RESEARCH PAPER

# Are shared models always cultural models? A study of the cultural model of affect and emotion in Chuuk

**Edward D. Lowe** [ID]

**Abstract** This article investigates a theoretical tension in cultural models theory between their sharedness and their origin in social and culturally mediated experiences. To address this tension empirically, this article presents a mixed-methods analysis of the shared understanding of a typology of emotion in Chuuk Lagoon. Based on a review of contemporary theory, one would expect that while people in Chuuk would have distinct cultural models for specific culturally meaningful paradigmatic emotions, the shared model for the entire typology of emotion would be structured by two universal dimensions of core affect (arousal and hedonic quality). But this theoretical literature ignores the importance of an intersubjective dimension of prereflective experience. This dimension may be culturally muted in industrial, educated, and rich contexts where most prior research has been conducted but culturally emphasized in places like Chuuk. The mixed-methods analysis finds that an intersubjective dimension along with a hedonic quality dimension structures the shared model of a typology for affect and emotion in Chuuk, while the arousal dimension found elsewhere is muted. Thus, shared models of affect and emotion are cultural models both in terms of specific, culturally elaborated emotions and in terms of the cultural emphasis given to underlying affective and intersubjective dimensions.

**Keywords** Cultural models · Emotion · Affect · Intersubjectivity · Chuuk · Micronesia

E. D. Lowe (✉)
Social and Behavioral Sciences, Soka University of America, 1 University Drive, Aliso Viejo, CA 92656, USA
e-mail: elowe@soka.edu

Cultural models are typically defined as complex cognitive schemas that people share as a result of having learned them though similar socially mediated experiences (Bennardo and de Munck 2014; de Munck and Bennardo 2019; D'Andrade 1995; Shore 1996; Strauss and Quinn 1997). There is a theoretical tension within this definition between the sharedness of cultural models and their origin in socially mediated experiences. The sharedness aspect emphasizes how cultural models can be learned via recurrent exposure to regular patterns that are present in various domains of social and cultural life (e.g., Strauss and Quinn 1997). But, an overemphasis on sharedness can diminish attention to the second, socially mediated aspect of cultural models. The social mediation of much of human learning is not just based on the way those experiences come to be patterned, but also about the way social and cultural practices "constrain attention and guide what is perceived as salient" in those experiences (Shore 1996:50). In addition, socially mediated experiences can also promote in people who share a cultural model a sense that they are

jointly or collectively committed to those social experiences and the understandings that accompany them (Bennardo and de Munck 2014; de Munck and Bennardo 2019; Gilbert 2014; Lowe 2018; Spiro 1997; Tomasello 2014). Humans also learn cultural models through an intersubjective sense of the other, either as a prereflexive, phenomenological sense of an other prior to reflexive intentional (e.g., goal oriented) action or in the sense of real and imagined co-participants in intentional actions within social and cultural worlds (Duranti 2015).

Given the preceding, the empirical study of cultural models presents four interrelated methodological challenges to attend to in cultural models research. First, one describes the structure of the models. Second, one establishes how the model is socially shared or distributed. Third, research documents how the patterning of social life facilitates learning the cultural model and the possibilities for developing a sense of joint commitment to it (e.g., Spiro 1997; Lowe 2018). Fourth, issues of intersubjectivity that relate to the cultural model as it is expressed in everyday life must be documented. To meet these four challenges, a combination of structured, quantitative methods and qualitative, ethnographic methods is necessary. There is a division of labor here when considering which methods might be a better fit for these different methodological challenges. The first two favor more structured analytic methods (Bernard 2015), including quantitative methodologies or structured qualitative analyses such as Iterative Analysis (Tracy 2013). The second two favor more open-ended, unstructured ethnographic methods, including phenomenological and sensory-oriented strategies (Pink 2015).

To explore these points, this article presents a mixed-methods cultural models analysis of the domain of affect and emotion for people in the Micronesian islands of Chuuk Lagoon. The domain of affect and emotion is a particularly good one for the investigations of the theoretical issues of sharedness, joint commitment, and intersubjectivity. The reason is that shared understandings of affect and emotion could reflect patterns that are learned as the result of experiential features that accompany universal neurophysiological and psychological processes and also learned through local social and cultural processes. In the case of the former, the consciously accessible neurophysiological patterns universally present in

experience could provide a universal basis for the complex mental models of affect and emotion that people develop and share with others regardless of social and cultural context. In the case of the latter, social and cultural processes can constrain and guide attention to certain aspects of affective and intersubjective experience, defining some aspects as valued and others not, promoting forms of joint commitment to favored and not favored aspects of affective and emotional experience. If intersubjectivity is also a basic neuro-physiologically grounded dimension of human experience along with affectivity (Gallagher 2017), then social and cultural processes might emphasize the intersubjective qualities of experience in some societies more than in others, leading, for example, to cultural models that place greater emphasis on the intersubjective aspects of affective and emotional experience in some societies as compared to models in societies that emphasize the affective dimensions more.

