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Emotions, Moods, and Conscious Awareness

Comment on Johnson-Laird and Oatley's "The Language of Emotions: An Analysis of a Semantic Field"

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Oatley and Johnson-Laird's (1987) general theory of emotions is built around the idea that there are five basic "emotion modes" (corresponding roughly to happiness, sadness, fear, anger, and disgust) that function as communicative signals within the information processing system so as to control the management of plans. They believe that these "basic" emotions underlie all emotional experiences, and that they alone can be experienced without conscious awareness of their causes. The main goal of the present paper is to explore what Johnson-Laird and Oatley (henceforth, J-L & O) take to be certain linguistic implications of their general theory, the most important of which concerns the diagnosticity of sentences of the form "I feel *x* but I don't know why", for identifying their basic emotions. Such sentences are acceptable, they say, when (and only when) *x* refers to one of their five basic emotions. They argue, for example, that whereas one can say "I feel angry but I don't know why", it would be odd to say "I feel glad but I don't know why". Anger, therefore is a *basic* emotion (and is thus classified into a category called Basic Emotions) but feeling glad is not. All terms referring to nonbasic emotions are, they contend, classifiable into one of six other categories according to the kind of semantic relations they have to (one of) the basic concepts. These six categories are those of Generic Emotions, Emotional Relations, Caused Emotions, Causatives, Emotional Goals, and Complex Emotions, and J-L & O provide an impressive classification of hundreds of words into them.

We should say at the outset that our discussion takes as its starting point a fundamentally different position to that of J-L & O with respect to a central aspect of emotion theory. Specifically, whereas J-L & O's theory is rooted in the idea that there is a small set of "basic" emotions, we are sceptical about endowing any emotions with such a special status (Ortony

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& Turner, submitted). Had we shared J-L & O's views about basic emotions, we are confident that we would have found their fascinating analysis much more compelling. As it is, however, much of our discussion will be devoted to examining their arguments for a fundamental dichotomy between basic and nonbasic emotions.

FEELING EMOTIONS WITHOUT AWARENESS OF THEIR CAUSE

Let us first acknowledge that we agree that it is *possible* to say, for example, "I feel angry but I don't know why". The question we want to ask is why this should be so? In particular, is it, as J-L & O maintain, because anger is a basic emotion and that it therefore possesses the property that it can be experienced without conscious awareness of its cause? We think not. We think it is perfectly possible to use the "I feel *x* but I don't know why" construction with a number of emotions that J-L & O do not consider to be basic emotions. For example, we find nothing contradictory about asserting, "I feel embarrassed but I don't know why" even though embarrassment is not one of J-L & O's basic emotions. Our first problem, therefore, is that the criterion for basic emotions (that one can experience them without conscious awareness of their causes) does not in fact discriminate between basic and other emotions because it can be used successfully with nonbasic emotions too.

To this objection J-L & O might reply by simply denying the (semantic) acceptability of reporting that one feels embarrassed without knowing why. If they try to counter our objection in this way, we then have to ask what the criterion embodied in the linguistic test really is. Is the purported unacceptability of a sentence like "I feel embarrassed but I don't know why" based on the belief that such a claim involves a logical contradiction, or do they have in mind a weaker notion, such that it is merely odd, perhaps because it is in fact very unlikely to be true, even if in principle possible? Although they often reject such sentences by asserting that there is something "odd" about them, we suspect that they intend the former interpretation because they believe that such sentences involve the violation of certain semantic constraints on word meanings. But if this is correct, then any demonstration that it is in principle possible to feel embarrassed without knowing why would mean that it cannot be logically impossible. To this end, consider a *gedanken* experiment in which different regions of the brain are stimulated in such a way as to (artificially) elicit the *feelings* of different emotions. There is no *a priori* reason why a subject in such an experiment could not report any of the following:

I have the feeling of anger, but I don't know why

I have the feeling of embarrassment, but I don't know why
 I have the feeling of shame, but I don't know why

If we are right that these are possible reports, then there is no logical contradiction in asserting that one can feel (at least some) emotions that J-L & O do not consider to be basic without knowing why. To be sure it may be "odd," but oddness construed as practical improbability is not the same thing as semantic anomaly.

