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研究課題名（和文）Development of a culturally salient sentiment dictionary

研究課題名（英文）Development of a culturally salient sentiment dictionary

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研究成果の概要（和文）：本研究目的は、日本語、アメリカ英語、ブラジルポルトガル語の3言語による感情辞書を開発することでした。3カ国の参加者（合計N=2371）が42の感情語を7つの次元（ポジティブ・ネガティブ[valence]、覚醒度[arousal]、相互独立性[independence]、相互協調性[interdependence]、望ましさ[desirability]、経験の好ましさ[experience]、表現性[expressivity]）で評価しました。このプロジェクトでは、4つの学会発表が行われました。2023年の日本社会心理学会大会にも発表する予定です。

研究成果の学術的意義や社会的意義

Emotions are perceived, felt, valued, and expressed in different ways according to cultural norms, affecting the psychology of people everywhere. This research project sheds light on those differences, providing an important tool for the better understanding of cultures.

研究成果の概要（英文）：The objective of this research project was to develop a dictionary of emotions in three languages: Japanese, American English, and Brazilian Portuguese. Participants from the three countries (total N = 2371) rated 42 emotion words in 7 dimensions (valence, arousal, independence /interdependence, desirability, experience, and expression). This project has yielded 4 presentations at conferences: Annual convention of the Japanese Psychological Association in 2021; Annual convention of the Society for personality and Social Psychology in 2022 and 2023 (preconference and main conference. Currently a manuscript is under preparation. Data related to culturally specific emotions (awe, amae, and saudade) was also collected from the same three countries (N = 380). Analysis of this data will enrich the main study, and may yield another article for publication. Preliminary results will be presented at the 87th Annual convention of the Japanese Psychological Association in 2023.

研究分野：Psychology

キーワード：Emotion Culture Japan USA Brazil

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1. 研究開始当初の背景

Psychology has been criticized recently for its lack of cultural diversity, especially in regard to sample composition. Heinrich and colleagues (2010) highlighted the current situation in top global journals of Psychology, whereby most studies are conducted using western, educated, industrialized, rich and democratic (WEIRD) people. Research developed with such limited sample variation hinders the development and validity of the whole field of Psychology, since the results may not be applicable to the majority of the international population. Still, research developed using WEIRD subjects tend to be extrapolated to other cultures without careful adaptation of their methods and theories. The reasons for this lack of diversity can vary. For instance, rich countries have more monetary and human resources involved in research, while developing countries' resources are scarcer and psychologists tend to be involved with applied work (Adair et al., 2002). Sue (1999) pointed out that even researchers in rich countries usually face difficulties when trying to study culturally diverse populations. These difficulties include: reaching out to minorities often spread across big regions compared to on-campus undergrads; translations or adaptations of research materials; difficulty in backing up findings due to the lack of previous literature and thus penalized during the review process for publication. To sum up, culturally diverse research is hindered by the lack of monetary resources, adequate materials and theories, as well as the difficulty in reaching these populations.

The analysis of cultural products (e.g. artifacts produced by individuals from a specific culture) has been proven as a valid, practical and effective alternative to research involving participants (see Morling & Lamoreaux, 2008 for a review).

Studies has been done on very specific areas of emotions, through text analysis. For instance, previous research focusing on emotions has shown, through qualitative text analysis, differences in emotional expression between the US and China in love songs (Rothbaum & Tsang, 1998), and also Japanese emotional expressions in news articles concerning the great earthquake of 2011 (Uchida et al., 2015).

However, qualitative text analysis is extremely time consuming when compared to quantitative text analysis. In the latter, a machine can deal with an immense volume of text in an instant, while such

tasks would be very time consuming for a human being doing it qualitatively. Hence, the quantitative approach that researchers are using in computational linguistics, to extract information from text databases, amongs6 the myriad of different methods used by computer scientists, can be applied in the field of psychology which lacks such methodologies.

The methods developed so far in quantitative text analysis are not very well suited for studies on emotion in cultural psychology. They were created in a specific culture, mainly American, and then just translated, not revalidated or adapted to suit other cultures. Also, they do not focus on culturally salient emotions.