## A theoretical framing of shared understandings of affect and emotion

Earlier approaches in the affective sciences tended to focus on "emotion" as a basic unit of study, with many seeing "affect" and "emotion" as essentially synonymous. Over the last two decades, however, researchers and scholars have made a clearer analytic separation between these two terms (see Colombetti and Roberts 2015; Russell 2003; Posner et al. 2005; Throop 2014). For example the psychologist James Russell (2003; Posner et al. 2005) and his colleagues distinguish between universal core *affects*, defined as "that neurophysiological state consciously accessible as the simplest raw (nonreflective) feelings evident in moods and emotions" from *emotions* that are more complex paradigmatic cognitive and relational events and that are often labeled with particular emotion words in a given language. As another example, in the philosophy and anthropology of affectivity, and following more in the phenomenological tradition of Husserl and Heidegger, Colombetti and Roberts (2015) distinguish between discrete emotions, or paradigmatic states like fear, anger, and sadness and more diffuse affective moods like having the blues or being grumpy. Moods are "usually characterized … as diffuse affective colorations that influence one's

experience of the world, and that make some emotional episodes [like those labeled "joy" or "anger" in English] more likely than others" (Colombetti and Roberts 2015: 1250; also Throop 2014). In doing so, these scholars make a useful theoretical distinction between more general, diffuse, affects or moods, on the one hand, and more complex, and paradigmatically discrete emotions, on the other.

Russell's (2003) 2-level theory of affect and emotion that distinguishes a two-dimensional model of core affect that underlies more complex and paradigmatic emotions has important implications for the comparative study of cultural models of affect and emotion. On the one hand, any typology of affect and emotion should be organized in terms of the two dimensions of core affect (arousal and hedonic quality) for all societies, since these are experientially organized through common human neurophysiological processes. So, across all cultural groups, if respondents are asked to rate emotion terms from their language in terms of their degree similarity to each other and this pattern of similarity is examined statistically using Multidimensional Scaling (MDS) or Correspondence Analysis, a 2-dimensional solution would result with the emotion terms organized in the space according to their combined qualities along both the arousal dimension (activation-deactivation) and the hedonic quality dimension (pleasure–displeasure) (e.g., Moore et al. 1999; cf. Lutz 1982). On the other hand, the cultural elaboration of specific emotion categories or complex taxonomies of emotions, often found through clustering procedures, will vary more among different societies as these are more subject to processes of social mediation and cultural elaboration (e.g., Gerber 1985; Lutz 1982; cf. Shaver et al. 1987). Theoretically, the different combinations of these two dimensions combine to give an affective feeling tone to all experience, whether such experiences can be characterized in terms of discrete emotions or more general, diffuse moods such as having the blues of feeling grumpy.

However, there are theoretical and empirical reasons to question these claims. Russell's model of core affect reproduces what Bradd Shore (1996) has characterized as a tendency in academic psychology to assume that the construction of mental models reflects a direct relationship of individuals and their physical and embodied environments. Contrastingly, social and cultural anthropologists generally assume

that the social and intersubjective aspects of human worlds are equally primary features of human being as are those of individual adaptation. As Bradd Shore (1996: 50) notes, "[b]y introducing a social environment into the equation, the anthropologist transforms the problem of [mental] models into one involving intersubjective communication and not just adaptation." The upshot of this difference is to insist that human beings are born into intersubjective human worlds that quite often mediate the relationship between individuals and the physical environment. Humans are neurophysiologically prepared at birth for their entry into an intersubjective and highly cooperative lifeworld and the challenges this human world will present to developing persons who must learn to negotiate both the need for individual agency and for social participation in joint- or collective-social and cultural activity (Gallagher 2017; Siegel 2012; Tomasello 2014).

Given this, in addition to the adaptive concerns that underlay the arousal and hedonic dimensions found in Russell's (2003) two-dimensional model of core affect, we can posit a third, intersubjective dimension that can also inform cultural models of affect and emotion. Here, intersubjectivity is understood as a general, prereflective and non-objective sense of an other (Duranti 2015; Gallagher 2017; Thompson 2007). As Duranti (2015: 209) notes, intersubjectivity is "a fundamental quality of all kinds of human experiences, including the apparently most individual or private." Therefore, intersubjectivity in this phenomenological sense is very likely a third dimension of everyday conscious experience for humans and it should, along with the dimensions of core affect, be part of cultural models of affect and emotion (see Gallagher 2017 for a discussion of affectivity and intersubjectivity as analytically primitive aspects of human experience).

One reason that much of the prior research has found the two affective dimensions of hedonic quality and arousal as a base for shared models of affect and emotion may be that much of the research was conducted in one of Henrich, Heine, and Norenzayan's (2010) WEIRD societies (Western, Educated, Industrialized, Rich, and Democratic). It has long been established that these societies are permeated by institutional and ideological arrangements that emphasize the cultivation of individualism (Benedict 1946; Riesman et al. 2001; Strathern 1988; Taylor 1989). In

addition, this tendency may reflect less the "western" origins of a society, than the educated, industrial, and rich aspects. Theorists of modernity have long posited that these modern industrial contexts foster a more individualist psychosocial orientation (Simmel 1950). This might explain Moore et al.'s (1999) findings for urban dwellers in Japan, China, and United States mentioned earlier, where two of the three societies were non-western but all were industrial and where the shared models of emotion were similarity organized by dimensions of hedonic quality and arousal.

