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Smile to see the forest and sea: beyond happy, anger, or sad

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Human emotion factors were assessed for a sample of 299 Yoruba-speaking students with a questionnaire administered in Ibadan metropolis. The present study reports a repeated-measure multiple discriminant function analysis for individual items across raters. Neither the Interest subscale or Surprise subscale nor the Guilt subscale demonstrated significant retest correlations in a comparison of the General and Specific Depression conditions, and also of the Specific Depression and pre-examination conditions. Practical implications of these findings for uplifting individual happiness, collective identity and sense of connection to others, as well as theoretical implications of these findings for the nature of attitudes, emotions and intergroup relations are explored.

Mots-clés :

Introduction

That Bea Oranyan possessed great savoir-faire, or Solomon was wise, or Picasso, creative, or Mandela, charismatic no one can doubt. Perhaps it would be unreasonable to do so, no matter how creative the reasons for doubt may be. But if we were to ask just what social traits made Bea Oranyan had savoir-faire, or Solomon wise, or Picasso, creative, or Mandela, charismatic most social researchers would either shrug their shoulders, or throw up their hands in despair. In any event, Solomonic ‘emotive’ pronouncements probably would not be supplied (Ebner & Johnson, 2011; Spearman, 1927; Sternberg, 1985; D’Zurilla, Mayden-Olivares, & Gallardo-Pujol, 2011).

Psychological constructs such as emotion has a rich history in the fields of social science. The root of this tradition extend as far back as the work of Aristotle or *AristotélÄ□s* ((384 BC – 322 BC) a Greek philosopher), and the trait is central to the later conceptualizations of human emotion with Charles Darwin. Many taxonomic approaches to personality and most recent instruments include some form of emotion/states (Lucas et al., 2000). Emotion, although can overwhelm logic, but can play a major role in the communication and actions of human beings (Carver & Connor-Smith, 2010; Lucas, et al., 2000).

Furthermore, it is well-documented that just like stress, the study of emotions has been

plagued by an inconsistent, amorphously conflicting and potentially confusing usage of terms to denote the variables of the emotions. Aristotle and several centuries of philosophical thought, has demonstrated that the social-history of the emotions has been essentially cognitive from ancient times (for reviews see e.g., Aristotle, 4th Century BC; Bell, 1806; Darwin, 1872) to the present (Akande, 2002; Allport, 1924, 1954; Boyle, 1984; D'Zurilla, Mayden-Olivares, & Gallardo-Pujol, 2011; Lazarus, 1993; Reid, 2010).

Subject to further examination a different dimension of disagreement can sometimes 'turn on whether an emotion's being experienced is taken to imply that the emotion is recognized and labelled as such. Theorists at times take positions at different segments of the continuum (Riediger, Voelkle, Ebner, & Lindenberger, 2011).

Controversy over the definition and the selection of an appropriate way of measuring emotion or affect has led to numerous lay and academic debate (see Aristotle, 1380, 1913, 1941; Boyle 1984; Darwin, 1872; Ekman Friesen & Ellsworth, 1982; Glick, Fiske, Adetoun, Akande & Alao, 2000; Ebner, Riediger, & Lindenberger, 2010; Izard 1994; James, 1884; Johnson, Waugh & Fredrickson, 2010; Parrott, 2001; Riediger, Voelkle, Ebner, & Lindenberger, 2011; Tomasik, Silberreisen & Heckhausen, 2010; MacLeod & Nucks 2011; Mead, 1934; Selye. 1974; Skinner, 1953; Tang et al., 2006; for a review of empirical research).

Izard, Dougherty, Blosom and Kotsch's (1974) review of personality theory described emotion by enumerating its different types, thus postulating 16 fundamental universally discernible emotions in the human facial expression. The 30-item self-report inventory is based on ten discrete emotions which involve complex neuromuscular feedback loops via the trogeminal nerve. More specifically, the Differential Emotions Theory assesses the intensity of primary emotions for a comprehensive differentiation between the basic emotions and related constructs from facial expression. The Differential Emotions Scale (DES) can trace its roots back to the study of animal behaviour (Izard, 1994).

One central debate concerns whether a self–report inventory on emotion can reliably and validly divides the individual's description of his/her emotional experience into discrete categories of fundamental emotions. Boyle (1984), for example, convincingly argued that unlike other multivariate measures of mood states, "the DES is based on the assumption that mood states (such as anxiety or depressed mood) involve a characteristic pattern of fundamental emotions – a unique conceptualization" (p. 748).

