

## REVIEW OF A CONSTRUCT OF EMOTIONAL AWARENESS

Daniel T. DAMIAN\*

**Abstract.** In this paper, I will address the theoretical construct of emotional awareness, based on the model developed by Lane, R.D. and Schwartz, G.E. (1987). First I will describe the theoretical conceptualization of emotional awareness as well as the instrument used to measure the construct (ie: the Levels of Emotional Awareness Scale), then I will discuss some research-relevant issues pertaining to the construct and I will conclude with an overall critique of model.

**Key words:** emotional awareness, Levels of Emotional Awareness Scale, Lane, R.D. and Schwartz, G.E.

### The concept of emotional awareness

Lane & Schwartz (1987) view the overall domain of emotions as comprising the physiological, experiential and behavioral components. They view the experiential component of emotion as the most complex and critically important from a clinical perspective, yet the most difficult to research. The model of emotional awareness they developed addresses specifically the experiential (i.e., feeling) part of emotions. The authors use the words “emotional experience” and “emotional awareness” interchangeably, although they specify that the latter refers to the conscious part of emotional experience. The model was primarily developed in order to assess individual differences in the experience of emotion. The authors contend that, while a cognitive-developmental paradigm was used in various theories about ego development, object representations, self concept, moral reasoning, etc, no such paradigm has been applied yet to the domain of emotional experience.

The authors’ conceptualization of emotional awareness (Lane& Schwartz, 1987) is based on Piaget’s and Werner’s cognitive-developmental theories. Piaget identified four stages of cognitive development (i.e., sensory-motor, preoperational, concrete operational and formal operational) spanning the period from infancy to late adolescence. These cognitive stages represent structures that organize one’s knowledge about external world. Lane &Schwartz (1987) point out that Piaget was not so much interested in the content of one’s knowledge, but in the underlying mechanisms (i.e., structures) that enable one’s specific type of knowledge about the external world. Thus, in the authors’ view, Piaget’s stages of

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\* Associate Member, ASR New York Department.

cognitive development provide a specific mode of knowledge, which accounts for various types/ levels of knowledge about the external world that can be acquired.

Werner (Lane & Schwartz, 1987) identified the “orthogenetic principle of development” according to which cognitive development proceeds from an undifferentiated, global state to a increasingly differentiated and integrated state.

Lane & Schwartz (1987) apply Piaget’s and Werner’s cognitive-developmental theories to the internal world of emotions. Emotional awareness (i.e., knowledge about one’s emotions) is anchored in the same mechanism (i.e., the cognitive-developmental stages) that structures and organizes one’s knowledge about the external world. One’s knowledge about emotions is determined and organized by the underlying cognitive-developmental structure. Therefore, there will be different modes and levels of knowledge of one’s emotions, based on the specific cognitive-developmental structure according to which the content of knowledge is organized.

Lane & Schwartz (1987) identify five levels of emotional awareness, which represent five different modes of knowing about emotions, each level being an organization, a structure in its own right.

The ability to become aware of one’s emotions entails in essence a mechanism of cognitive processing amenable to structural transformations, in accordance to the cognitive-developmental stages. Lane and Schwartz (1987) state that “our central thesis is that what is experienced as emotion is the consequence of a subsequent cognitive processing of emotional arousal and that the cognitive process itself undergoes a sequence of structural transformations during development” (p. 134). Ultimately, it is the underlying cognitive-developmental structure that enables a specific mode of cognitive processing which informs the overall quality and structure of emotional experience. Lane & Schwartz (1987) state that “it is the structural organization of the of cognitive processing which determines the structure of the individual’s (emotional) experience” (p. 134) and “emotional arousal constitutes an internal world about which one has knowledge and it is the structural organization of this knowledge that determines that determines how the internal world of emotion is experienced” (p. 135).

Emotional awareness begins fundamentally with an awareness of physiological arousal and the cognitive processing refers primarily to the processing of the emotional arousal. Emotional arousal provides the basic information upon which the process of emotional awareness takes shape. Lane& Schwartz (1987) identify one’s progressively more complex schemata by which emotional information (in the form of arousal) is assimilated and understood in more complex ways.

The levels of emotional awareness are hierarchical structures, each level evidencing greater emotional complexity (i.e., differentiation and integration of emotion) than the previous one. Overall, the model described above focuses on the structural organization of emotional experience and highlights the structural characteristics of emotional awareness in terms of varying degrees (i.e., levels) of emotional differentiation and integration. The overall experience of emotion is

“hypothesized to undergo structural transformation in a hierarchical developmental sequence of progressive differentiation and integration” (Lane, Quinlan, Schwartz, Walker, and Zeitlin, 1990, p. 125).

