

How 'wi-fi' connects human
brains and explains why
people have 'gut feelings'
about which politicians are
corrupt

Humans may be more connected to each other than they think

[Sarah Knapton](#), SCIENCE EDITOR

Humans brains are interconnected through type of 'wi-fi'

which allows us to pick up far more information about other

H people than we are aware of, a leading professor claims.

Prof Digby Tantum, Clinical Professor of Psychotherapy, at the University of Sheffield, believes that language plays only a part of in how humans communicate and that actually the brain is working hard to pick up tiny micro-signals that communicate what a person is thinking.

It explains how people often have a ‘gut feeling’ or intuition about a person or situation even if they cannot logically determine why.

And it may be the reason why commuters find it so difficult to maintain eye contact on a busy train. Too many people overloads the brain with too much subliminal information.

In addition, it may also explain why laughter is infectious.

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Prof Tantom describes the phenomenon as ‘The Interbrain’ and outlines the theory in a new book of the same name.

“We can know directly about other people’s emotions and what they are paying attention to,” he said. “It is based on the direct connection between our brains and other people’s and between their brain and ours. I call this the interbrain.

“One of its advantages is that the connection exists in the background. We take it for granted unless it is brought to the surface of our minds.

“People with autism have little or no interbrain connection. They are often able to pick up or learn what expressions mean and yet that doesn’t seem to solve the problem of that lack of human connection.”

Prof Tantom believes that the communication between brains may happen as an ‘inadvertent leak’ and it may be linked to smell. Areas of the brain which have the most

activity of neurons are located in the prefrontal cortex, and are linked with smelling. They also are situated where they follow the gaze.

Slight changes in a person's chemistry could, for example emit molecules which signal fear, illness or sexual arousal even if they are not saying or doing anything to suggest those states.



“The input from the eyes gets carried to the back of the brain for processing but the receptors in the nose contact a thin extrusion of the brain tissue directly,” added Prof Tantom.

“The area of the brain that is closest to the nose is the orbitofrontal cortex. It might be there because so many of our most basic connections to other people are via smell.”

Prof Tantom also argues that the interbrain is the reason people are drawn to religions or feel the need to come together in huge crowds at football matches or concerts.

“The experience of transcendence is one and this might be the root of spirituality and indeed what many people would consider the meaning of life,” he said.

“Being in crowd mode may also make us experience what it would be like to transcend our perspective, our time, our

place and our capacity, to feel for a moment, like a driving being.

It also may explain why some people commit atrocities like murder and terrorism. The book argues that feelings of hate, disgust, rage and contempt effectively switch off the interbrain, making it impossible to see a situation from another person's point of view.

However Prof Tatum believes the internet could have a damaging effect on such communication, which has evolved over millions of years, and what probably sets humans apart from other animals

“The face looking at you in the video chat is the face of someone seconds before,” he said. “Even if you and they have excellent bandwidth connection it is their face milliseconds before.

“Emotional contagion occurs at the speed of light, not the speed of electronic transmission. Face-to-face visual input is accompanied by sound, by gesture, by the smell of sweat, by the possibility of touch, and by a connect.

“So what is lacking in this vast network is an interbrain connection between its human participants.”