

H. Ogi. A review of product usability index 2004 for rapidly ageing society. *Gerontechnology* 2008; 7(2):177. In Japan, rapid aging takes place. We developed a method to measure adaptability of a senior citizen to life support products and environments as the basics to secure the universality. We started from discovery of differences and similarities among senior citizens in samples that we extracted experimentally in the city and its suburbs. It appeared that the differences did not depend on differences in the local situation, but on the difference in the method to sample senior citizens. Therefore this study aims at characterization of sampling method for senior citizens, using the data acquired through the experiments. We introduced a Product Usability Index 2004 (abbr. PUI-2004.jp) earlier, based on surveys containing more than one thousand individuals¹. As for PUI-2004.jp, correlations with cognitive functions were also suggested^{1,2}. Here, we report an examination result about the meaning of the index as a part of the review work of PUI-2004.jp. **Methods** We first introduced four kinds of diagrams that are closely related to each other. Through the explanation of these diagrams, we demonstrated the close relationship between the reply patterns and PUI-2004.jp, which is based on Dual Scaling³. Then, comparing to the analytical solution of Dual Scaling to the model data, which is a so-called Guttman's Complete Scalable Dichotomous Items Data⁴, we gave an answer to the question: "Does PUI-2004.jp add a linear order between products and senior citizens?". Thirdly, concerning to this Question & Answer, we showed other diagrams of the profile of PUI-2004.jp, and explained its basic features, and discussed the usage of the Product Usability Index Approach. **Results and discussion** We clarified that PUI-2004.jp does not add linear order between products and senior citizens. PUI-2004.jp shows average order as a rough tendency. On the other hand, such an average index often becomes the aim and the clues knowing wider perspective. Dual Scaling is the one of the exploratory data analysis methods, and we place PUI-2004.jp as the application of the Dual Scaling, and we also place this study as an exploratory trial to measure the state of the self-consciousness of senior citizens. We hope that such a trial leads to the constitution of a guidepost to the maturity of Gerontechnology and Universal Design.

References

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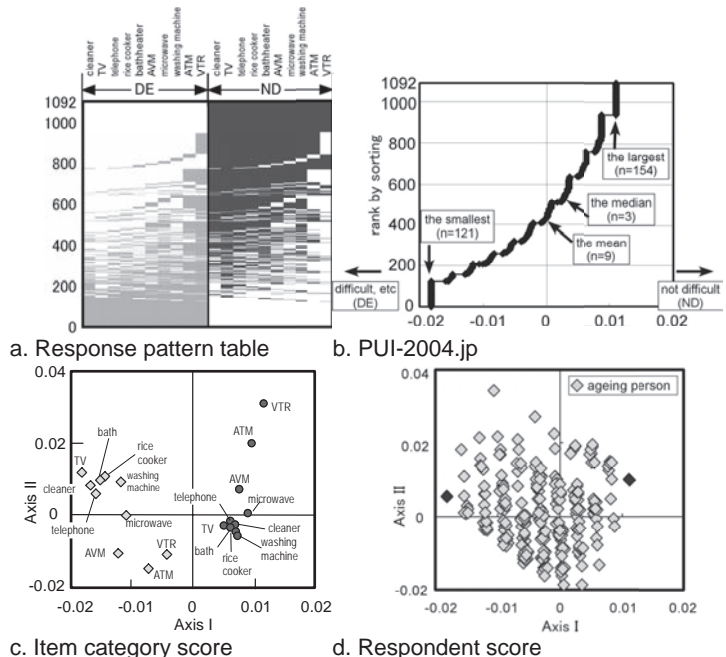


Figure 1 Relation among response pattern table, Dual Scaling solutions and PUI-2004.jp