Lane & Schwartz (1987) provide an overview of the salient characteristics of each level of emotional awareness. The first level is sensorimotor reflexive (i.e., awareness of bodily sensations), whereby the conscious experience of emotion consists of bodily sensations only (i.e., “I feel sick”) on the backdrop of a global arousal state. At this level, there are reflexive (i.e., involuntary) responses in reaction to emotional arousal, such as internal autonomic changes and automatic facial expression. The awareness of the separate existence of the other is nonexistent or minimal and there is no awareness of the other’s emotional states.

The second level of emotional awareness is sensorimotor enactive (i.e., awareness of the body in action) and the emotion is experienced as a global hedonic state (i.e., “I feel bad”) and/or an action tendency that aims at minimizing emotional distress or maximizing pleasure (i.e., “I feel like kicking a wall”). The awareness of the other as a separate individual is minimal and the experience of the other is represented enactively (i.e., doing things the way the other is doing), but there is no proper awareness of the other’s emotional experience.

The third level of emotional awareness is preoperational (i.e., awareness of individual feelings), whereby the representation of emotion as a conscious feeling state becomes for the first time possible. Emotional states tend to be pervasive and have an “either/or” quality (i.e., one is either happy or sad), but the capacity to experience multiple emotions as part of a single emotional reaction has not yet developed. The awareness of another person’s experience is inconsistent and is based on responding to a particular aspect of the other’s behavior rather than multiple aspects of the behavior. While others are experienced as separate from the self, they are seen primarily in terms of their external characteristics rather than internal attributes.

The fourth level of emotional awareness is concrete operational (i.e., awareness of blends of feelings) and the emotional experience of the self consists of differentiated feelings (i.e., feeling sad and angry) and blends of opposite emotions. Others are now recognized as different on the basis of internal as well as external attributes, but the awareness of the others’ emotional experience is unidimensional (i.e., others are not experienced as having differentiated feeling states).

The fifth level of emotional awareness is formal operational (i.e., awareness of highly differentiated blends of feelings for self as well as others). At this level, one’s emotional experience consists of highly differentiated and integrated feelings and subtle distinctions between nuances of emotion can be made. Compared to the previous level, greater differentiations of the quality and intensity of emotions becomes possible. One also becomes aware now of the multifaceted, differentiated emotional experience of others.

### **The measure of emotional awareness**

The Level of Emotional Awareness Scale (i.e., LEAS) (Lane et al., 1990) was designed to capture the individual differences in one's structural organization of emotional experience (i.e., the degree of differentiation and integration of emotional states in self and others). Lane & Schwartz (1987) view the quality of verbal representations as reflecting the degree of emotional awareness and "the greater degree of organization of the inner world will be reflected in the structure of the verbal descriptions of emotion" (p.137).

The LEAS (Lane et al., 1990) is a performance-based, observer-rated measure. It consists of 20 hypothetical scenes, each described in two to four sentences and each involving two persons. The scenes are intended to elicit four types of emotions: anger, fear, happiness and sadness, at five levels of increasing complexity. Each scene is presented on a separate page, followed by two questions: "How would you feel?" and "How would the other person feel?" Subjects write their responses on the remainder of each page. The scoring system for LEAS protocols is fairly complex and the authors developed a specific scoring manual that includes a glossary of emotion-relevant words and outlines the scoring criteria. Each scene receives a final score ranging from 0 to 5 corresponding to the five levels of emotional awareness. Each subject receives a separate score for the "self" response and for the "other" response, ranging from 0 to 4. In addition, a third "total" score is assigned, equal to the higher of these two (i.e., self and other) scores.

The lowest score (i.e., level 0) is given for non-emotion responses where the word "feel" is used to describe a thought rather than feeling. Level 1 scores are given for responses that describe emotional states as bodily sensations (i.e., "I would feel tired"). Level 2 scores are given for descriptions of action tendencies (i.e., "I would feel like punching a wall") or undifferentiated emotion states (i.e., "I would feel bad"). Level 3 scores are given for descriptions of single and specific emotional states (i.e., "I would feel happy"). Level 4 scores are given for responses that describe a differentiated emotional experience which typically involves the use of two or more Level 3 words (i.e., "I would feel happy and relieved"). Finally, Level 5 scores are given for responses in which the description of emotional experiences regarding both self and others receive a Level 4 score (i.e., both self and others are described in highly differentiated and complex terms from an emotional perspective). The maximum score on LEAS is 100 and only the final scores (i.e., the "total" scores) are reported.

