

Module: Psychological Foundations of Mental Health

Week 3

Introduction to emotion and emotional processing

Topic 1

Nature of emotion – Part 1 of 3

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Lecture transcript

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I would like you to complete an introductory assignment before the lecture. I would like you to spend five to 10 minutes answering the questions on the screen. We are going to practice using introspective techniques. These are techniques used historically by philosophers of mind and psychologists to learn from their own experiences by turning their thinking inward to their own mind and behaviour.

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For what seem to be very simple questions about phenomena that we experience often, it is difficult to get to the bottom of what emotions are and what their defining characteristics are. Researchers and academics from different disciplines agree that there are various components and features of emotions. But they disagree in what the defining central characteristics of these emotions are.

Having said that, most perspectives would agree that there needs to be a stimulus or eliciting event, something that provokes a change in equilibrium of experience. This can be an external stimulus, seeing a car speeding towards you, or an internal stimulus, the memory of your partner cheating on you with someone else. The stimulus could signal something real and objective, such as the car speeding towards you. Or it could be a subjective evaluation of the potential consequences of a situation, such as anticipating winning the lottery.

However, what then defines the emotion? Are they a conserved set of expressive behaviours that serve an adaptive function? Or do they represent a set of sociocultural rules and responses that have been internalised? And should they be defined by a subjective feeling state, a change in the state of consciousness, or by physiological body responses?

Finally, what drives the feelings of emotions? Changes in brain processing that are automatically activated in response to an emotion eliciting stimulus? Or a more conscious reappraisal of a situation?

We can see that there are, indeed, different perspectives on what the defining characteristics of emotions are.

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A neuroscience perspective would consider that the set of behaviours, physiological responses, and subjective states result from a cascade of events coordinated by the nervous system that have evolved to ensure survival.

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Neuroscientists would specify that these neural events emerge in response to various events involving punishments and rewards.

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Edmund Rolls provided a working definition of what a punishment and reward is in his book *The Brain and Emotion*. “A reward is anything for which an animal will work, while a punishment is anything an animal will work to avoid and escape.”

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He further goes on to argue that specific emotions can be defined on the basis of whether they involve the presence of reward and punishments. Thus, happiness is a set of behavioural, bodily, neural, and cognitive responses to the presence of a reward, for example, winning money or being praised. And its role is to facilitate an approach to such rewards, because they are beneficial.

In contrast, fear is an emotion state elicited by the presence of a punishment. Its role is to facilitate escape or avoidance. Rolls also suggests that emotions result from the termination and reduction in the likelihood of rewards or punishments. Thus, anger is felt when there is a termination of a reward, whereas relief is felt when a punishment is no longer present.

Can all emotions conform in this way to the mere presence or absence of a reward or punishment? Rolls would say yes, but that different emotions could reflect differences between individuals in their habitual responses. So while some may feel anger towards termination of a reward, others may feel sad. But nonetheless, both occur in response to the same trigger.

Rolls also would argue that what we call different emotions are actually the same in nature, but that they differ in intensity. So fear, apprehension, and terror all emerge in the presence of a punishment, but vary in their intensity. Finally, Rolls also makes some interesting points about whether hunger and pain conform to these definitions, and you will read more about those and discuss them in the discussion forum.

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In contrast to the neuroscientific perspective, a social constructivist perspective would suggest that emotions are learned rules in response to sociocultural norms. However, as behaviours associated with many basic emotions are shown by other species, and there is a conserved brain circuitry for expression of basic emotions, such as fear and pleasure, suggests that emotions have evolved to facilitate survival.

Another piece of data that would argue against the social constructivist approach is that the way in which basic emotions are expressed is universal. Paul Ekman did a lot of work on this, showing that people from different cultural backgrounds, even preliterate cultures in New Guinea, who had not been exposed to mass media presentations of facial expression, were still able to link faces displaying particular emotions appropriately with what was happening in a story that they were being told.

These data, together with many other studies, strongly suggest something that is biologically inherent about emotions. Yet it also cannot be denied that there are some cultural differences in the extent to which some emotions are expressed and managed, supporting the social constructivist approach.

For example, some of this work compared the facial expressions of Japanese and American

participants when viewing stressful films. It was found that Japanese participants displayed less intense emotions, particularly in the presence of a high status scientist from their own culture.

Also, there have been differences between Japanese and American participants in how intensely they rate emotional facial expressions. The American participants had higher mean intensity ratings than the Japanese for all emotions except disgust. Thus, it appears that there are some cultural effects on display rules, the way that emotions are managed and controlled in particular social settings.

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There is also disagreement over whether emotions are the consequences of physiological bodily responses or whether physiological bodily responses are the consequences of emotions.

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William James posed these alternatives through an interesting question. Do we run from a bear because we are afraid, i.e. the physiological bodily responses occur in response to an emotion? Or are we afraid because we run, i.e. do we only feel the emotion because of the physiological bodily responses?

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He himself then went on to argue the latter. "Our natural way of thinking about emotions is that the mental perception of some fact excites the mental affection called emotion and that this latter state of mind gives rise to the bodily expression. My thesis, on the contrary, is that the bodily changes follow directly the perception of the exciting fact and that our feeling of the same changes as they occur is the emotion."

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Finally, cognitive scientists would suggest that emotions occur in response to subjective appraisals of particular situations. So an ambiguous situation that resembles a threatening situation could be initially interpreted negatively and so instigate a cascade of subjective feeling, neural responses, bodily changes, and behaviours that are consistent with fear, but then, upon re-appraisal that the ambiguous situation is not actually dangerous, could then reduce the set of fear responses.