

A Conceptual Framework for Defining Emotion concepts

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To approach the problem of emotion, physiologists consider some physiological measures, and some AI researchers propose computational processes. Yet the problem remains. We may ask, are these things *emotion* or *emotional*? To determine what emotion is, we must, first of all, clarify what it is meant by "emotion". We argue that actually the concept of emotion and that of desire are one and the same. When we are talking of *thirst*, for instance, we are, by that very token, talking of the *desire to drink*. For illustration, we give some emotions in terms of the notion of desire:

feeling an itch: desiring to scratch;

feeling cold (hot): desiring to warm (cool) oneself;

feeling of fear: desiring to flee, or escape, etc.;

feeling of love: desiring to be with;

hate: desiring to make someone feel pain, die, etc.;
desiring to retaliate against someone.

pain (in the general sense of unpleasant feeling):
desiring, when P (a fact or a state of affairs) is true,
to do something as a result of which P will not hold;

pleasure: desiring to do what is being done.

"Desiring to scratch oneself (feeling an itch) when one is doing so" is an instance of pleasure. "Desiring to lying on a beach in the warm sun when one is doing so", is another instance. Where there is a kind of pleasure, there always exists a pattern of "desire to do... when... is being done". In fact, the concept of pleasure is just constructed out of this behavior pattern. With the definition of pleasure, the accounts for aesthetic feeling of beauty and aesthetic feeling of the sublime are given in this paper. Every emotion can be defined by characterizing what one desires to do when having the emotion.

By abstraction from the cases typically considered as desires, we obtain a type of formalism of desire. What is meant by "desire" can be characterized by $P \xrightarrow{d} a$ reading "whenever P is satisfied by a situation, the action a occurs", P specifying a set of situations that satisfies it. The action part a , which determines what action will be fired if a situation satisfies P , characterizes the desire's quality. The condition part P determines a desire's intensity; if, roughly speaking, Q specifies a stronger condition to be met than R , then $R \xrightarrow{d} a$ is stronger than $Q \xrightarrow{d} a$. As well, this definition for the concept of intensity of desire is obtained by the abstraction of what is meant by "... (desire) is stronger than ...". For illustration, we present an account of

the intensity of pleasure yielded when quenching. We demonstrated that the relation "stronger" thus defined satisfies 1) antireflexivity, 2) antisymmetry, 3)transitivity. It is a misconception that emotions have magnitudes in the sense in which physical quantities have. This misconception leads people to view some connected physical parameters as variables modulating or indicating, directly or indirectly, the intensity of emotion. The situation P may include the internal states of the subject. For example, when one feels hungry, one might take no action to eat even if some food is at hand, if one is on a diet; only with the hunger becoming strong enough one would eat the food.

Our paper demonstrates how the referents or semantic elements of mentalistic terms could be dismissed without appealing to neuron science, and quantum mechanics as well. One might agree that emotion causes desire, and desire causes action tendency as defined above, but not agree that they are identical. Behind this position may be the dualism. As Searle points out, it is tempting to think that whenever A causes B there must be two discrete events, one identified as the cause, the other identified as the effect; that all causation functions in the same way as billiard balls hitting each other. This crude model of the causal relationships between the brain and the mind inclines us to accept some kind of dualism. The view underlying our approach to meanings of those so called semantic primitives is that concepts are ultimately constructed out of the regularities of observable behavior, a view which can be traced back to Ryle. Now we shall give brief responses to some possible objections to our theory. One objection might be that for emotion (or desire) is the mental it cannot be defined in non-mental terms. Reply: Intelligence once was thought as the mental. Another objection might be that there are some emotions which are not clearly defined by a particular desire; for example, "excitement". Our answer is: Yes, but aesthetic feeling of beauty, aesthetic feeling of sublime and pleasure are such emotions too. When one experiences excitement, one experiences a pleasure and at the same time senses, say, one's heart pounding, the latter of which, sensing, is no emotion. In fact, our thesis can be stated as that an feeling is called "emotion" if and only it contains desires. We would prefer that our theory is considered as a theory of meaning rather than of emotion, if it is considered extreme.