Think you are an excellent driver? Think your pav is the best? Odds are, you think you are above average. But odds are, you are not. And you're not alone. Turns out, the majority of people have this so-called "Superiority Illusion." It's what gives us optimism, confidence, motivation, and hope for the future. It is a human thing, and a pretty good one at that. Negative thoughts about one's self are associated with depression, so the superiority illusion is a biologically built-in safeguard of good mental health. In fact, if we could just figure out how it is created within the brain, we might be able to tweak it in order to improve mood or cure depression.

Several years ago, Neuroscientists identified the parts of the brain that are important for the superiority illusion, but how these parts of the brain work together to create the illusion has remained mysterious, until now. In order to understand what is going on, researchers reasoned that the brain areas that generate the superiority illusion must be "talking" to one another in some way. To see if this was true, they used psychological tests to determine the strength of the superiority illusion in study participants. This was followed with functional magnetic resonance imaging (fMRI), a powerful technique that can measure active brain connections. As expected, the researchers found that the brain areas involved with the superiority illusion were indeed communicating with one another. Surprisingly, they also found that the stronger the connections – the louder the brain areas talked, or even shouted, at one another – the weaker the superiority illusion.

Seems odd, doesn't it? It's as if something in the system is behaving opposite to what we think. It seemed odd to the researchers too, so they did another experiment. To sort out why strong connections result in a weak superiority illusion, they looked at a chemical messenger, called dopamine (pronounced: Dope-uh-mean), that brain cells use to talk to one another. They reasoned that dopamine might moderate the communication between these brain areas, in effect taking down the volume to an understandable level. And this is exactly what they found. People with a normal superiority illusion show a balance between the strength of the connections and the levels of dopamine. Some people have strong connections, so there is more dopamine to moderate them; whereas other people have weaker connections, so there is less dopamine.

The great thing about this is that we can now predict that people with depression would have an imbalance between the strength of their connections and the amount of dopamine. If proven, it may be an opportunity to improve mental health by altering a person's dopamine to balance their connections.

REFERENCE: Yamada M et al (March 2013) "Superiority illusion arises from resting-state brain networks modulated by dopamine." Proceedings of the National Academy of Sciences, USA vol 10: 4365-4367.