

### James-Lange Theory of Emotion

The autonomic nervous system is known to be linked integrally to emotions.

In his classic description of the adrenal response, Walter Cannon suggested that the autonomic nervous system served rather like a support system.

An emotion-provoking stimulus triggers the appropriate emotion and thence the autonomic nervous system (ANS) into action such as fight or flight.

In contrast, William James (1890) proposed an alternative view in which the ANS response is directly triggered by the stimulus and the emotional experience in fact lags behind, depending on a 'reading' of the autonomic reaction.

Rather simplistic representation of this theory might be that someone is 'fearful because he is running from a bear'.

Cannon attempted to contradict James' view by pointing out various flaws in the argument, such as the fact that paralysed people with loss of sensation still experience the full range of emotions.

The fact that, at the time (1927), Cannon was the leading physiologist in the world, whereas James was merely a gifted writer and psychologist, meant that Cannon's view prevailed.

However, some of Cannon's objections have since been rendered invalid by our increasing understanding of the ANS.

For instance, patients who are paralysed and have lost 'somatic' sensation, still retain an active ANS (in fact, often, it becomes hyperactive). These patients report a lack of emotional intensity, such as feeling 'as if' they were angry.

So in fact, we are now aware that the ANS, and thus a number of physical sensations, has an intimate link with our emotions; in fact, it is a two-way street.

Note that we can become 'conditioned' in our responses to pain and other stimuli. Previously neutral stimuli paired with aversive events can evoke fear and other negative emotions.

In essence, we 'learn' our response to pain over a period of time, and it can become ingrained.