A second problem that we see with the experience-without-awareness-of-cause criterion for basic emotions has to do with another aspect of the relationship between the criterion and the linguistic test used to apply it. The problem here is more complicated, but it rests on a distinction examined in much of our own work (Clore, Ortony, & Foss, 1987; Ortony, Clore, & Foss, 1987; Ortony, 1987), and which J-L & O themselves discuss, namely that between "feeling *x*" and "being *x*" (where *x* is an emotion adjective). First, however, we need to consider more generally the role of feeling in emotion. Let us sketch roughly a view of emotion that is not dissimilar to the one that J-L & O attribute to Frijda (1986). The view we have in mind is that emotions normally comprise *antecedent conditions* (e.g. the reported demise of an adversary), *appraisals* relative to one's goals, standards, or attitudes (e.g. this is a desirable event, as I arranged it in the first place), *physiological consequences* (e.g. pounding of the heart), and what might be called *dispositional consequences* (e.g. an inclination to tell my friends) such as changes in one's disposition to engage in certain kinds of affective orientations. Given this framework, we can now ask what is the phenomenal experience of an emotion, and how does it relate to this whole? We would answer that in any particular case, the feeling of an emotion is a private subjective experience reflecting the physiological component and (some or all of) the dispositional consequences. For example, the emotional feeling might simply be a particular feeling of bodily disturbance or upset coupled perhaps with an urge to somehow change the nature of one's immediate interaction with one's environment. To simplify greatly, we suppose that in the normal course of events, the appraisal of the antecedent conditions is causally responsible for the physiological consequences, which together lead to an inclination to act (or not to act) in a certain way. Although, together, these components cause the experienced *feeling* of the emotion in question, the *feeling* of an emotion can be talked about independently of the appraisal of the antecedent conditions and the dispositional consequences. In other words, the experienced feeling of an emotion is *part* of the emotion, but not the emotion itself. The emotion is the whole package, of which the feeling is a necessary but not sufficient component. This kind of view is consistent with the fact that one can properly speak of the feeling *of* an emotion (the

feeling *of* fear, *of* anger, or *of* embarrassment), but not of the feeling *of*, say, a headache. One cannot do it for a headache because a headache *is* (only) the feeling. On the other hand, the feeling component of an emotion is just that—a component; it is part of the emotion, not the whole thing. The view of emotion that we have sketched is not a very radical view, but it is one that J-L & O probably find rather unattractive because, as we shall see shortly, it conflicts with an important assumption underlying their argument, namely, that emotions (at least in their basic forms) are only the feelings.

We can now return to the main question which concerns why it is possible to talk about feeling an emotion without awareness of its cause. Our answer is that it is only possible if the referent in such reports is the experiential aspect of emotion *dissociated* from its cause, that is, from its antecedent conditions. If this is right, then one would expect it to seem more natural to say that one *feels* angry but doesn't know why than to say that one *is* angry but doesn't know why, because to say that one *feels* angry is to focus on the experiential/phenomenal aspects of an emotion (Ortony, 1987), whereas to say that one *is* angry is to take a less restricted view of the emotion. The same is true for emotions, such as embarrassment, that J-L & O do not consider to be basic. In other words, we are raising the possibility that the semantic acceptability of sentences of the form "I feel *x* but I don't know why", may in large part be due to the contribution of the word "feel". If this is right, then in so far as J-L & O's linguistic test succeeds for their basic emotion words, it succeeds for the wrong reasons—reasons which are, in fact, precisely the same ones that allow it to succeed for some words that do not refer to their basic emotions.

