

Biology, fundamentalism and brain damage

Please consult the papers:

Biological and cognitive underpinnings of religious fundamentalism, Zhong, W., Cristofori, I., Bulbulia, J., Krueger, F. and Grafman, J. (2017). Biological and cognitive underpinnings of religious fundamentalism, *Neuropsychologia*, 100; 18-25. doi:10.1016/j.neuropsychologia.2017.04.009.

It seems that patients who have suffered trauma to their pre-frontal cortex are probably going to get fundamentalist and rigid in their religious and political beliefs simply by registering extreme and dangerous religious and political beliefs as reasonable and moderate when they are anything but.

Another problem is that empirical beliefs – eg beliefs you can test for yourself – need to get discarded or fixed as you test them. You may think holy water cures your flu until you realise you are using it and not getting better. Beliefs that are not testable in that way such as the existence of God or the love of Jesus tend to get rigid as there is no test that can help you drop them or update them if they are wrong.

Damage leads to a degree of social impairment which in turn helps the beliefs get fixed and rigid. A truly social person learns from others even in religion or spirituality.

The study was done on male Vietnam veterans who were found through CT scans to have had damage through bullets or shrapnel.

The conclusions were that the fundamentalism arose from a coping mechanism and there is damage to their brain intelligence. However this was not strongly proven and remains an indicator of a link rather than a strong link.