



## Science of a Local Cultural Phenomenon

Nittono, H., Fukushima, M., Yano, A., & Moriya, H. (2012). *The power of kawaii: Viewing cute images promotes a careful behavior and narrows attentional focus*, *PLoS ONE*, 7(9), e46362. doi:10.1371/journal.pone.0046362

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In this paper, I reported three experiments to demonstrate that people who viewed pictures of kittens and puppies, as compared to those who viewed pictures of adult animals, perform better on subsequent tasks that require dexterity and carefulness and tend to focus on the finer details of an object [1]. To be honest, I am not a pet lover. In more than forty years of life, my family and I have never had any kittens and puppies of our own. I have been a researcher in psychophysiology for twenty years, measuring activities in the brain and the autonomic nervous system in connection with various psychological phenomena. I had never dreamt of doing this kind of "pop" research up until a few years ago when a third-year student of mine asked me if she could study human reactions to *kawaii* items as the theme of her diploma thesis.

*Kawaii* is one of the most popular words in contemporary Japan. Roughly speaking, it means "cute," "lovely," "pretty," "adorable," etc. This word is frequently uttered to express the speaker's favorable evaluation toward an object or person. Because it is used too often, sociologists and journalists have discussed for decades that *kawaii* is a key concept to understand the characteristics of modern Japanese people and culture. Nevertheless, many believed that it was out of the scope of science. "It is difficult," I said, "but if you really want to do so, try it." While she recorded psychophysiological responses to human and animal baby pictures [2], I carefully read through many articles regarding *kawaii*, from "The Pillow Book," an essay written by a Japanese court lady around the year 1000, to the most recent fashion magazines. As a psychologist, I was curious why people love *kawaii* so much and thought that there should be a psychological factor that reinforces the behavior of admiring and possessing *kawaii* items. At that point I was confident that, when done well, this line of research would attract much public attention, at least inside Japan.

Shortly after we started this investigation, an interesting psychology paper was published in the US. The authors argued that viewing pictures of baby animals promotes behavioral carefulness [3]. Because the results initially sounded odd but intriguing, I tried to replicate and extend the findings in a Japanese sample with support of three other students of mine. This is how and why I started the experiments reported in the paper in question.

As many other projects were going on in parallel, it took about two years to complete three experiments. The paper was first submitted to *Psychological Science*, which is one of the most highly reputed journals that publish many exciting psychology papers. However, it was rejected immediately

without being sent out to reviewers, because the paper made "a useful but incremental contribution to the literature" rather than reporting "groundbreaking findings." Needless to say, I had been aware that the study lacked true originality and was, in essence, a replication. On the other hand, I was pretty sure that this topic would attract public attention, so we decided to submit it to an open access journal, *PLoS ONE*. Before resubmission, however, I added a twist. Originally, the paper was titled "The power of cuteness," which was more comprehensible for an international audience. However, I deliberately changed it to "The power of *kawaii*," with the Japanese public in mind. I also inserted a short paragraph at the beginning of the paper to introduce what *kawaii* is and what it means in Japanese culture.

After the second revision, it was published in September 2012. Fortunately, the editor and reviewers never asked me to change the title to a "plainer" one. Therefore, it became the first peer-reviewed scientific paper with the word *kawaii* in the title among more than 23 million citations in PubMed. Before publication, for the first time in my life I asked a public information officer from my university to put out a media release.

The research was positively received. On the day of publication and the following several days, I was interviewed by a dozen of Japanese newspapers, radio hosts, and TV personalities. Furthermore, over seventy international news and blogs featured our findings, which surpassed my predictions. There were remarkable differences in the focus of interest between Japanese and international news media. While Japanese media mainly focused on the idea of scientific research on *kawaii*, other media passed over this aspect and just focused on the finding that viewing pictures of kittens and puppies may benefit work performance.

What enabled this research study to generate so much attention? It was partly due to luck, of course. With hindsight, however, there seem to be several factors that increased the likelihood of an article gaining wider attention in society. First, the study originated from a layperson's question. Second, the topic was well-framed in a local cultural background. Third, the finding itself was relevant to a wider, international audience for different reasons than those that pertained to the original culture. Fourth, it was published in a popular open access journal that is easily accessible by everyone via the Internet. Last but not least, what I learned from this experience is that, in order to publish a paper that is influential amongst the general public, it is important to conduct not only a groundbreaking study but also a study that replicates previous findings and extends them in a proper direction that many people are interested in learning more about.

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