An additional reason for supposing that this argument might be valid can be seen by again considering our gedanken experiment. Our (probably untestable) conjecture is that reports of the form "I feel *x* but I don't know why" are much more likely than the corresponding ones of "I am *x* but I don't know why". So for example the following reports strike us as much less likely than their corresponding "feel" forms:

I am angry, but I don't know why
 I am embarrassed, but I don't know why
 I am ashamed, but I don't know why

We consider such reports to be less likely than the corresponding "feeling" reports because we think that the report that one *is* angry, embarrassed, etc. is a report of the whole emotion rather than just the feeling part of it. A subject in our gedanken experiment might well conclude that the reason he had the feelings associated with these emotions was because of the stimulation resulting from the experimenter's positioning of the electrodes. The subject might say "This is just the *feeling* of anger. I presume I have this feeling because of the electrical stimulation. I'm not *really* angry".

However, an experiment could only produce such results for psychological states in which the experience is dissociable from the other components, especially, the cause. This is why it could not be done for the feeling of a headache. Either the subject has a headache or not, but he or she cannot have the feeling of a headache while not really having a headache.

Our suspicion that J-L & O treat the experiential feeling of an emotion as the entire emotion is strengthened by a number of quite explicit statements in their paper. They say, for example, that “[the bodily and somatic] consequences are dissociable from the emotion” (p. 86), which implies to us a denial of the physiological component as part of the emotion, and that “An emotion such as embarrassment is what you feel” (p. 89), and again; “These modes [basic emotions] . . . are primitive subjective experiences” (p. 90), and “[Basic emotion] words . . . refer to . . . subjective experiences . . .” (p. 90). Later they say “. . . the *subjective experience* that goes along with these observable eliciting conditions and concomitants is called ‘sadness’” (p. 92/93), and “. . . “[the] observable eliciting causes and concomitants are not part of the meaning of basic emotion terms”.

All this suggests to us that J-L & O want to draw conclusions about emotions (which we take to be best captured by expressions such as “*being sad*” or “*being embarrassed*”) on the basis of observations about their dissociated feelings. But what is true of *feeling* sad or embarrassed need not be true of *being* sad or embarrassed. Emotions cannot be characterised adequately solely in terms of feelings; to be an emotion, the feelings must signify the results of an appraisal of some kind. Thus, sadness is not simply a particular kind of feeling, but a particular kind of feeling for a particular kind of reason. In this regard emotions are like diseases. Diseases typically involve particular physical and experiential symptoms, but the concept of disease is appropriate only if those symptoms are assumed to have a particular kind of cause. In the case of emotions also, the valid use of the concept is conditional on the feelings having the relevant psychological causes. A patient who complains of a distressing tightening in the chest is experiencing an emotional panic reaction only if the feeling is caused by fearful preoccupations, not if her symptoms are caused by a heart attack. J-L & O say (p. 92) “We do not accept that words that characterize the basic emotion modes contain any necessary components”. We would argue, on the contrary, that all emotions have necessary components, and that the components that are necessitated are causal in nature.

EMOTIONS AND MOODS

A third reason for our reluctance to accept the awareness test for basic emotions is a suspicion that the success of the test is too dependent on the emotion terms being given a mood reading. J-L & O suggest that only

