

Title - **Telecommunications and Decussation (Non-evolutionary Explanation of Nerve-Fibre Crossing)**

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Abstract -

This is just a couple of short pages seeking an answer to a problem I've wondered about for years and years - Why do nerve fibres cross from one side to the other so that the hemispheres of the brain control the opposite halves of the body? I never felt satisfied by the conventional evolutionary explanations. A recent experience allowed me to frame another explanation – from the world of telecommunications.

Content –

The word "decussate" means "to cross in the form of the letter X" (it comes from Latin meaning "divided in the form of an X"). Applying it to the nervous system, David Le Vay (M.S., F.R.C.S.) says in "Anatomy" - English Universities Press, 1965, pp.253-254 - "... an invariable principle (of nerve-fibre pathways) is that of crossing or decussation; at some point, usually in the brain stem, the fibre tracts cross completely from one side to the other so that the sensory and motor regions of the brain control the opposite halves of the body."

The most popular explanation for why this occurs is the "somatic twist" hypothesis of evolutionary biologists and neuroscientists. This says that in the course of evolution from invertebrate to vertebrate, the nerve cord moved from the ventral side (side towards the belly) to the dorsal side (side towards the back). It is believed that in this process, the decussation arose with a 180° shift with respect to the brain.

(Kinsbourne, M. [Sep 2013]. "Somatic twist: a model for the evolution of decussation." - *Neuropsychology* 27 [5]: 511–5, and Dixon, A. Francis [31 May 2014]. "Why are the great motor and sensory tracts of the central nervous system crossed?" - *The Dublin Journal of Medical Science* 124 [1]: 1–4.)

Albert Einstein showed that space-time is curved and warped, so it's possible that our own computer science (and terraforming, and biotechnology from many centuries in the future) found its way into the remote past. In "Custom Universe – Finetuned For Us?" (Australian Broadcasting Corporation's TV program "Catalyst", August 29 2013), Dr Graham Phillips said, "(The physicist and writer) Paul Davies thinks the universe is indeed fine-tuned for minds like ours. And who fine-tuned it? Not God, but minds from the future, perhaps even our distant descendants, that have reached back through time ... and selected the very laws of physics that allow for the existence of minds in the first place. Sounds bizarre, but quantum physics actually allows that kind of thing."

So could there be a non-evolutionary explanation of decussation?

A week or so ago, my mobile phone stopped being able to send text messages (though it could still receive them). I couldn't fix the problem so I bought another mobile (a smartphone, because the extra capabilities have long impressed me) This couldn't send messages either but could receive. I turned on my computer and had a Live Chat with Janice, Richard and Eileen from the supplier of both phones, Telstra. It turns out that a Customer Service number in the settings of my new phone was incorrect (it should have started with the sign + but it didn't). When this problem was fixed, I discovered that my original phone was now working normally in every way (a real puzzle to me).

While chatting to Telstra, the SIM card for my new phone was being activated by them. They said the new account would, to make things easier, be linked to the account for the old phone. Does this link mean that changing the number in my new phone's settings also changed the same number in the old phone's settings, correcting the original trouble and allowing that old phone to now send texts (maybe there had been a slight corruption of the original data, and the old phone stopped sending messages until settings in the new one were corrected).

In a similar way, nerve fibres are linked by physically crossing. They could then influence each other and "make things easier" i.e. act more efficiently than if they were parallel. Incidentally, those two phones had their own taste of decussation. Not wanting to change my number when the new phone was bought, I removed the SIM card from my old phone and put it in the new one. And the card that was posted with the new phone was, after it was activated, inserted in the old phone.