Culturally salient emotions are those that have a particularly different function or value depending on the culture in which they are manifested. For example, Tsai and colleagues (2006) made a distinction between high arousal and low arousal positive emotions. In North American cultures, people tend to value high arousal positive emotions such as excitement and elatedness, because these emotions help them be assertive and influence other people; while in East Asian cultures, people tend to prefer low arousal positive emotions such as calmness or serenity, because these emotions will not disrupt harmony and will help them fit in the social group. Another example pertains to engaging and disengaging emotions (Kitayama, Mesquita, & Karasawa, 2006). Engaging emotions, such as friendly feelings and respect, are defined as emotions focused on positive connectedness with others in social relationships, which are more valued in Japan. Disengaging emotions, such as pride or anger, relate to emotions focused on individual agency and separation from others, which are more valued in North American

cultures.

Thus, while cultural differences persist in emotions, up to date there is no sentiment dictionary focused on cultural characteristics. At the most, there is a set of words called ANEW (Affective Norms for English Words; Bradley & Lang, 1999). The database contains 1034 words previously rated in terms of valence, arousal and dominance in a 9-point scale by people from the United States. Subsequent adaptations were made by translating the words and having participants from other countries rating the translated words using the same three dimensions (e.g. Honma, 2014, and Kristensen, Gomes, Justo, & Vieira, 2011). However, the ANEW adaptations showed that the same word can be evaluated as a positive word in one culture and negative word in another culture, highlighting the importance for a culturally sensitive analysis and dictionary. However, the ANEW was not designed for cross cultural comparison and only a few of its words are related to emotions.

2 . 研究の目的

The objective of this research project was to develop a dictionary of emotions in three languages: Japanese, American English, and Brazilian Portuguese. A dictionary focused on culturally salient emotions, to be used in cultural research.

A sentiment dictionary has many applications. It can be applied to most situations involving text or speech analysis, such as computational linguistic analysis or natural language processing. Also it can be used by psychologists and other social scientists to produce stimuli for experiments, calibrate measures and support methodologies. Finally, there are more practical usages as well, for instance, a therapist working with a client from another culture can better understand their client's usage of emotional words during the sessions; another example in clinical psychology can be the adaptation of treatment methods to different cultures.

3 . 研究の方法

Firstly, a literature review was conducted to identify dimensions that are important for cultural studies in psychology, and to identify emotion words that can be relevant in such studies. Seven dimensions were considered: valence, arousal, independence, interdependence, desirability, tendency to express, and tendency to savor. 42 emotion words were identified based on previous research. A list of emotion words coming from research on basic emotions, ideal emotions, engaging and disengaging emotions, culturally specific emotions and some others was made. Participants from the three countries (Brazil [N=546], Japan [N= 1003], and the US [N= 1006]) evaluated the emotion words in the 7 dimensions. The results were analyzed in order to prepare the dictionary.

4 . 研究成果

A dictionary of culturally salient emotions was made. Its main manuscript is under preparation to be submitted to an academic journal in the field of psychology. Results show that there is substantial differences across the three studied cultures in terms of emotions in the 7 dimensions analyzed (see Figure 1 for an example of 9 emotions).

