すれば、ある程度なら、脳の反応から、どんな単語を考えたかが分かるという。

脳の研究が進むにつれ、人の内面と脳との関係が少しずつ見えてきた。「何を考えているのか」「なぜ行動したのか」「どれが好きか」……。

近い将来、脳活動のデータが知らぬ間に使われて、あなたの心の中が勝手にこのぞかれるかもしれない。脳波は、病気の検査のほか、ボールを操るようなゲームでも使われる時代になった。

### English Translation

"A potato after a tent," "grapes after a cave." The supercomputer read each word aloud one after another. What the computer was doing is "mind reading": reading what the man was thinking about based on the blood flow.

"All were correct, 10 out of 10," said, Dr. Marcel Just, a professor at Carnegie Mellon University.

According to Dr. Just, when we see or think about a word (or words), the brain regions which relate to the meaning of the words get activated. For example, if we see a phrase, "a red apple," the brain regions for "red" and "eating" will get activated. If we think about "a pencil," the brain regions for motor related areas, particularly for hands, will get activated.

Yet, complex feelings (such as "jealousy") or long sentences are difficult to "mind read." However, "the activated brain areas for the particular words will be approximately the same among people who are the same language and culture," said Dr. Just. This means that, in the future, it will be possible to understand what the person is thinking about based on brain activity, if data for each word were collected from a large number of people.

With the advancement of technology and research, we are starting to understand the relationships between mind and brain. "What is s/he thinking about?" "Why did s/he do that?" "Which one does s/he like?"

In the near future, it is very possible that your own mind will be accessed without your knowledge, if such data of your brain activities were ill-treated. The time of using brain waves only for medical purpose is past. Now we are using them for games such as manipulating a ball.