Societies across the region of Oceania are a strong contrast to these urban, individualist societies. In many societies of Oceania, self is understood as emerging not from a reflexive sense of one's own individual biography of achievement and setbacks when interacting with an external environment, but instead within a context that privileges relating to others (e.g., Ochs and Schieffelin 1984; Lilomaiava-Doktor 2009; Lowe 2003; Lutz 1988; Mila-Schaaf 2006). There is some evidence that supports this claim. In her study of the judged similarities of 31 emotion words on the Micronesian island of Ifaluk, using MDS to analyze the pile sort data Lutz (1982) found a two-dimensional model with a hedonic dimension and a dimension associated with interpersonal concerns for an other. Although Lutz did not present a phenomenological interpretation of this second dimension, she did clearly label it as having to do with the position of ego in terms of being "strong" or "weak" relative to the position of an other in a given situation. A strong position characterized paradigmatic emotions like *fago* (love, pity, sadness) and *song* (justified anger). A weak position was characterized by emotions like *metagu* (fear/anxiety [of an other]) and *ma* (shame, embarrassment).

It is possible therefore that some societies might institutionally and ideologically mute or emphasize the intersubjective dimensions of human experience, leading to this dimension's either becoming culturally hypocognized or hypercognized in Robert Levy's sense of these terms (Levy 1973; 1984, 219; also Röttger-Rössler et al. 2015). Consequently, in more individualist societies there could be relatively few culturally provided schemata, labels, and models for interpreting and managing the intersubjective dimension of human experiences in these societies, even though it is always present in everyday life. In Oceanic societies, like Ifaluk, Fiji, Samoa, Yap or Chuuk, the

intersubjective dimension may be hypercognized (Duranti 2015; Lowe 2018; Toren 1999; Ochs and Schieffelin 1984; Throop 2008). A hypothesis derived from the preceding is that in societies where intersubjectivity is hypercognized, we would expect the local cultural model of affect and emotion to reflect this dimension as strongly or more than the two dimensions of core affect.

## The present study

To test the hypothesis given above, this study uses quantitative and qualitative data collected through two-decades of ethnographic fieldwork in Chuuk Lagoon of the Federated States of Micronesia (FSM). Field research was conducted in the language of Chuuk and took place during field visits in 1996, 2000, 2008, 2012, and 2017. Chuuk Lagoon is located in the Western Pacific in the area of 151° 220′ East longitude and 7° 220′ North latitude. The lagoon is a complex atoll where a broken ring of coral reef islets encircles 18 or so small volcanic islands that rise out of the lagoon to heights ranging from a few feet to about one thousand feet. Twelve of these high-islands are currently inhabited. Chuukese is the language spoken in the lagoon; there are several regional dialects, all of which are mutually intelligible to native speakers. Chuuk is culturally part of a larger Chuukic region, which also includes several low-lying atoll groups to the north, south, and west. Ifaluk (Lutz 1982; 1988) is among those Chuukic atoll islands to the west. According to the FSM Office of Statistics, Budget, Overseas Development Assistance and Compact Management, the total population of Chuuk Lagoon in 2010 was 36,152. This is the year that the last official census was conducted.

Quantitative data collection procedure

The quantitative data for the cultural model of affect and emotion were collected in the initial 11 months of fieldwork conducted in 1996. To study the shared understanding of the typology of emotion in Chuuk, I first produced a list of Chuukese emotion terms by using Goodenough and Sugita's (1990) English–Chuukese dictionary to find Chuukese equivalents for eight "basic" emotions listed in D'Andrade (1995:219), which he took from Carol Izard's list of

ten primary emotions. These included the English words joy, surprise, sadness, fear, anger, disgust, contempt, and shame. Two words, interest and guilt, from the ten listed in D'Andrade (1995) were not included as there are no direct equivalents for these terms in Chuukese. I also included Chuukese terms for "love/compassion" because earlier ethnographic studies found these to be highly salient (e.g., Gladwin 1953; Lutz 1988). I then discussed this initial list with several local men and women to see if any additional words might be added. These consultants added a number of additional words they felt were missing. We checked these terms for their presence in Goodenough and Sugita (1990) and confirmed that they did indeed reflect emotion words that had some correspondence to emotion words in English. In the end, I was able to assemble a list of 38 Chuukese emotion terms that fit into the 8 basic emotions we started with using this procedure (see Table 1).

To document the structure of any shared model of the typology of emotion in Chuuk and to test how strongly it might be shared among adults, I used a variant of the successive pile sort procedure (Boster 1994) to collect similarity judgments of these 38 terms from a convenience sample of 11 adults, including 8 men and 3 women (age range 22–48, Mean age 40.9). These respondents were a convenience sample of adults who lived in three villages on the lagoon island of Feefen. While this sample is small for statistical procedures that rely on identifying a reliable central-tendency in the aggregate pattern of response as the basis of inferring a shared model of a particular domain, this approach taken in this study was to use consensus modeling to estimate the shared model (Weller and Romney 1988). In cases where shared agreement on how to complete a task is high, as is the case for this domain (see below), 11 is an adequate minimal number of respondents needed to estimate a shared model using consensus modeling techniques (Weller and Romney 1988:77). Since anthropological research is often conducted in contexts where the total available adult population is low, consensus procedures have distinct advantages over those that require a large number of respondents in order to find central tendencies in patterns of response to a particular research procedure. Nevertheless, with such a small sample, the results of the analyses presented her should be read with some caution, pending further research.