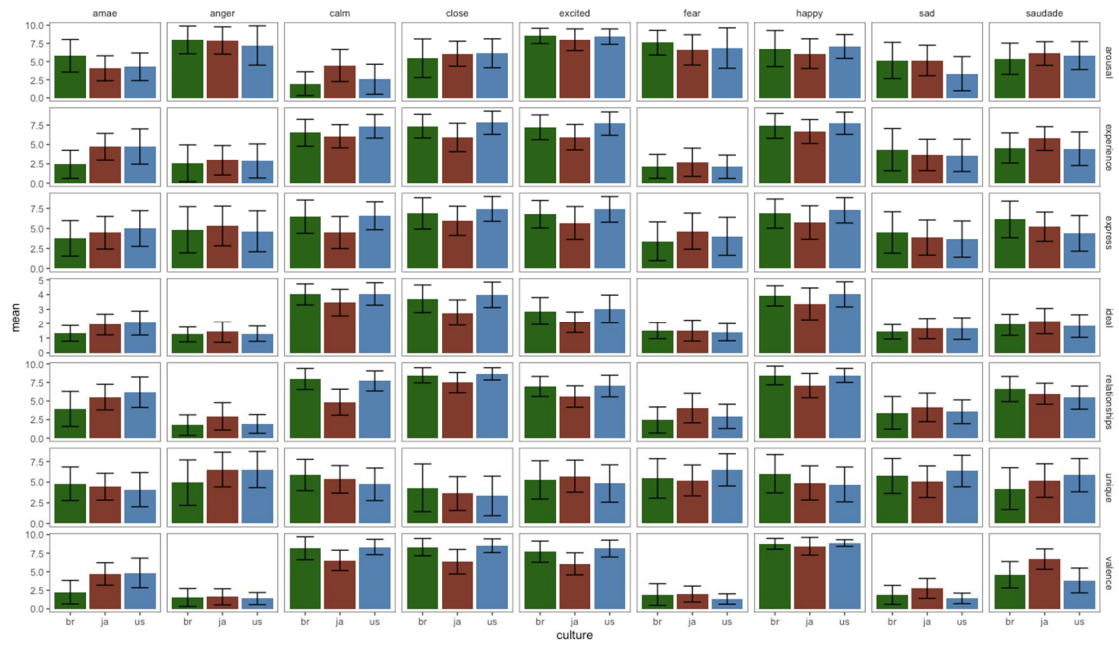


Figure 1
 Comparison of means of 9 emotion words in 7 dimensions across the three studied cultures: Brazil, Japan and USA

This project has yielded 4 presentations at conferences: Annual convention of the Japanese Psychological Association in 2021; Annual convention of the Society for personality and Social Psychology in 2022 and 2023 (main conference and pre-conference).

Preliminary results will be presented at the 64th Annual convention of the Japanese Society for Social Psychology in 2023.

Apart from this, another kind of analysis was conducted focusing on three culturally specific emotions from the three studied cultures. Amae from Japanese culture, saudade from Portuguese-speaking cultures (Brazil in this project), and awe in English-speaking cultures (US in this project). This analysis is being written up for another future publication.

5. 主な発表論文等

〔雑誌論文〕 計0件

〔学会発表〕 計4件（うち招待講演 0件 / うち国際学会 3件）

1. 発表者名 De Almeida, Igor
2. 発表標題 Emotions in song lyrics and Spotify data from Brazil, Japan and the United States
3. 学会等名 The Annual convention of Society for personality and Social Psychology (国際学会)
4. 発表年 2022年

1. 発表者名 De Almeida, Igor
2. 発表標題 Cultural values and popular songs in Brazil, Japan and the US - an analysis of lyrics and Spotify's musical features
3. 学会等名 85th Annual convention of the Japanese Psychological Association
4. 発表年 2021年

1. 発表者名 De Almeida, Igor
2. 発表標題 What we talk about when we talk about emotions: developing a culturally salient emotion dictionary in three cultures.
3. 学会等名 The 2023 annual convention of the Society for personality and Social Psychology (Culture pre-conference) (国際学会)
4. 発表年 2023年

1. 発表者名 De Almeida, Igor
2. 発表標題 Beyond valence and arousal: engagement and disengagement as important dimensions when clustering emotions.
3. 学会等名 The 2023 annual convention of the Society for personality and Social Psychology (国際学会)
4. 発表年 2023年

〔図書〕 計0件

〔産業財産権〕

〔その他〕

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6. 研究組織

	氏名 (ローマ字氏名) (研究者番号)	所属研究機関・部局・職 (機関番号)	備考
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7. 科研費を使用して開催した国際研究集会

〔国際研究集会〕 計0件

8. 本研究に関連して実施した国際共同研究の実施状況

共同研究相手国	相手方研究機関
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