### **Research studies using LEAS**

Although the LEAS was not used extensively in research, it has still been employed in a variety of research studies. Lane et al. (1990) report significant positive correlations between LEAS and two cognitive-developmental measures:

the Sentence Completion test of Ego Development (i.e., a measure of cognitive complexity) and the Parental Descriptions Scale (i.e., a measure of the complexity of representations of others) ( $r=.40$  and  $r=.35$ , respectively). The authors interpret the significant correlations as providing further support for the cognitive-developmental paradigm underlying the LEAS.

One study (Lane, Sechrest & Riedel, 1998) found that LEAS correlates significantly yet modestly with demographic variables, such as age, education, gender and SES, correlations ranging from  $r=-.26$  for gender (i.e., LEAS correlates negatively with male gender) to  $r=.28$  for education (i.e., LEAS correlates positively with more years of education). Lane et al., (1998) reported the results of a previous study that found a positive correlation between LEAS and emotion perception, as measured by the Perception of Affect Task.

R. Lane and his research team have been interested in identifying possible neurological correlates underlying the process of emotional awareness. One study (Lane, Reiman, Axelrod, Yun, Holmes and Schwartz, 1998) sought to investigate whether or not the activation of particular brain areas during emotional arousal is also associated with the conscious experience of emotion. Using PET scans, the researchers manipulated the film-induced and recall-induced emotional arousal of the subjects and then sought to find out if the changes in the subjects' emotional arousal (in the two emotion-inducing versus two emotion-neutral conditions) varied with their performance on LEAS. Using a conjunction analysis, a positive association was found between subjects' cerebral blood flow (CBF) increase in an area of the Anterior Cingulate Cortex (ACC) and their greater level emotional awareness, as assessed by the LEAS scores. In other words, subjects who showed greater emotional awareness also demonstrated an increased activity in the ACC during the two emotional arousal conditions. When interpreting the results, the researchers contended that ACC activity increases as the conscious ability to process emotional information (i.e., greater emotional awareness) during states of emotional arousal is increased, as well.

Another study (Lane, Kevley, Dubois, Shamasundara, and Schwartz, 1994) examined whether or not individual differences in emotional awareness, as measured by LEAS, are related to the degree of right hemispheric dominance in the perception of facial emotions, as measured by measured by Levy Chimeric Faces Test. The latter measure involves a task of identifying emotions (i.e., happiness) in 36 pairs of chimeric face photographs (i.e., each pair being a combination of half-smiling and half-neutral facial expressions) presented to the subjects as slides on a projector screen. From a neuropsychological perspective, the performance on this task shows evidence of lateralized brain function, specifically a degree of the right hemisphere dominance over the left hemisphere. The subjects' scores on LEAS were significantly correlated with Laterality scores on LCFT ( $r=.35$ ). Therefore, the study suggests the existence of a relationship

between greater emotional awareness and greater lateralization to the right hemisphere in the identification of facial emotions.

Several studies have shown that LEAS is not strongly correlated with most other measures of emotional functioning. One such study (Lumley, Gustavson, Partridge & Labouvie-Vief, 2005), investigated the interrelationships among several measures of emotional ability such as Toronto Alexithymia Scale (TAS-20), Beth Israel Hospital Psychosomatic Questionnaire (BIQ), Observer Alexithymia Scale (OAS), Emotional Approach Coping Scale (EAC), Trait Meta-Mood Scale (TMMS) and LEAS. The results showed that LEAS was significantly correlated only with the External-Oriented Thinking subscale of the TAS-20 ( $r = -.30$ ), Attention to Mood subscale of the TMMS ( $r = .22$ ) and Interpersonally Distant subscale of the OAS ( $r = -.20$ ).

Another study (Lundth, Johnson, Sundqvist, & Olsson, 2002), sought to examine the relation between TAS-20 (a measure of alexithymia) and LEAS in a Swedish sample, along with other self-report measures of negative affect: Beck Anxiety Inventory (BAI), Anxiety Sensitivity Index (ASI), Beck Depression Inventory (BDI) and Karolinska Scales of Personality, Anxiety and Social Desirability Scales (KSP). The study found that LEAS did not correlate significantly with any measure of negative affectivity and was positively correlated with TAS-20 ( $r = .24$ ). However, the authors explain the positive correlation between these two measures as a result of inconsistent patterns of scores due to subjects' response bias.