For the card sort procedure, I first wrote each of the 38 emotion terms in Chuukese on a separate index card along with a unique alphabetic code next to each emotion word for data recording purposes. Then, in a formal one-on-one interview setting, I shuffled the cards and spread them out before the respondent in a rectangular pattern. The respondent was first asked to sort all of the cards into two separate piles based on any feature of shared meaning he or she chose to use as the basis of this first sort. The respondent was allowed to place any number of cards into each pile. After making the initial sort, the respondent was directed to move cards around in order to sort one of the two piles into a smaller pile based on the shared similarity of the words in the pile. This process of sorting and splitting continued until all 38 of the cards were split apart. The final cards to be split apart were those judged by the respondent to be closest in meaning. Each split was marked using a numeric marker chip so that the order of the entire sort could be recorded once the task was complete. The complete sort was recorded by first noting the alphabetic code for the first card in the left-hand side of the final sort and then the number that separated it from the next emotion term and then the alphabetic code for that next term, followed by the number, and so forth (Boster 1994).

There are two advantages in using a successive card sorting procedure over other commonly used semantic similarity judgment tasks. First, this task requires each respondent to construct a complete taxonomic tree representing their understanding of the semantic relationships of all 38 emotion terms. This typology can be easily converted into a complete proximity matrix of the judged similarities for all the items on the list for each respondent. These individual proximity matrices can be used to measure the level of agreement among all of the respondents and to model the shared semantic structure of the domain using the cultural consensus procedure (Romney et al. 1986). Second, other methods designed to measure similarity judgements such as triads and paired comparisons (see Weller and Romney 1988) require respondents to make a large number of judgements given a relatively small number of items (usually less than 15). The successive card sort procedure allows the use of a much larger set of terms for systematic comparison, a test kit is much more portable, and a task that is much less time consuming in a remote field setting.

**Table 1** A list of 38 emotion words for Chuuk Lagoon with English translations (Goodenough and Sugita 1990)

| "Joy" words | |
|---|---|
| Meseyik | Be pleasantly excited |
| Mwánek | Be elated, stirred to joy, happy with anticipation |
| Neetipééch | Pleasant emotion, favorable desire |
| Neetipwas | "Lighthearted," agreeable |
| Pwaapwa | Happiness, joy, merriment |
| "Surprise" words | |
| Iing | Be astonished, amazed, filled with admiration, to marvel |
| Mááyiru | Be alarmed, astonished, surprised, scared, frightened |
| Mwaar | To be pleasantly astonished, filled with admiration |
| Rúúké | Be unpleasantly surprised |
| "Sadness" words | |
| Neetipengaw | Feel badly, be disappointed, sad, unhappy |
| Neetipeta | Broken hearted, grief stricken |
| Nóniinen | Sorrow, concern, regret, unease |
| Pwos | To long for, suffer nostalgia, be lonely |
| Riyáfféwun | Misery, torment, suffering |
| Ttur | Feel disillusioned, disappointed, depressed |
| Mú | Be full of emotion for someone's loss, feel pity |
| "Fear" words | |
| Mésék | Be afraid |
| Niw | Afraid, scared frightened |
| Piireyir | To be anxious about something of personal concern |
| "Anger" words | |
| Chchow | Heaviness, ill-will, hostility, anger |
| Neetipechow | Be aggrieved, bitter, feel wronged, "heavy hearted" |
| Ningeringer | Frustrated rage |
| Soong | Be angry, cross |
| Weyires | Difficult, frustrating |
| "Disgust" word | |
| Nnoow | To be disgusted by something |
| "Contempt" words | |
| Chipwang | To be weary, tired of something, annoyed |
| Ekiyekingaw | Have evil intentions |
| Esiit | To be critical of [someone] |
| Nónówó | To feel spiteful, be spitefully envious |
| "Shame" words | |
| Kin | To be ashamed (without implications of awe) |
| Ma | Be ashamed |
| Máfen | Embarassment, shame |
| Sááw | Be ashamed, embarrassed |
| "Love/compassion" words | |
| Achengacheng | To love, cherish |
| Chen | To be loved, cherished, favored |
| Chengen | To cherish, be happy with |
| Féng | Love for someone, [romantic] affection for someone |
| Ttong | Love, affection, sympathy, pity |

## Quantitative data analysis

To model the shared model for the typology of emotion in Chuuk, I used ANTHROPAC 3.0 to process the successive pile sort data (Boster's method) in order to derive proximity matrices for each of the eleven respondents' judged similarity tasks. The individual half-matrices, with no diagonal, were placed into a stacked matrix in order to perform a consensus analysis procedure, using the informal model according to Romney et al. (1986). Consensus analysis serves three purposes (1) to test for evidence of a single heuristic model shared among the respondents, (2) to estimate a model that describes the semantic relationships among the 38 emotion terms items, and, if evidence for a model exists, (3) to estimate each respondent's agreement with that shared model. Consensus analysis is a procedure very closely related to reliability analysis and is an appropriate method for the analysis of this kind of data and given the small sample size (Weller and Romney 1988: 78).

