

THE DEVELOPMENT OF FACIAL AFFECT RECOGNITION IN CHILDREN

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The present study describes the processing of facial affect cues by a sample of 90 children, ages 4 to 12. An instrument consisting of 18 scenarios depicted in comic strip format was used. Children responded by choosing which one of nine black and white photos represented mother's most probable emotional response in the given social context. Findings exhibited a tuwa > galit > lungkot pattern of recognition accuracy. In general, age and social class were not found significant in assessing the affective social maturity of the children. Clinical implications of the interaction of affect category and social context were also discussed.

The basic value system of the Filipino is characterized by a strong dependency on close family ties and the maintenance of intimate interpersonal relationships (Bulatao, 1964; Jocano & Mendez, 1974). Consequently, an integral component of the socialization of the Filipino child is the refinement of his ability to recognize and internalize the feelings of others. In particular, Guthrie and Jacobs (1966) have suggested that increased sensitivity to non-verbal cues is one of the most crucial objectives of this process. Unfortunately, little quantifiable data have been gathered to facilitate a systematic study of this important social skill among children.

Affect and social expressions

Contemporary theories of emotions state that emotional behavior can be inferred from both internal and external events. The present investigation emphasizes the social expression of emotional behavior. Research on the communication of emotion has focused on the face as the primary source of information regarding emotional states. Ekman (1965) has dubbed the face as the "royal road to the unconscious and affect". Many factors influence the accuracy by which facial emotion is encoded and decoded by an individual (Burgoon & Saine, 1978; Ekman, Friesen & Ellsworth, 1982). These include (a) knowledge of the events leading up to the emotional experience; (b) awareness of the explicit social context (e.g. roles, relative status of interactants); (c) affect displays of the other

interactant; and (d) the physical setting. Considering the high social sensitivity of the Filipino, the effect of social context has been given particular emphasis in this study.

An instrument was developed recently which measures a child's ability to recognize the facial expression most appropriate for a given affect-inducing social context. Details concerning the item construction and construct validation of this instrument are reported elsewhere (Navarro, 1985). Only a brief description of the instrument will be presented here. The present article will primarily describe the process by which children in the sample perceived emotional social experiences. In particular, an in-depth study will be made of the interaction between age, affect category, and socio-cultural context in the processing of facial affect cues. A secondary objective of this article would be to elaborate on certain observations which would have significant implications for clinical practice.

The sample was drawn from a population of well-adjusted children. The profile of their responses could be used as a standard upon which the behavior of clinical samples may be compared. Thus, the instrument could evolve into a diagnostic tool to aid clinicians involved with emotionally disturbed children. The general level of affective maturity of a child may be assessed using the instrument. The clinician could also identify which affects and in which social contexts the child's responses are likely to be inadequate. Behavioral disturbance among children

has been associated with the inability to accurately interpret the affect signals of others (Bugental, Love, & Kaswan, 1971, 1972). Thus, the child's score on this instrument could be indicative of the intensity of his or her behavioral maladjustment.

METHODOLOGY

Respondents

The sample consisted of 90 children, aged 4 to 12. The children were categorized in two ways: (a) by age group (i.e., Preschool, 4 to 6 years old; Primary, 7 to 9 years old; and Intermediate, 10 to 12 years old) and (b) by social class (i.e., Low and Non-Low SES). Thus, there were six experimental groups in all.

The Instrument

Facial affect recognition was operationalized as the child's ability to match a mother child interaction with an appropriate facial expression. The entire instrument included eighteen scenarios illustrated in comic-strip format. These scenarios are basically differentiated on the basis of the (a) intentionality attributed to the child's behavior in the scenario, (b) the nature and extent of

material and/or psychological consequences incurred, and (c) the range of people affected by these consequences.

A child responded to each scenario by choosing which one of nine black-and-white photographs represented a mother's most probable emotional response in a given social context. The affects *tuwa* (happiness), *galit* (anger) and *lungkot* (sadness) were unambiguously represented in six photos; two expressed affect blends; and the ninth was a neutral pose. Table 1 lists the code name, a brief synopsis of the child's affect-inducing behavior, and the difficulty level associated with each scenario. Figure 1 presents a reproduction of the actual photographs used.

Procedure

Each child was interviewed individually. The examiner introduced the task by asking the child to help her make endings for some cartoons. Each child was asked to identify the affect elicited by each scenario by pointing to the photograph which they perceived as most representative of how the mother would look like at the end of each scenario. All responses were recorded on coded sheets by the examiner.