Izard (1994) in the United States, Boyle (1984) in Australia, and Akande (2002) in South Africa have subjected the DES to numerous factor analyses on different sample, using a principal-components plus Promax rotation methodology. Most of these factorings have supported at least eight of the postulated fundamental emotions. It has not been until relatively recently, though, that studies have investigated the psychometric performance of differential emotions scale using non-Western participants (Akande, 2002).

However, some researchers have noticed, some difficulties were however apparent for the subscales of Anger, Disgust and Contempt, which tended to load a common factor. The subscales of Interest, Joy, Surprise, Sadness, Fear, Shyness and Guilt, on the other hand, seem fairly well validated from the several factoring, although in one large study of 1182 Subjects, the subscales of Fear and Sadness were not clearly separated (see Izard, 1994). The data reported the emergence of eight distinct factors, including those pertaining to Joy, Fear, Surprise, Interest, Shyness, Contempt and Guilt (see a list of states and emotions in Tables 1 and 2), The subscales of Anger and Sadness were combined as a single factor.

Dimensionality of Individualism-Collectivism

Culture may be defined as “the collective programming of the mind which distinguishes members of one category of people from another” (Hofstede, 1991, p. 193). The culture of a society can be said to be the memory of beliefs, attitudes, norms, roles and values that have worked in the past, and was transmitted from generation to generation based on fundamental assumptions we are not aware of (Heydendeldt, 2000). A person’s culture is a composite of such factors as the person’s ancestral culture, level of accumulation, racial/ethnic identity development and unique personal experiences. By the same token, these shared beliefs and collective representations do not echo Durkheim’s (1912) classic theory of social rituals.

The assumption that people are bound together in tight groups of interdependent individuals is fundamental to collectivist societies. People are integrated into strong, cohesive in-groups from birth onward. Throughout life, these in-groups continue to protect members in exchange for unquestioning loyalty and the performance of obligations and duties. No one is an isolated individual, and uniqueness is seen as secondary. Economically, physically and socially, a collectivist’s life is grounded in responsibility to the group.. Broadly speaking, as Heydenfeldt (2000) further observed, every society has a distribution of allocentric and idiocentric types, and even individualist and collectivist societies may vary from one individualist and collectivist cultures in vertical terms (inequality is accepted and rank has its privilege) or in horizontal terms (everyone must be the same). Nigeria is somewhat a vertical collectivist culture.

The Social and Cultural Milieus

Ibadan is one of the biggest cities in Africa. The traditional Nigerian culture core promotes the culture of respect, cooperation and responsibility - OMOLUABI It rejects all forms of violence which includes the violence of poverty (the lack of food, clothing and

shelter); the violence of criminals and rapists (terrorising the communities); family violence.

The necessity to eliminate negative emotional climate with its roots and branch in any progressive society are shown in Tables 1, 2 and 3. We should not equate the birth of globalisation to acceptance of all groups in every society. A wound that cannot be seen can be more efficaciously painful than the visible one (see a short description in Tables 3). We should not allow the legacy of the colonization's map of the continent to continue to fragment the people forever.

Erik Erikson opined, "There is a sample evidence of inferiority feelings and of morbid self-hate in all minority group" (1956, p. 155). In a similar vein, Allport (1954) stated that "group oppression may destroy the integrity of the ego entirely and reverse its normal pride and create a grovelling self-image" (p. 152).

The consensus obtained in all studies gives credence to the pan-African spirit of some African elder statesmen like Obafemi Awolowo, Murtala Muhammed and Kwame Nkrumah. We should hearken to Nelson Mandela's words in his historic 1994 inaugural speech at the dawn of democracy in South Africa, "let there be work, bread, water and salt for all".

METHOD

We sought information for the paper from various sources, we undertook a review of reports that were available by March 2011. First, we conducted a computerized search of PubMed, Psychological Abstracts, Sociological Abstracts, Embase, Medline, PsycINFO, ERIC, Social Science Citation Index, and Dissertation Abstracts International using a number of key words. Second, we manually searched all available years after 1990 of all journals relevant to the topic. .