I used the cultural consensus algorithms for interval data in ANTHROPAC v.4.8 in order to test for evidence of a shared model of the emotion typology in the individual responses to the judged similarity task and to obtain an estimate of individual agreement with this model. ANTHROPAC v.4.8 first derives the matrix of intercorrelations among all individual proximity matrices as the agreement matrix. The agreement matrix is then factor analyzed using Comrey's MINRES algorithm. If the first Eigen value of the factor analysis is at least three times as great as the second Eigen value, and no negative values appear in the factor loadings, then a single factor solution is indicated. In other words, most of the non-random variance in the agreement matrix is represented by the first factor of the factor analysis. If this is the case, it may be assumed that a single shared model can be estimated from the data with the first factor loadings representing the level of agreement with the derived cultural solution for each consultant.

In addition to testing for the presence of single cultural model that organizes individual response patterns and deriving a measure of respondent agreement, consensus analysis in Anthropac 4.8 also provides an estimate of the cultural model itself. A weighted average of the respondents' similarity judgments is used to estimate a proximity matrix that represents the shared cultural model of the semantic similarities among the thirty emotion terms. Each respondent's answers were weighted using the factor scores from the consensus procedure.

The structure of the shared model for the typology of emotion in Chuuk was estimated by first recoding the similarity matrix representing the estimated cultural model for the typology of affect and emotion derived from the consensus analysis as a correlation matrix and then using Anthropac 4.8 to compute a 2-dimensional solution for a non-metric MDS procedure of the matrix. Using a non-metric MDS is consistent with earlier research that has documented the 2-dimensional structure of emotion taxonomies in a great number of earlier studies (see Shaver et al. 1987; Lutz 1982 for examples). In addition, an agglomerative hierarchical clustering analysis of the shared similarity matrix of emotion terms from the consensus analysis was produced using XLSTAT, this allowed the identification of paradigmatic emotion as clusters of related emotion terms. The cluster analysis is used in this article descriptively to help the reader identify related clusters of paradigmatic emotions presented in Fig. 1 that is presented and discussed below.

## Quantitative results

The consensus analysis of the individual responses to the successive pile sort procedure produced a single factor solution (Factor 1 Eigen value = 6.425, Factor 2 Eigen value = 0.268, ratio = 24.015:1) and no negative competence estimates. This suggests that a single cultural model can be estimated from the data. Competence scores for all of the respondents were relatively high with a mean of 0.76 (SD = 0.085, range 0.59–0.84). These results suggest that all of respondents shared a mental model that organized their responses to the pile sort task in a similar fashion. The high agreement scores are important for they suggest that the data are reliable, and the estimated shared model is likely to be a valid description of the cultural model of the semantic organization of emotion terms in Chuuk.

Figure 1 represents a plot of the results of the non-metric MDS procedure of the cultural model that informed the respondents' pile sorts of the 38 Chuuk emotion words. It also includes boxes next to each cluster of Chuukese emotion terms that reflect the clusters found through the cluster analysis. English
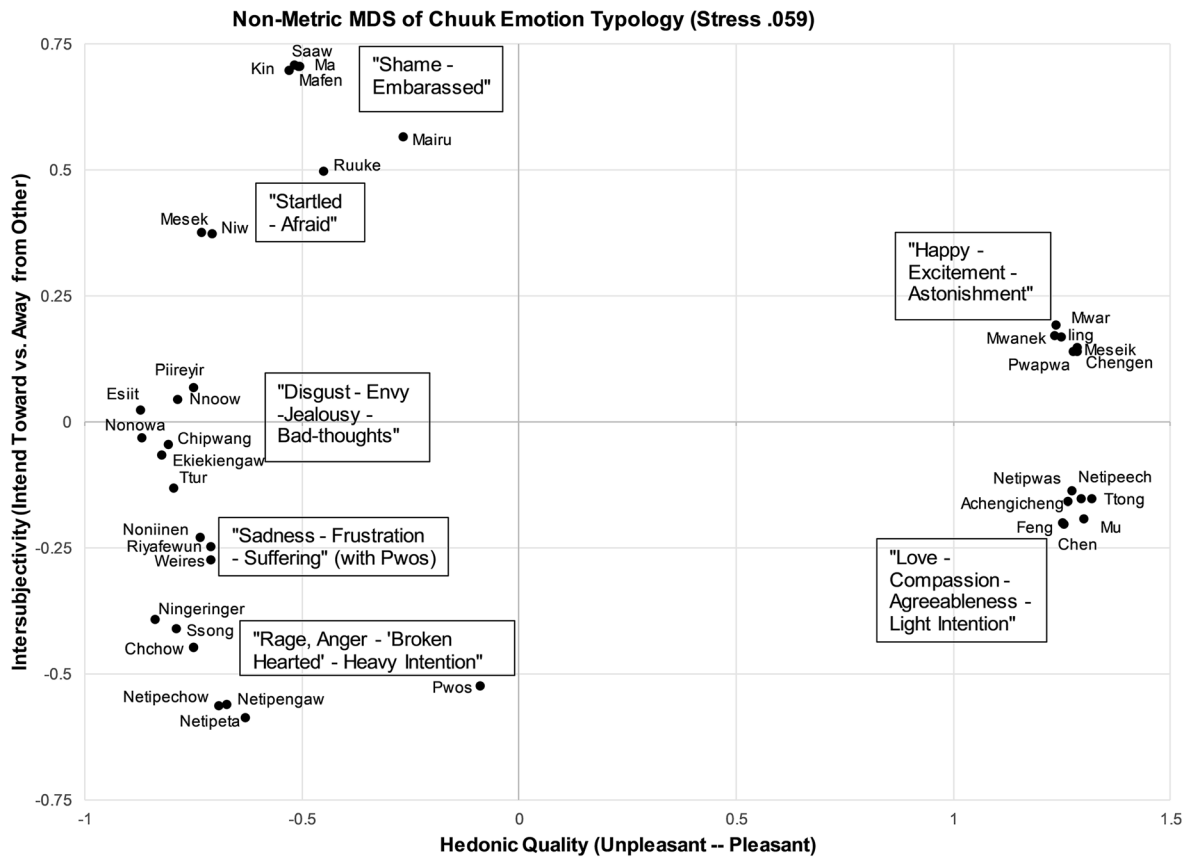
**Fig. 1** A 2-dimensional MDS model of the cultural model of affect and emotion in Chuuk