TABLE 1

Child's Affect-inducing Behavior and Difficulty Level per Scenario

<i>Affect:</i>	<i>Scenario Code:</i>	<i>Behavior</i>	<i>P</i>
Tuwa	A - sayaw	child spontaneously dances and sings in front of his mother	.75
	B - tahimik	child keeps quiet while mother is busy working	.74
	C - tulong	child helps another child who has just stumbled to rise	.71
	D - larawan	child gives his drawing to his mother as a gift to her	.81
	E - ingat	child takes care not to spill food on his best clothes	.80
	F - inumin	child spontaneously serves drinks to his mother and a visitor	.75
Lungkot	G - bakasyon	child leaves for vacation but mother remains because of work	.37
	H - lagnat	child has a fever and is put to bed	.46
	I - lipat	child reports that his best friend has moved away	.33
	J - ibon	child discovers that his pet bird has escaped from its cage	.37

Child's Affect-inducing Behavior and Difficulty Level per Scenario

<i>Affect: Scenario Code:</i>	<i>Behavior</i>	<i>P</i>
: K - kaarawan	: child waits in vain for friends to come to his birthday party	: .44 :
: L - letrato	: child cries over picture of his father who works abroad	: .41 :
: Galit : M - alaga	: child neglects baby sibling who consequently gets hurt	: .49 :
: N - daya	: child accuses sibling of unfair play and starts shouting	: .44 :
: O - laruan	: child grabs and damages the toy of a sibling	: .46 :
: P - halaman	: child jokingly damages his mother's plants	: .61 :
: Q - kalat	: child ignores mother's order to clear up his things	: .66 :
: R - tsinelas	: child refuses to fetch his tired mother's slippers	: .75 :

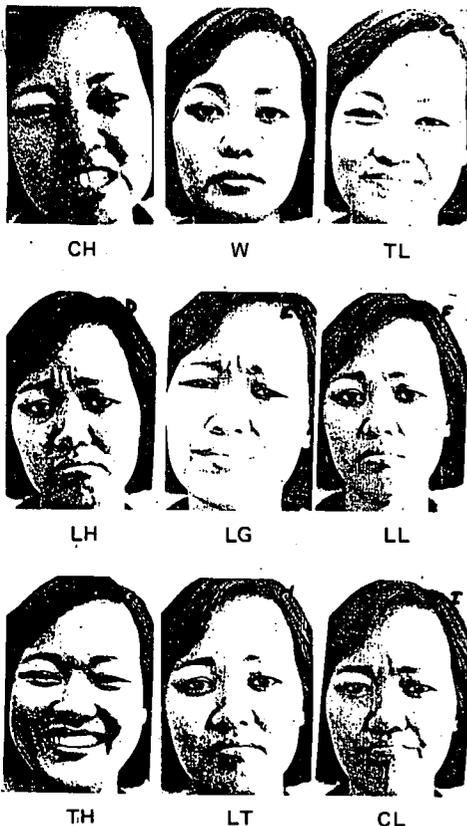
RESULTS AND DISCUSSION

Previous empirical research in the West has identified three factors which significantly determine the accuracy by which emotional inferences can be made. These variables are age, affect category, and socio-cultural context.

Generally, the tryout sample could verbalize which emotions were relevant to various contexts. This finding is supported by Acuña (1981) who observed that, in both rural and urbanized communities, sensitivity to the social-emotional climate was finely developed in children at an early age. Mischel (1979) observed that American children became adept by age 10. However, the results of this study indicate that the age of affective social discovery for Filipino children may be approximated at seven-years. Figure 2 graphically presents the accuracy scores for each affect category for each age level.

On the other hand, children generally have more problems recognizing how these emotions should be facially expressed. They only gradually acquire an accurate understanding of the social norms dictating how these emotions may be facially expressed. This may be attributed to the complexity of the system of cultural display rules which has to be learned. After the first grade, accuracy scores were observed to level off. Again,

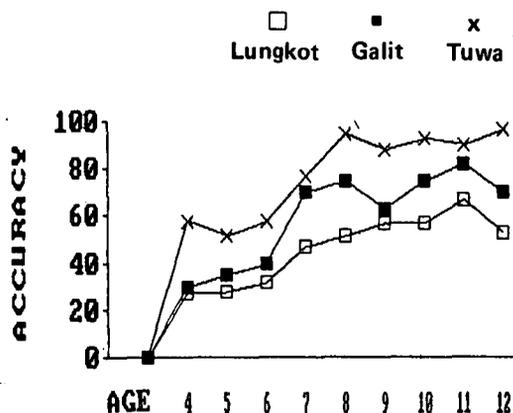
FIG. 1 Reduced Xerox Copy of Photo Stimuli



this plateau effect in the capacity to recognize affect signals occurs at an age earlier than that observed in American samples. In general, the observed cross-cultural differences may be attributed to the greater emphasis placed on affect communication in Filipino society. Thus, the Filipino child's sensitivity to facial affect is refined at a much younger age than that of the American child.