terms referring to their candidates for basic emotions can also refer to moods and personality traits because only those basic emotions can be experienced without awareness of their causes. But might this not be putting the cart before the horse? Might it not be that the reason J-L & O's candidates for basic emotions appear to satisfy the test is that they can be construed as moods? On this view, apart from the fact that it focuses on the feeling rather than on the whole emotion, the reason that it is acceptable to say, for example, "John feels sad but doesn't know why" is that we implicitly understand "sad" to refer to an enduring mood state rather than to a momentary emotional reaction. This might explain why, although it is quite reasonable to say "John is in a happy mood today but he doesn't know why", it seems less reasonable to say "John is experiencing the emotion of happiness but he doesn't know why". Similarly, "John is irritable, but he doesn't know why", is fine, but (as indicated earlier) "John is angry but he doesn't know why" is more problematic. Notice that it is even more odd to say "John is in the grip of anger right now but he doesn't know why". What these examples suggest is that such sentences appear to be anomalous to the degree that they refer unambiguously to a momentary emotional reaction as opposed to a general mood state. Furthermore, this would explain why the linguistic test is less successful when an intense form of one of J-L & O's basic emotions is employed. We agree with J-L & O that one cannot really say that one feels, for example, ecstatic but doesn't know why, but our explanation of this observation is that moods are generally not highly intense states. One cannot be in a terror-stricken mood, for example. Therefore, if an emotional state is markedly intense, it is probably not a good example of a mood and is therefore less likely to be given a mood reading. Thus, ecstasy cannot be given a mood reading (whereas its intensity-unmarked counterpart, happy, can). J-L & O offer no satisfactory explanation of this. They say only that "it verges on the pathological to feel extreme emotions without knowing why". This may be true, but it is difficult to see how it could be relevant and certainly it is not a consequence of their theory. Thus, our view is that the main reason why words such as "anger", "anxiety", "happiness", and "sadness" fit more easily than "pride" or "pity" into the sentence "John feels x but doesn't know why" is not because pity and pride are somehow nonbasic, but because it is less easy to think of being in a mood of pity or pride than in an angry or sad mood.

Our argument about the mood reading of emotion terms is not likely to convince J-L & O. They might well counter that the fact that there are relatively few mood words, and that these can also refer to their "basic" emotions is support for their position. But the matter is not so clear-cut. First, it is by no means obvious that their five basic emotions can all be moods. It would be odd to say, for example, that "John was in a disgusted

mood". John could be disgusted at the smell of spoiled milk, which implies a physical reaction, or he could be disgusted at the policies of the government of the day, which implies an analogous but less physical reaction. In neither case, however, does it seem quite right to say that he found himself in a disgusted *mood*, perhaps, in part because it is not easy to imagine the disgust reaction lasting very long. John could, of course, experience nausea over a prolonged period as a result of illness, but it would be incorrect to refer to the nausea caused by illness as "disgust", or to refer to such bodily symptoms as a mood. It is also not self-evident that disgust can be experienced without awareness of a cause, despite the fact that one clearly could be nauseated without knowing why. But in any case, given that J-L & O separate emotions from purely bodily sensations (as opposed to affective feelings), whether or not one could be nauseated without knowing why is irrelevant.

A different kind of objection would take the opposite tack: One might argue that in principle (almost) any emotion can be a mood and as such could be experienced without awareness of its cause. Perhaps the reason that we readily accept that one can be in a good mood, a bad mood, an irritable mood, or be generally anxious is not because these are objectless forms of basic emotions, but simply because these are among the most common emotional states. There is no reason in principle why one could not be in an admiration mood or a gloating mood, or a mood of pity, or a proud mood. That is, if moods are primarily low level affective states that persist over time, it might be that if we were exposed to a succession of admirable deeds or pitiable spectacles, we could find ourselves in a generalised state characterised by the activation of cognitive themes and feelings of pity or admiration. The oddness of saying "John is in a mood of admiration" may simply be a reflection of the fact that the appropriate conditions for the creation of such moods are extremely rare, rather than that it is somehow logically impossible for there to be such moods. By this logic, then irritability and anxiety and perhaps shyness are readily seen as moods, simply because these mood states are very common.