glosses are used in the boxes to aid the reader in better understanding the paradigmatic emotions that characterize each cluster. A 2-dimensional solution for the MDS is a result of an examination of changes in stress between a 1-, 2- and 3-dimensional MDS solutions (stress for 1-dimension = 0.11; 2-dimensions = 0.059, 3-dimensions = 0.042).

The two dimensions can be inspected for a sense of how these emotion terms are organized affectively and intersubjectively. The horizontal dimension clearly reflects a distinction of emotion terms that are hedonically pleasant, arrayed on the right-hand side of the dimension, from terms that are hedonically unpleasant, which are arrayed along the left-side. The vertical dimension distinguishes emotion words on the lower end of the dimension that are often associated with expressions of loss, longing, grieving such as *netipeta* (broken hearted, grief stricken), *pwos* (to long for, suffer nostalgia, be lonely) and *netipechow* (be aggrieved, bitter, feel wronged, "heavy hearted") but

also anger (*soong*) or frustrated rage (*ningeringer*) from words on the upper-end of the dimension that reflect shame and embarrassment (*sááw, ma, kin, máfen*) and fear or being unpleasantly surprised (e.g., *niw, rúúké*).

Comparing these results with earlier studies that report two-dimensional models of affect and emotion in earlier studies (e.g., Moore et al. 1999; Shaver et al. 1987), the vertical dimension of Fig. 1 does not reflect the expected arousal dimension. If it did, one would expect to find words associated with low-arousal such as being tired, or weary (*chipwang*) and lonely (*pwos*) on the extreme of one end of the dimension and highly arousing words like being angry (*soong*) or fearful (*niw*), and startled (*rúúké*) on the other. Rather, Fig. 1 shows that emotion terms reflecting anger (*soong*) or frustrated rage (*ningeringer*) are strongly associated with words reflecting loneliness and longing (*pwos*) and sadness and grief (*netipeta*). High arousal emotions like anger (*soong*) and frustrated rage

(ningeringer) are quite distant from other high arousal emotions like fear (niw) (fear) and unpleasant surprise (rúúké) along this dimension.

Moreover, while the two-dimensional pattern found in Fig. 1 does not resemble the pattern found in more industrialized, rich, and educated settings, it is striking how well it resembles that reported in Lutz (1982) for the island of Ifaluk. Lutz (1982:121) also reported a horizontal dimension that distinguished emotion words that reflected either pleasant or unpleasant affects and a second-dimension that distinguished words associated with fear, panic, and shame/embarrassment on one end of the dimension from words that reflect longing, loneliness, and homesickness together with anger and irritation on the other end. The major difference is that Lutz (1982) includes a selection of emotion terms that reflect indecision, doubt, and discomfort, which are absent from this study. If this selection of words were removed from the MDS diagram reported in Lutz (1982), the Ifaluk pattern and the Chuuk pattern is nearly identical.

Again, Lutz argued that this second dimension reflected the interpersonal relationships of both ego and other. In the case of Chuuk, and like Ifaluk, words associated with anger (soong) and grief/loss (netipeta) reflect ego being in a stronger position relative to other who is the object of the emotional experience. Words associated with shame (sááw, ma) and fear (niw) reflect ego being in a weaker position relative to other in this regard. If we accept the argument given in the theoretical review above, this is evidence that the cultural model of affect and emotion in Chuuk is organized primarily in terms of an intersubjective dimension in addition to one of the two dimensions of core affect, hedonic quality. This suggests that the array of emotion terms along the second dimension in Fig. 1 is strongly influenced by the nature of particular intersubjective concerns. These intersubjective concerns may be said to direct ego either intentionally toward the other as in the case of anger, grief, or loneliness or intentionally away from the other, particularly in the case of shame and embarrassment, but also in the case of fear and unpleasant surprises.