Design and Sample

299 social science students (cohort II) took part in this study with an age range of 24-32 years, (with females 53.1 percent). Participants were matched as possible in age, parental background and geographic location within the state. In a version of Izard's Differential Emotions Scale (Izard, Dougherty, Bloxon, & Kotsch, 1974), respondents rated some fundamental emotions, each on a seven-point scale in reference to the question: "Considering the fact that all students will be in this situation, to what extent do you feel the following emotions?".

RESULTS AND DISCUSSION

Under the four conditions, the DES subscales of Joy, Contempt, Fear and Shame/Shyness exhibited the highest lower-bound estimates of test-retest reliability with correlations up to about 0.75, which for state measures given under different conditions is good (cf.

Boyle 1979, p.78). However, neither the Interest subscale or Surprise subscale nor the Guilt subscale demonstrated significant retest correlations in a comparison of the General and Specific Depression conditions, and also of the Specific Depression and pre-examination conditions. Izard et al (1974), p. 32) reported a retest correlation of 0.77 for the trait version of the DES (using a 5-point frequency rather than intensity response system), which seems somewhat low for a reliable self-report instrument of the trait variety (cf. Boyle, 1979, p. 78).

Admitedly, the reliability of the state version of the DES can only be assessed in terms of internal consistency of the items in each subscale (Boyle, 1984; Izard et al., 1974). However, with only three items per subscale (which may allow rapid measurement of transient moods – although increased items in accord with the Spearman-Brown formula should result in greater reliability of the DES subscales – see Nunnaly (1978, pp. 210-212, 243-245) one would expect high internal consistency if the items were measuring essentially the same limited aspect of the particular dimension. What is more desirable are items which have less homogeneity of variance (less internal consistency and item redundancy), but which correlate highly with the relevant factor. This would enable each item to measure a different aspect of a given dimension, providing broader, less redundant and more efficient measurement.

It should also be kept in mind that, as Saggino, Cooper & Kline (2001, p.5) indicated, a coefficient should not exceed 0.7 if each item is to add something new to the measurement of a construct. Likewise, Cattell (1982) has discussed this issue along with Allen and Potkay (1983), who have all indicated that internal consistency is not particularly related to reliability. Boyle (1984) reported a mean ïµ coefficient for the DES subscales of .82. In the present study, the DES total scale exhibited coefficients of 0.77, 0.82.0.87. 0.85 and 0.89, respectively for the five treatment conditions. For the 10 subscales, ïi estimates ranged from 0.52 to 0.89, which suggests some item redundancy.

As discussed in earlier reports, we performed the categorization manipulation by following Boyle's (1984) approach. An iterative principal factoring was performed on the item intercorrelations. Eight factors on the basis of the Scree test were rotated to oblique sample structure for the General Depression condition using a direct oblimin procedure (see Izard, 1994). The ï±0.10 hyperplane count (Catell, 1978, p. 142) was 62.05%. While a seven-factor oblique solution accounted for 54.7% of variables in the hyperplane, a nine-factor solution produced a hyperplane count of 0.46% which was no better than that for the eight-factor solution. However, in order not to lose one factor, we did not apply the eigenvalue >1 factor-extraction number rule. Otherwise, only

seven factors would have been retained for subsequent rotation, while one factor would have been lost.

To test further, a close examination of the oblique factor pattern (cf. Table 4) reveals that the four DES subscales of Contempt, Surprise, Fear and Disgust were clearly defined by Factors 3, 5, 6 and 7, respectively. Nevertheless, Item 23, "Feel like you are better than somebody" failed to load significantly on Factor 3. For Factor 6, Item 7. Item 22, "Feel like things are so rotten they could make you sick", failed to have a significant loading, while Item 1, "Feel regret, sorry about something you did", loaded significantly on this factor. Factor 4 represented a combination of the Sadness and Anger subscales which suggests that the instructions to participants may have simultaneously being unclear, presumably due to the inconvenience of having to experience a negative mood state (depression), when no such state might be difficult to easily recall. Factor 1 represented a combination of the Guilt, Sadness and Shame/Shyness subscales, while Factor 2 represented a grouping of the Joy, Surprise and Interest subscales. Therefore, Factor 1 involved a cluster of negative mood states, whereas Factor 2 involved a cluster of positive moods reminiscent of Eysenck's personality dimensions of Introversion and Extraversion. Factor 8 seemed to represent a state of depressed mood indicative of the condition under which this data was obtained. These factor-analytic finding was very similar to previous study (Adetoun, Tserere, Akande & Akande, 2009; Akande, 2002), therefore, provided only partial support for the construct validity of Izard's DES subscales. Since some factors involved combination of the postulated fundamental emotions, it appears that the division of the DES into 10 subscales may be partly an artefact of the factor-analytic procedure employed in Izard's studies (see Boyle 1984; Reid, 2010).

