Affective Science: Unlocking the Mysteries of Human Emotion

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Affective science is the scientific study of emotion or affect. This includes the study of emotion elicitation, emotional experience and the recognition of emotions in others. In particular the nature of feeling, mood, emotionally driven behaviour, decision making, attention and self-regulation, as well as the underlying physiology and neuroscience of the emotions.

Discussion

An increasing interest in emotion can be seen in the behavioral, biological and social sciences. Research over the last two decades suggests that many phenomena, ranging from individual cognitive processing to social and collective behavior, cannot be understood without taking into account affective determinants (i.e. motives, attitudes, moods, and emotions). Just as the "cognitive revolution" of the 60s spawned the "cognitive sciences" and linked the disciplines studying cognitive functioning from different vantage points, the emerging field of affective science seeks to bring together the disciplines which study the biological, psychological, and social dimensions of affect. In particular affective science includes psychology, neuroscience, sociology, psychiatry, anthropology, ethology, archaeology, economics, criminology, law, political science, history, geography, education and linguistics. Research is also informed by contemporary philosophical analysis and artistic explorations of emotions.

The major challenge for this interdisciplinary domain is to integrate research focusing on the same phenomenon, emotion and similar affective processes, starting from different perspectives, theoretical backgrounds, and levels of analysis. As a result one of the first challenges of affective science is to reach consensus on the definition of emotions. Discussion is still ongoing as to whether emotions are primarily bodily responses or whether cognitive processing should be placed central. Controversy also concerns the most effective ways to measure emotions and conceptualise how one emotion can differ from another. Examples of this include the dimensional models of Russell and others, the emotion wheel of Plutchik, and the general distinction between basic and complex emotions.

Measuring Emotions

Whether scientific method is at all suited for the study of the subjective aspect of emotion, feelings, is a question for philosophy of science and epistemology. In practise, the use of self report (i.e. questionnaires) has been widely adopted by researchers. Additionally, web-based research is being used to conduct large-scale studies on the components of happiness for example. Alongside this researchers also use fMRI, EEG and physiological measures of skin conductance, muscle tension and hormone secretion. This hybrid approach should allow researchers to gradually pinpoint the affective phenomenon.

Affective display

A common way to measure the emotions of others is via their emotional expressions. These include facial expression, vocal expression and bodily posture. Much work has also gone into coding expressive behaviour computer programmes can be used to read the subject's emotion more reliably. The model used for facial expression is the Facial Action Coding System or 'FACS'. An influential figure in the development of this system was Paul Ekman. For criticism, see the conceptual-act model of emotion.

These behavioural sources can be contrasted with language descriptive of emotions. In both respects one may observe the way that affective display differs from culture to culture.