To further support the interpretation that the vertical dimension of Fig. 1 reflects an intersubjectivity dimension, a brief discussion of the terms associated with the affectively pleasant terms that are also on the intersubjective orientation toward an other end of the vertical dimension is offered (i.e., the "Love–Compassion–Agreeableness" Cluster n Fig. 1). Consider the term neetipééch, which reflects feeling good (-ééch) in one's tip (the seat of will/desire in one's body). However, other terms seem much more problematic in direct translation into English. For example, ttong and mú both involve feelings of pity or compassion for someone else's suffering, where ttong is a more general concern for the needs and suffering of others and mú is more restricted to feelings of sympathy over someone's loss. This bringing together of pity and sympathy with affection certainly seems strange to the American understandings of emotion as a typology. For example, in Shaver, et al. (1987) study of an American shared model using 135 English emotion terms, pity and sympathy were associated with negative emotions that are located in their "sadness" group (including terms like anguish, depression, and disappointment). The only related term Shaver et al. (1987) found in their "love" cluster was "compassion."

To understand the differences between this cluster in the context of Chuuk and those that are identified as "love/affection" in English more clearly, one can examine the definitions offered by consultants for the prototypical emotion of this group, ttong. One teenaged youth defined ttong as a feeling a person has when "he or she sees someone who has no food or shelter and he or she wants to help them." Another consultant, a female youth, offered the following for ttong, "when you see someone who has had some bad luck or has had an accident, you want to help them, comfort them." These descriptions also help us make sense of terms like neetipwas ("light desire", agreeableness). Feeling "good" (neetipééch) and "light" (i.e., not heavy) involves seeing the neediness in others and being affectively moved to bring them comfort and relief in some way.

This difference may reflect the divergent assumptions of many Americans and those of people in Chuuk, where, in the latter case, sympathy or pity are strongly connected to a motive to act in order to bring relief to an other. In the former context, sympathy may very well be associated with feelings of helplessness, or the assumption that one is unable to do anything about the suffering of others. This may be why American respondents associate sympathy and pity with terms that denote affectively deactivating terms like sadness, while people in Chuuk associate these terms with other words that denote love and affection.

But more than this, being able to succor those in need is fundamental to promoting feelings of loving or cherishing another, certainly this is a major component of the value systems that are explicit both in Chuuk and elsewhere in Micronesia (Gladwin 1953; Lutz 1988).

### Ethnographic and comparative observations

So far, we have examined the structure of a shared model of an emotion typology in Chuuk and suggested that it may be broadly shared. The results of the analysis of the quantitative data for the emotion typology in Chuuk also suggests that the underlying dimensions of affect that organize the domain are not entirely the same dimensions of core affect identified in earlier research. The evidence suggests that the dimensions of core affect that matter most to people in Chuuk are the dimensions of hedonic quality and the quality of intersubjectivity (i.e., intentionally oriented toward or away from an other), rather than a dimension of arousal. This is not to deny the presence of arousal, rather it is to say that hedonic quality may be muted or hypocognized in Chuukese people's understanding of the underlying affective features of the different varieties of emotional experience that is likely instantiated when they complete the pile sort task, just as it may be for people on the island of Ifaluk.

The next task in the analysis is to review ethnographic findings that establish the ways that the patterning of social life facilitates the learning of this cultural model and also the possibilities for developing a sense of joint commitment to the model and the way an intersubjective sense of an other accompanies these patterns of social and cultural life in Chuuk. In this section, I will review some ways in which an intersubjective dimension is emphasized in mundane, everyday ritual observances and in more occasional but highly affectively charged rituals (e.g., funerals).

In Chuuk there are many ways in which the intersubjective qualities of everyday consciousness are highlighted through both informal and formal institutional practices. A particularly mundane example is reflected in everyday greeting rituals that are commonplace in the villages of Chuuk. When walking along the road or path that leads from one village to the next, one will regularly hear often unseen residents of the houses that one passes call down to the road, "*etto mwéngé anach reis*" ("come and eat some of our rice)

or "*etto un coffee*" (come and drink coffee). To which the passerby typically responds, "*inamwo*" (roughly "no, thank-you, sir or madam"); but, she or he may also choose to take the person up on the offer and come up to the house for a meal, a drink, and some conversation—often sending young women in the household scrambling to prepare something for the impromptu visit. My understanding of the purpose of this everyday ritual is that people are normatively expected to demonstrate their openness to others who might pass buy and offer them food or drink in recognition that they may be hungry or thirsty, or need a moment to rest before continuing on their way in the tropical heat. On the other side, the polite response "*inamwo*" indicates that the person may worry that in accepting their invitation, they may place the other in some hardship as they might not actually have much food or drink on hand, and to accept the offer might cause the household itself to suffer. On the other hand, people might take them up on the offer because they recognize that person might be lonely (*pwos*) and desire some company.

An affectively charged set of formal ritual arrangements that emphasize an intersubjective sense of an other in Chuuk are those associated with grave illness and death (Lowe 2018: 87, 88). Ward Goodenough (2002:134) for example, reported that "[p]eople did not like the prospect of dying away from home and family. They wished to die, if possible, in the arms of their closest female relatives. … people's children and sub-lineage mates had the responsibility for caring for them in their last illness." In my own observations, if someone had moved away from their home village to other villages or islands in Chuuk, they would often return to their local lineage or sublineage homesteads if death due to grave illness seemed imminent. If their illness made travel impossible, close female members of their lineage would travel to the ill person to care for their relative in the place where the sick person was staying and hold vigil there at night with songs and prayers if the person seemed close to death. In the contemporary milieu, this travel to care for the gravely ill can include staying on the main, urban island of *Wééné* in the only state hospital for Chuuk State (see Bautista 2010: 92). Or, in an even sharper reflection of the Chuuk diaspora, a close female relative may fly to Guam or Hawaii, or even to the mainland U.S., to care for their sick relative, especially when death seems imminent.