Given the clustering of these subscales, we further carried out the discriminant validities of the DES items, using a repeated-measures application of multiple discriminant analysis. The 30 DES items were tested for their ability to individually discriminate between the five treatment conditions – an extremely stringent test of the sensitivity of the items. Twenty-one of the 30 items discriminated significantly. Had only two or three conditions been employed, several of the remaining 9 items probably also would have been significant discriminators. F-tests on the power of the discriminant functions were all highly significant ($P < 0.001$). The first discriminant function accounted for most of the variance (65.15%) and therefore was considered as the most important for examining the discriminant validities of the DES items among non-Western paeticipants. Table 5 presents the data pertaining to the four discriminant functions. Finally, there was suggestive evidence that, these findings are similar to isiZulu participants (see Adetoun, Tserere, Adewuyi, Akande & Akande, 2009).

In one respect, the examination of the correlations of the 21 significant DES items with the first discriminant functions (see Table 6), revealed that item 23 (from the Contempt subscale) correlated only 0.17 with the function. While this was statistically significant ($P < 0.05$), compared to the other correlation it was low. Therefore of the 30 DES items, a stringently conservative estimate is that 17 items appear to be highly valid discriminatory between various mood states. The stepwise discriminant analysis

sequentially selected those DES items which contained most of the classificatory information. All three items for the subscales of Interest, Surprise and Sadness, were significant discriminators between the five conditions. For the subscales of Joy, Anger, Fear and Shame/Shyness, three items were significant discriminators, while for the Disgust. Contempt and Guilt subscales only two items discriminated significantly between the five conditions.

Consequently, as shown by the statistical results while majority of the DES items are sensitive indicators of different mood states the construct validity of the DES subscales is not clear. Only for the subscales of Contempt, Surprise, Fear and Disgust, was a clear-cut matching of the subscale with empirical factor achieved in the present study. While there is an apparent need to improve the construct validity of the DES subscales (perhaps different subscales are required) for reducing item redundancy (internal consistency), for improving the retest reliability of the instrument. Overall, results suggest that Izard must be commended for his attempt to measure fundamental emotions.

Eventual conclusions regarding whether Izard's differential emotions theory represents an advance in conceptualization and logicality will clearly have to be based on more observations made in a wide variety of contexts. In this sense, our research is very much a beginning, and the results must be interpreted cautiously, based as they are on students in a non-experimental setting. Apart from this, our inferred main contribution is the discovery that social categorization in the absence of an opportunity for intergroup differentiation may attenuate self-esteem somewhat. Nevertheless, such effects were grossly minimized.

Conclusions and implications

To a large extent, too, it would seem human emotion is complex, entailing both universal and cultural specific aspects. One could speculate that certain aspects of the content - specificity of emotion may be dynamic, changing across time and place. This idea underscores the appropriateness of studying emotion as broadly as possible with samples as diverse as possible.

This suggests a lack of metric equivalence across these geopolitical cultures, perhaps due to probable systematic differences in the frames of reference that participants use when responding to scalar items on measures (Triandis & Gelfand, 1998). However, experts have suggested that metric equivalence is not necessary before an instrument can be utilised validly within a culture (Watkins, Mcinerney, Akande & Lee, 2003). Even then, there is urgent need to take seriously the alternative conceptualization emerging from other cultural models rather than just doing quick fix of checking whether a given culture agrees with our preformulated hypotheses, regarding our Western conceptualisation of facial emotions.

Thus, we feel that research on differential emotions is important and offers a promising

area of inquiry for all social researchers, given the current dearth of research in this area and particularly, amongst similar non-Western population. Future research using other non-Western data will add value to our true understanding of psychological and social factors that might strengthen the motivation to learn and communicate dialogue across cultures, which might help us not only uplift individual happiness, cultural consciousness, increased world mindedness, and sense of connection to others, but also the wealth of the society.

In closing, studying beliefs of other geopolitical cultures in our quest for universality thesis, by way of applying hybrid 'personality-social psychology' strategy to the study of emotion very well may have the potential to awaken the functional theories of intergroup discrimination, human emotion and social influence from their long winter of hibernation.

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