Finally, it should be noted that the reason moods can be experienced without known causes may have more to do with the nature of moods in general than with the notion that some emotions are basic (if indeed they are). Moods can presumably be caused in several ways. An event of great significance (e.g. the death of one's spouse) may lead to a mood or similarly prolonged emotional condition (e.g. grief). Or, a series of events of a particular kind, none of which is important enough to result in an emotion, may produce a mood. In the first case, the cause would be clear, while in the second it would not. Both kinds of moods might have a strong influence on one's mental life, the first simply because important events have many and varied implications, and the second because when the

causes are not clear, then the range of implications is unrestricted. J-L & O seem to have the second form of mood in mind. It has been suggested elsewhere (Schwarz & Clore, 1988) that one reason the effects of general moods on judgement are more pervasive than those of particular emotions is precisely because it is easier to be unclear about the cause of mood-based than of emotion-based feelings. As moods extend over time, while emotions tend to be short-lived, at any given time the cause of a mood is likely to be more remote and hence less salient than the cause of an emotion. But in these cases, one is unaware of the cause because it is remote and obscure, not because the emotion of which it is a form is somehow special.

SEMANTIC PRIMITIVES

We think that J-L & O are absolutely right that if one undertakes a semantic analysis in the domain of emotions words (as in all domains) one eventually has to settle on some irreducible primitives. Yet we think that J-L & O place too much faith in the semantic irreducibility of their five basic emotion terms. It is far from clear that their five "basic emotions" really are semantically unanalysable. In spite of their attempt to preempt this objection, we think that these terms *can* be given a semantic analysis in terms of two ultimate types of feelings, positive ones and negative ones (see also Frijda, 1987). We might propose the following:

sadness = the negative feeling occasioned by the (conscious or unconscious) belief that things important to me are not going well and that it is difficult to rectify what is wrong

J-L & O's general reply to this would be that one cannot define emotion words by using category labels (e.g. "negative feelings") that are themselves disjunctively defined in terms of the emotion words one is trying to define. However, just as they are willing to define "regret" as sadness having a particular kind of cause, so too can we define "sadness" as negative feeling having a particular kind of cause.

In the face of the objection that it is just as possible to provide a semantic analysis of "sadness" as it is of "regret", J-L & O take some proposals for characterising sadness and argue that there is no contradiction in asserting that someone is sad while at the same time denying the putative definition. They do this with proposals both of Wierzbicka (1972) for "X feels sad" and of Mees (1985) for "fear". But, of course, to show the fallibility of these *particular* proposals in no way shows that a satisfactory definition is in principle impossible. So, Wierzbicka and Mees didn't have it quite right—no-one said it was going to be easy!

J-L & O offer another defence against this kind of proposal. They argue (we think, correctly) that “If you were ‘emotion-blind’ and unable to experience emotions, then you would have no idea what it was like to *feel*, say, sadness” (p. 90, italics added). True, but this is not a semantic fact, it is a fact about the private nature of feelings, and it is as true for the *feeling* of shame or embarrassment or regret as it is for their “basic emotions”. When they come to deal with this issue with respect to nonbasic emotions, they shift the nature of the problem by asserting that it is possible, for example, to analyse the meaning of “regret” (p. 91). Yes, it is, but it is not possible to explain to an emotion-blind person the *feeling* of regret. Our claim is that if one keeps the problem constant, one *can* analyse the meaning of “regret” *and* of “sadness” (for example, in terms of a certain kind of negative feeling), but that one cannot communicate to someone who has never experienced them the *feelings* either of sadness *or* regret. J-L & O might want to say that in the case of regret, one can explain what it feels like by saying it is a certain kind of sadness, to which we would reply that in that case one can explain what it feels like to be sad by saying that sadness is a certain kind of negative feeling. The cases are perfectly parallel.

We are confident that J-L & O would reject this criticism, so we now offer another line of argument. Suppose one grants them their argument that terms such as “negative feeling” are no more than disjunctions of their instances (fear, anger, sadness, shame, pity, etc.). Why could we not then object that this is also true of the terms they identify as basic emotion terms. Why, for example could we not say that the word “fear” really means “either apprehension or anxiety or dread or fright or nervousness or petrification or terror or timidity or worry . . .?” Such a characterisation of basic emotions would, of course, undermine their whole system. This is not a move that we are inclined to make, but J-L & O might have to, because when faced with the problem that fear entails distress (which would mean that distress was a component of fear, and therefore that “fear” was not an irreducible semantic primitive), they say, “According to our analysis, ‘distress’ has a disjunctive denotation: *sadness or fear for a known reason*” (p. 97). What, one wonders, are the constraints on this game!