The funeral ritual in Chuuk is understood to be a calling for kin and others who had some relationship to the deceased during her or his life (e.g., coworkers, close friends, fictive kin) to assemble (Lowe 2018). This calling is reflected in the term used to refer to the body of the deceased during the funerary period, *kkóniiro*, this literally means the "assembly" (*ro*) of *kkón* or pounded breadfruit, which is a symbolically important food staple in Chuuk and also symbol of a united kin group (see below). During the initial stage of the funeral, as the body of the deceased lay in the center of the lineage meeting house, more distantly related real or fictive kin arrive to pay their respects. Those visiting the deceased bring a small gift (*oowun meyimá*) for the dead person and none attend without such a gift. Visitors enter the funeral site and leave their gift next to the body of the deceased. As visitors exit the lineage meeting house after presenting their gift, they are given a small package of food and drink. Over the course of a day on which a funeral takes place, hundreds and even a thousand or more may visit. The importance of attending is to show one's openness to the call that the deceased puts out upon their death. The exchange of small gifts from and to visitors is an enacted expression of love and compassion (*ttong*) for each other as kin during this time of loss and grieving.

While discussing a series of funerals that I attended in the summer of 2012, one man and I talked about the meaning of *kkóniiro* further (Lowe 2018). He started with a description of the single family or household portion of pounded breadfruit (*kkón*) that is used in Chuuk to send to relatives after the breadfruit has been prepared at a shared cookhouse. Preparing *kkón* to be shared with close relatives is a regular feature of young men's weekly routines, and so an easily accessible metaphor to most people in Chuuk. As I wrote in an earlier article (Lowe 2018: 97, 98),

> When presented as a portion, the *kkón* is smooth and well mixed. But, he continued, *kkón* comes from the breadfruit tree. *Kkóniiro* has a metaphoric meaning, provided by the growth pattern of this tree. The breadfruit starts from a single trunk, representing the extended kin group and all of their relationships. As the branches separate out from the trunk, so do the single lines of relationship that connect people to each other. He then discussed how the different branches

represent the households of the kinship group that had gathered together to observe *kkóniiro*. As people go about their daily business, they become separated/differentiated (*ra sakufesen*) in their ideas and in what they think the family should do. This can lead to bad or disjointed intentions (*tiipengngaw*) among the kin group's members. But, he stated, when there is a death, then there is a *kkóniirow*. This is when the fruit of the breadfruit tree is harvested from the many different branches, and then cooked and pounded into *kkón*. As the cooked breadfruit pieces (*tipen*) are mashed together into a single smooth … portion of *kkón*, the people become as one again. For *kkóniiro* gives kin the opportunity to throw out any bad feelings and to become united again in a single, collective state of mind (*tiipeew fengen*).

This passage is significant because, while grave illness and death may occasion an emotionally charged opportunity to attend to one's conscious experience of an intersubjective sense of kin as an other, this passage describes also a process of fashioning a sense of joint commitment, culturally elaborated with the commonplace phrase "*tiipeew fengen.*"

Other ethnographic examples from Chuuk would only serve to reinforce the main point: the everyday organization of social and cultural life in Chuuk serves to constrain and guide people's experiences toward certain dimensions of subjective experience, emphasizing some dimensions of affectivity and intersubjectivity over others. These examples point to the importance of both a hedonic quality dimension and intersubjective dimension, with less emphasis on an arousing dimension of affect.

## Conclusion

This article opened by introducing a tension in cultural models theory between their sharedness and their social and cultural mediation. The introduction suggested that, due to this tension, one can imagine the possibility of mental models that are shared with others as a virtue of the patterns present in those phenomena as they are encountered in nature, independent of the social and cultural contexts in which

people live. Would such shared models also be cultural models? Or do we restrict our understanding of cultural models to those that come to be shared only through their social mediation in particular social and cultural worlds? The domain of affect and emotion is a particularly useful place to explore these issues because many have argued that the affective dimensions of emotion would be universally understood in similar ways even though specific paradigmatic emotions and larger emotion taxonomies would be elaborated in culturally distinct ways. This theoretical position places presumably universal neurophysiological processes in a more primitive analytic position than those that are social and culturally derived through processes of joint commitment and intersubjectivity. But what if earlier research is biased in terms of the populations that previous studies have studied, privileging those that live in more individualizing and atomizing urban, industrial contexts? In such cases, an intersubjective dimension of subjective experience might be muted and the affective dimensions associated with hedonic quality and arousal dimensions might be emphasized. If intersubjectivity is a fundamental dimension of prereflective experience in addition to the two dimensions of core affect as phenomenologists have argued (e.g., Thompson 2007; Gallagher 2017), then it is likely that all shared models for affect and emotion are also cultural models, because, while intersubjectivity is always present as a part of subjective experience, it is differently emphasized as a part of everyday social discourse within local cultural worlds, as are the two dimensions of core affect. The results from this study provide some support for this latter view. Although, the evidence presented here is admittedly tentative given the limitations of the research design.

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