The Co-Evolution of Language and Morality
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Background

The evolutionary emergence of morality requires language. (Dawkins 1976, O'Hear 1997, Flack & de Wall 2000, Bernstein 2000, Rallton 2000, Thierry 2000, Boehm 2000, Knauf 2000, Thierry 2000b, Tiger 2000, Boehm 2000b, Sober & Wilson 2000, Laland, Odling-Smee, & Feldman 2000, Vine 2000), i.e., linguistically based social norms, or what I am calling moral memes. Language enables morality as a taught information system. If moralities require language, and if languages sufficiently differ from each other, then it is possible that linguistic differences influence moral differences to some degree. That is, there may be a line of causality drawn from linguistic characteristics and moral thinking in a given culture. Such a hypothesis, testing a light form of linguistic relativism avoids the pitfalls of this theory by being driven by empirical considerations, comparing linguistic differences between two language, specifically how subjects respond to these differences as they are isolated experimentally from other variables (Lucy, 1992). If this obtains in the proposed experiments below, it would suggest that language might operate as a selective pressure in the evolution of cultures, specifically within a lingua-cultural, socio-moral co-evolutionary matrix. The experiments propose comparisons between English and Japanese moral words or phrases, i.e., moral memes. It examines whether differences the moral lexicon will cause bilingual speakers of English and Japanese to affectively perceive moral concepts differently, or to attend to different nuances of moral problems, or to appraise and evaluate moral issues differently.

Moral Memes

For the purposes of this experiment, moral words or phrase will be called moral memes; that is, memes are words, which represent concepts, which in a Darwinian sense may have varying degrees of reproductive fitness depending on particular environmental selection pressures. Incidentally, if the hypothesis of this paper obtains, it may correlate that one of the selection pressures operating on these moral-meme-concepts could be the language itself. That is, certain moral-memes may exhibit varying degrees of fitness depending on the linguistic host they inhabit. The following list of moral memes comes from the Japanese Ministry of Education, Culture, Science, Sports, and Technology (MEXT) government web site, specifically from their moral education objectives. There are a number of places where one could obtain a catalog of Japanese morals and values. There are numerous anthropological and sociological works that compare Japanese and American values, for example. It is also possible to choose the list from a thesaurus, picking words that cluster in moral categories. However, because the MEXT curriculum represents national goals for moral education, which are required to be taught by law in all public schools in Japan, this seems to be sufficient justification for using these terms in this current study. Another problem arises regarding the translation of the terms, or the choosing of bilingual moral meme pairs. Although the list included below is only in English, there are a number of potential solutions to the translation problem. An ideal solution presents itself on the MEXT database because all of their curricular goals are translated into both English and Japanese. Hence, on the MEXT database you have bilingual pairs of moral memes.

A secondary problem concerns how to choose the moral meme pairs from the English and Japanese pages that will be suitable for experiment. That is, a certain amount of gleaning will be necessary, and even though all of the memes come directly from the database, gleaning involves the choice and bias of the researcher. A random selection of the memes provides one solution to this issue. Hence, for example, if the number of moral memes is X and the survey requires 20 terms, a computer program can generate a random list of 20 numbers taken from X without repeating any of them. Hence, when the survey is made ready for administration, this randomization approach, or a similar one, can be used. Besides the gleaning issue, it is also important to recognize that this list comes from the Japanese side of the comparison. That is, the list represents Japanese moral memes, not necessarily English or western values. However, since the experiment aims to test whether there is a causal relationship between moral language and how such memes are perceived, then it actually seems irrelevant which cultural side the original moral memes were chosen from, as long as they are carefully translated into both languages. That is, whether the comparison succeeds or fails probably does not depend on which side of the ocean the moral memes are chosen from. Finally, there is one last issue to consider regarding the choice of the moral memes for comparison. Sociological and anthropological literature suggests that Japanese and Western culture have relatively different value systems, and it is the moral memes that intersect at the nexus of contrasting cultural differences that may prove most interesting for the experiments suggested below. For example, the word "democratic" in English may engender different cognitive associations in subjects than the Japanese word for democratic (minshuteki). Therefore,
because of the issue of cultural contrasts, there appears to be some justification for experimenter bias--in choosing at least some of the moral memes for the experiment that represent the starkest contrasts between the two value systems.

**The List of Moral Memes (MEXT, 1965)**

- To maintain safety
- To secure good health
- To develop self-reliance
- To keep oneself neat
- To improve the environment
- To use things and money effectively
- To recognize the value of time.
- To control oneself
- To act according to one's beliefs
- To be honest
- To be sincere
- To love justice
- To be courageous
- To overcome difficulties in order to accomplish right aims
- To reflect on oneself
- To listen to the advice of others
- To act with deep consideration
- To act moderately
- To act unselfishly
- To be alert
- To be courteous
- To be alacritous
- To care for animals
- To care for plants
- To have a pure mind.
- To be kind to everybody
- To care for the weak or unfortunate
- To trust each other
- To be friendly
- To be fair and impartial
- To be generous
- To observe rules and promises
- To differentiate between rights and duties
- To appreciate labor
- To protect public property
- To love one's family
- To love one's school

**Experimental Issues**

The problems of gathering moral memetic data for analysis are miniscule compared to the difficulty of designing an experiment to test for linguistic relativity related to any structural aspect of language. However, trying to evaluate lexical and semantic issues seems even more problematic. The following three approaches listed below are still tentative, and may need substantial revision to become viable. The main problem stems from trying to evaluate lexical items in different languages. Is it not possible to say that for bilinguals, who are the proposed subjects in the experiment, that these words (i.e., democratic/*mishuteki*) are simply synonyms of each other, so that if the different words are perceived to connote distinct nuances that is simply because they are different words. Hence, before any real experiment can take place, rigorous and creative methodology will need to be researched and developed. In the meantime, the following proposals will form the basic first step.

**Semantic Differential Technique (STD)**
• Select and translate bilingual moral word pairs.
• Justify the choice and translation.
• Create the STD instrument in both languages.
• Have bilingual speakers complete the STD instrument, first in Language A, then after appropriate delay, Language B.
• Perform a statistical analysis of the data.
• If all variables are stable, except the bilingual moral meme pairs, statistically significant variations in the responses point to a possible correlation to linguistic relativity.

Likert Scale Evaluation on Orthography
• Choose a list of morally relevant words.
• Create Likert or STD instruments—Form A and Form B for the words.
• Mix the instruments with the same lexical items but written in different orthographies, hiragana, katakana, and romaji.
• Have bilingual speakers complete the instrument, form A first, after appropriate delay, form B.
• If all variables are stable except for the orthographic differences, statistically significant variations in the responses will correlate to linguistic relativity based on orthographic differences of the same words.

STD Using Pictures with Tag-Phrases
• Select and translate bilingual moral phrase pairs.
• Associate the pairs to morally evocative pictures.
• Create the STD instrument in both languages based on the pictures and tag-phrase.
• Have bilingual speakers complete the STD instrument, first in Language A, then after appropriate delay, Language B.
• If all variables are stable, except the bilingual moral tag-phrases, statistically significant variations in the responses point to a possible correlation to linguistic relativity.

References