We think there is a limit to what can be discovered about emotions themselves by analysing emotion words and looking for semantic primitives. If J-L & O are right that there are five basic emotions, then by analogy with other areas, ought one not to expect to find cross-cultural evidence reflected in different languages? For example, as Berlin and Kay (1969) found for colour terms, one might hope to find data of the following form: If a language contains only two emotion words, then they are the words for Emotion A and Emotion B. A language with three emotion terms will also include a word for Emotion C. If a language has four

emotion terms, they will be Emotion A, B, C, and D, and so on. Although J-L & O offer no cross-linguistic data one way or the other, we are sceptical about the possibility of finding such support for their position.

Secondly, although we appreciate that such cross-linguistic data would be relatively difficult to attain, the same cannot be said of evidence from English that might corroborate their assertions. Yet, J-L & O offer no normative data to support the linguistic intuitions upon which they base their conclusions. In fairness, their paper was not intended as an empirical contribution. However, given that our intuitions (and doubtless those of others) are often at odds with theirs,¹ some sort of data will ultimately be necessary.

Finally, we are uncomfortable with the identification of semantic primitives with emotion components. J-L & O, in rejecting the argument that there can only be two ultimate primitive emotions (which we have alluded to as positive feelings and negative feelings) assert: "We would argue, for example, that the meanings of "red", "green", "blue", etc. do not each contain a component equivalent to COLOUR, plus some other component that distinguishes the particular nature of each colour" (p. 91). We are inclined to accept this argument, but to turn it against J-L & O by saying that the meanings of "love", "admiration", "pride", etc. do not each contain a component equivalent to HAPPINESS, plus some other component that distinguishes the particular nature of each emotion. Rather, we think it more natural to argue that emotions such as happiness, love, admiration, and pride are all particular *kinds* of positive feelings, just as poodles, spaniels, and collies are all particular kinds of dogs, and dogs, cats, and elephants all particular kinds of animals. The problem is that whereas we can all agree that a poodle is a dog with particular (additional) properties, it does not follow that the *word* "poodle" comprises the semantic primitive DOG plus semantic features corresponding to these properties. Indeed, the radical version of this position is that, except for a handful of special cases² such as "bachelor" and "orphan", words do not have meanings at all, which means that it is not possible to provide a semantic analysis for them (Green, 1984). When we look in the dictionary

¹Apart from the examples we have already discussed, we find their use of the "but" test quite perplexing at times. For instance, they argue that there is nothing odd about asserting "He was tired, but he was not happy" (p. 96), and that this establishes that there are no semantic components that are shared by both "tired" and "happy". We find the sentence semantically anomalous, presumably because there is a common component between "tired" and "not happy", namely that they are both negative feelings. However, as we have seen, this is not an explanation that J-L & O are able to entertain.

²Words such as these refer by describing rather than by naming (Green, 1984). Putnam (1975) calls them "one-criterion words".

under, say, "poodle", we do not discover what the word means, but rather what a poodle is, or, more accurately, what kind of a thing a poodle is. Similarly, when we look at dictionary entries for emotion words, we discover not what the words *mean*, but what kind of states they refer to.