Another study (Ciarrochi, Caputi & Mayer, 2003) examined the relationship between LEAS and a measure of emotional intelligence (Multifactor Emotional Intelligence Scale, MEIS) as well as LEAS and a measure of alexithymia (TAS-20). The study found that LEAS correlates with two subscales of MEIS (i.e.; perceiving emotions in stories subscale,  $r = .20$ ; and relativity subscale,  $r = .21$ ), while not being significantly correlated with the composite score of MEIS. No significant correlation was found between LEAS and TAS-20 scores.

Lane et al., (1998) found a weak negative correlation between LEAS and overall TAS-20 scores ( $r = -.19$ ), while LEAS was found to be significantly correlated only with the Externally-Oriented Thinking subscale ( $r = -.27$ ) of the TAS-20 measure.

The results of these studies made the researchers conclude that LEAS taps a different aspect of emotional functioning, compared to most other measures. For instance, Ciarrochi et al. (2003), attempting to account for the weak correlations found between LEAS and MEIS, suggests that the two measures assess two distinctive domains of emotions. LEAS can be best understood as a measure of processing style, because it measures developmentally relevant style of processing emotions; thus, higher scores on the scale do not reflect the accuracy of responses, but a more complex and sophisticated style of responding. On the other hand,

MEIS is a measure of emotional ability and higher scores on this scale indicate more accurate responses.

### Critique

The model of emotional awareness developed by Lane and Schwartz (1987) primarily addresses the experiential (i.e., feeling states) component of emotions. Emotional awareness is conceptualized from a structural perspective, in terms of one's ability to experience increasingly complex, meaning progressively more differentiated and integrated) emotional states in self and others.

A strong cognitive dimension is embedded in this model of emotional awareness, although the cognitive part does not refer to the process of cognitive appraisal. Instead, the cognitive component becomes evident in Lane & Schwartz's view (1987) that emotional awareness entails in essence a mechanism of cognitive processing of emotional arousal. Also, the cognitive dimension becomes apparent in the authors' view that the structural organization of the emotional experience (i.e., various levels of emotional differentiation and integration) is made possible by the underlying cognitive-developmental structures which are derived from Piaget's theory of cognitive development. Each level of emotional awareness is rooted in a specific cognitive-developmental stage and the overall experience of emotion undergoes structural transformations in accordance with Piaget's stages.

The physiological component of emotion (i.e., emotional arousal) plays an important role in Lane and Schwartz' model, given that the emotional arousal, as a result of internal or external stimulation, provides the necessary emotional information that will be cognitively processed in varying levels of complexity. The interest in the neurological correlates of emotional awareness, as reflected by several research studies conducted in this area, suggests the important role given to the physiological aspect of emotion. The findings of some of the studies (i.e., higher level of emotional awareness is associated with increased activity of the Anterior Cingulate Cortex and greater predominance of right hemispheric activity in the perception of facial emotions) are highly interesting and facilitate a better understanding of the still little understood domain that links emotions and physiology.

Lane & Schwartz's model gives little attention to the behavioral/expressive component of emotions. To my knowledge, the authors do not conceptualize or describe this component at all.

In my opinion, the levels of emotional awareness constitute a manner of symbolizing emotional states and the higher levels of awareness reflect one's greater ability to represent emotional states symbolically, in a more differentiated, integrated and complex manner. In the therapeutic process, one's ability for

symbolic representation of various affective experiences plays a critical role in the self-regulation of emotions and the development of more integrated self-experiences. Thus, Lane & Schwartz's model seems to have an utmost significance from a clinical perspective.

In my opinion, when viewed from the perspective of the symbolization of emotional experience, the emotional awareness model seems to have something in common with mentalization theory (Allen, Fonagy, & Bateman, 2008). The latter construct focuses on one's ability to be aware of, reflect on and describe own's and others' mental states, including feelings, in a meaningful way. The capacity to mentalize, as assessed by the Adult Attachment Interview (i.e., AAI), follows a hierarchical model and various levels of reflective functioning, ranging from negative RF to exceptional RF, can be identified. Therefore, both the emotional awareness and mentalization constructs appear to share some common characteristics, such as a focus on one's ability to be aware of and symbolize (through verbal representations) the emotional states in self and others. Also, both constructs view such capacity as involving multiple levels of increasing complexity. However, there are also important differences between the emotional awareness and mentalization constructs. The latter takes into account not only feelings, but overall mental states of the self and others (i.e., desires, intentions, thoughts, etc), so it is broader in scope than emotional awareness model. The AAI assesses one's capacity to mentalize in regards to actual experiences (i.e., early attachment experiences) whereas LEAS assesses one's level of emotional awareness by using hypothetical scenarios, with no basis in the subject's actual reality.