The effect of affect category was likewise observed. The data exhibited a *tuwa* > *galit* > *lungkot* (happy > angry > sad) pattern of recognition accuracy. This trend diverts slightly from the happy > sad > angry pattern reported in American samples. Filipinos differ from Americans in the relative importance placed on anger and sadness responses. Filipinos are highly adverse to an open display of aggression. Thus children learn quickly to spot the external signals of anger and aggression.

FIG. 2 Accuracy by Affect by Age



The recognition of facial cues of sadness elicited the lowest accuracy scores. Error analysis indicated that there was a tendency for many children to confuse the pure *lungkot* expression with the affect blend of *lungkot-tuwa*. In a related observation, most of the errors elicited by the *galit* items were due to the children's mistakenly choosing the *lungkot* and *lungkot-galit* expressions.

A significant social class effect was observed only among the preschool children. Two alternative hypotheses may be considered to explain the interaction.

First of all, it is possible that belonging to a privileged social class facilitates recognition although this effect may be weaker than the effect of entry into a formal school setting. Among elementary age children, common exposure to institutionalized learning caused accuracy scores to be nearly equivalent across age levels and social class. Thus social class may not be as great a determinant of accuracy in affect recognition as entry into schooling.

On the other hand, contemporary research has suggested that certain cognitive social skills are so fundamental to the socialization process that their acquisition tends to be independent of social class (Acuña, 1981; Cole & Bruner, 1971). In taking this alternative interpretation, the observed differential performance among preschoolers may be attributed to other factors. The two groups of preschoolers differed from each other in three ways: social class, exposure to schooling, and demand characteristics at the time of testing. Any one, or a combination of any two, or all three of these factors could have accounted for the differential performance observed.

IMPLICATIONS

The preceding data indicate that age and social class are not significant factors in assessing the affective maturity of most Filipino children. As long as the child is exposed to some kind of schooling by the age of seven, he or she will most likely be able to exhibit moderate proficiency in recognizing facial affect cues.

The interaction of affect category and social context however is more complex. Situations which involved *tuwa* as the dominant affective response are fairly easy for the child to process. On the other hand, contexts which involve *lungkot* and *galit* activate a more involved system of display rules in the child. The children's non-verbal responses indicate that many of them anticipate affect blends as the most appropriate response of mothers in such contexts. Consequently, they expect a

mother to facially express *tuwa* as well as *lungkot* when something tragic happens to the child. This may indicate that a child wants his mother to ease his sadness by being smilingly encouraging. He expects her to mask some of the sadness with an attempt at cheerfulness in the face of tragedy.

In the case of *galit*, the child recognizes that misbehavior hurts as well as angers the mother. Anger in the mother may trigger repentance, fear, and/or resentment in the child. A mother's sadness elicits guilt and repentance. Thus by anticipating the mother's sadness and her anger, the child avoids excessive feelings of fear or hostility towards the mother. Future compliance with her wishes would then be based on the internalization of her feelings and concern for her welfare.

The foregoing therefore suggests that although most mothers for a given context would prefer to facially express a single affect, many children may actually be hoping to perceive an affect blend which would facilitate their capacity to cope emotionally. This does not imply, though, that an affect blend is the best response for every child in every social context involving *lungkot* and *galit*. This is certainly an empirical question which remains to be further explored. This article merely recommends that the possibility of this preference be considered seriously by clinicians in establishing rapport with children.

If this process does accurately describe the affective preference of Filipino children, this would explain how certain children develop emotional maladjustment. A mother may consistently express pure *lungkot* and/or pure *galit* responses so that her child is frequently left to sort out strong negative feelings by himself. If the child is not mature enough to process these feelings objectively, the mother's affective responses could aggravate emotional dysfunctioning.

In closing, the author reiterates that the observations and suggestions discussed in this study are very tentatively presented. In a naturalistic setting, affect recognition constitutes a complex process of integrating multiple and simultaneous sources of information from the

interpersonal environment. More research is necessary before we can achieve a thorough appreciation of this intricate social skill so essential to social adaptation.

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