CONCLUSION

The argument made by J-L & O can be summarised as follows: All emotion terms are reducible to six different forms of five basic emotions. Unlike the terms for nonbasic emotions (which have propositional content and can therefore be analysed semantically), the terms for basic emotions refer simply to kinds of feelings and cannot be analysed semantically. Basic emotions, as kinds of feelings, can be separated from their causes and their consequences, and, therefore, can be experienced without awareness of their causes or their objects. Because of this characteristic, basic emotion terms can also refer to moods and personality traits. As a linguistic test for basic emotions, J-L & O use sentences of the form, "I feel *x* but I don't know why" (where *x* is an emotion term). Because only basic emotions can be experienced without awareness of their causes, such sentences should be judged acceptable only when *x* is a term that refers to a basic emotion. In addition, J-L & O argue that their five basic emotions cannot themselves be analysed into more primitive elements, even though they can be classified into two categories, one of positive and the other of negative emotions. They argue that concepts such as those of positive and negative emotions should be treated like the concept COLOUR, which is not a constituent of specific colours but is disjunctively defined (if something is coloured, it is red, or green, or blue, etc.). Likewise, positive and negative emotions are superordinate categories of emotion that include the basic emotions rather than being primitive constituents of them.

We have given four main reasons for questioning J-L & O's central claim that there is linguistic evidence for the special properties that they attribute to their basic emotions. First, we have suggested that it is unclear whether one is to judge the acceptability of test sentences on a logical or a contingent basis. There is no logical contradiction involved when various "nonbasic" emotions are included in the test sentence. Secondly, we suggested that, regardless of the terms included, the criterion sentence is more likely to be judged acceptable when one considers the terms in the context of "feeling *x*" rather than "being *x*". The fundamental issue here hinges on the fact that J-L & O equate emotion with feeling. We argue that, like the concept "disease" which is apt only when symptoms are appropriately caused, the concept "emotion" applies only when the relevant feelings have emotional causes. J-L & O argue that "only some emotion terms have a semantic analysis, whereas others denote unanalyz-

able primitives" (p. 5). The fact is that all emotions have identifiable eliciting conditions which can be specified with equal ease (or difficulty) regardless of whether the emotions are "basic" or not (Ortony, Clore, & Collins, 1988). It is true that one cannot give the same kind of semantic analysis for feelings, but again, this is no more true of the five kinds of feelings that J-L & O focus on than it is of any other feeling, emotional or otherwise. Emotions are not feelings pure and simple even though they are felt. Thirdly, we argued that, in fact, the linguistic test of the awareness criterion may perhaps depend upon judges tacitly giving the candidate terms a mood reading. The more one constrains terms to refer specifically to brief but full-blown emotional reactions, the less clear is it that the experience can occur without awareness of the cause or the object of the reaction. Our final point concerned the idea that positive and negative feelings are disjunctively defined. J-L & O make the point in order to avoid the unpalatable conclusion that there are only two basic emotions, but it is a dangerous point in that the very same logic might be applied to their *five* basic emotions, leading to the conclusion that they too lack unique referents of their own.

In conclusion, J-L & O present a fascinating discussion of some linguistic implications of a novel and important theory of emotions. Their proposals are heuristically rich and admirably explicit. This explicitness provides a meaningful foothold for evaluating their proposals. We worry that we may appear to have been unduly harsh on colleagues whose work we greatly respect, especially when there is so much in the paper with which we agree. We are particularly sympathetic to their attempt to focus on the linguistic implications of their theoretical position rather than merely approaching the problem of emotion by taking the language as their starting point. However, in the spirit of an interesting debate we opted to focus on aspects of the paper that trouble us rather than on cataloguing the many aspects with which we concur.

As we mentioned at the beginning of this paper, we are not sanguine about attempts to construct a theory on the basis of a few basic emotions. But unlike most other such approaches, J-L & O come clean and offer a clear criterion for what is to count as a basic emotion, a criterion that is, moreover, rooted in a coherent general theory of emotion and information processing. It happens that we are not convinced that their linguistic tests always succeed in establishing what they appear to be designed to establish. Yet we think that this should not detract from the significance of J-L & O's enterprise. Not only is it quite possible that our misgivings are all misdirected, it is also true that even if they are not, progress can often be made by identifying difficulties in new approaches.

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