

fighting does, of course, still take place from time to time, but only as a last resort, when aggressive signalling and counter-signalling have failed to settle a dispute. The strength of the outward signs of the physiological changes I have described indicates to the enemy just how violently the aggressive animal is preparing itself for action.

This works extremely well behaviourally, but physiologically it creates something of a problem. The machinery of the body has been geared up for a massive output of work. But the anticipated exertions do not materialise. How does the autonomic nervous system deal with this situation? It has mustered all its troops at the front line, ready for action, but their very presence has won the war. What happens now?

If physical combat followed on naturally from the massive activation of the sympathetic nervous system, all the body preparations it had made would be fully utilised. The energy would be burned up and eventually the parasympathetic system would reassert itself and gradually restore a state of physiological calm. But in the tense state of conflict between aggression and fear, everything is suspended. The result is that the parasympathetic system fights back wildly and the autonomic pendulum swings frantically back and forth. As the tense moments of threat and counterthreat tick by, we see flashes of parasympathetic activity interspersed with the sympathetic symptoms. Dryness in the mouth may give way to excessive salivation. Tightening of the bowels may collapse and sudden defecation may occur. The urine, held back so strongly in the bladder, may be released in a flood. The removal of blood from the skin may be massively reversed, extreme pallor being replaced by intense flushing and reddening. The deep and rapid respiration may be dramatically interrupted, leading to gasps and sighs. These are desperate attempts on the part of the parasympathetic system to counteract the apparent extravagance of the sympathetic. Under normal circumstances it would be out of the question for intense reactions in one direction to occur simultaneously with intense reactions in the other, but