In my opinion, the model of emotional awareness developed by Lane & Schwartz seems to have some common characteristics with another model of emotional development, advanced by Sroufe, L.A. (Sroufe, 1996). Both models suggest that emotions begin as undifferentiated and global arousal states. Lane & Schwartz's (1987) description of the emotional experience at the sensorimotor reflexive stage seems related to Sroufe's (1996) description of physiological prototypes, because, in both instances, the experience of emotions entails reflexive reactions to internal arousal states. Lane & Schwartz's description of the global hedonic states specific to the sensory motor enactive stage appears to be related to Sroufe's emotional precursors, such as generalized states of pleasure, frustration, etc. Sroufe views the development of proper emotions as contingent on the achievement of a sense of separation between self and others. In the same vein, for Lane & Schwartz, the experience of emotion as a conscious feeling state first occurs only at the preoperational stage (ie: Level 3), when one begins for the first time to experience others as being separate from self.

There are certain limitations pertaining to the model of emotional awareness and the LEAS measure. For instance, one's emotional awareness is assessed on LEAS by the degree of complexity demonstrated in describing emotional states in



self and others based on hypothetical scenes, and not actual situations. However, one could show a high level of emotional awareness in regards to LEAS's hypothetical situations, but experience a lower degree of emotional awareness pertaining to his/her own actual, real-life situations and circumstances. Basically, there is no guarantee that one's level of emotional complexity as measured by LEAS remains the same when it comes to one's actual, real-life situations or events.

One's performance on the LEAS depends on his/her verbal skills and thus, one who is not entirely fluent in English may have difficulties capturing in words the more complex emotional states in self and others.

The hypothetical scenes from LEAS are intended to elicit only four types of emotions (ie: anger, fear, happiness and sadness). Thus, the measure appears to be somewhat restrictive in regards to the range of emotions it intends to assess.

Some researchers (Lane et al., 1998) identified certain response biases pertaining to the use of LEAS in research work: some subjects may report feelings that they wouldn't really have (i.e., false positives) or they may not take the time and energy to express the full complexity of their feelings (i.e., false negatives).

#### Reference List

- Allen, J.G., Fonagy, P.& Bateman, A.W. (2008). *Mentalizing in clinical practice*. Washington, D.C.: American Psychiatric Publishing.
- Ciarocchi J, Caputi P. & Mayer J.D. (2003). The distinctiveness and utility of a measure of trait emotional awareness. *Personality and Individual Differences*, 34, 1477-1490.
- Lane, R.D., Kevley, L.S., Dubois, M. A., Shamasundara, P.& Schwartz, G.E. (1994). Levels of emotional awareness and the degree of right hemispheric dominance in the perception of facial emotion. *Neuropsychologia*, 33, 525-538.
- Lane, R.D., Quinlan, D.M., Schwartz, G.E., Walker, P.A.& Zeitlin, S.B. (1990). The levels of emotional awareness scale: a cognitive-developmental measure of emotion. *Journal of Personality Assessment*, 55, 124-134.
- Lane, R.D., Reiman, E.M., Axelrod, B., Yun L. S., Holmes, A. & Schwartz, G.E. (1998) Neural correlates of levels of emotional awareness: evidence of an interaction between emotion and attention in the anterior cingulate cortex. *Journal of Cognitive Neuroscience*, 10, 525-535.
- Lane, R.D.& Schwartz, G.E.(1987). Levels of emotional awareness: a cognitive-developmental theory and its application to psychopathology. *American Journal of Psychiatry*, 144, 133-143.
- Lane, R.D., Sechrest, L.,& Riedel, R.(1998). Sociodemographic correlates of alexithymia. *Comprehensive Psychiatry*, 39, 377-385.
- Lumley, M.A., Gustavson, B.J., Partridge, R. T. & Labouvie-Vief, G. (2005). Assessing alexithymia and related emotional ability constructs using multiple methods: interrelationships among measures. *Emotion*, 5, 329-342.
- Lundth, L.G., Johnson, A., Sundqvist, K. & Olsson, H. (2002). Alexithymia, memory of emotion, emotional awareness and perfectionism. *Emotion*, 2, 361-379.
- Sroufe, L.A.(1996). *Emotional development: the organization of emotional life in the early years*. New York: Cambridge University Press.

