

Publication

A generalized distance function for preferential choices

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Author(s) Berkowitsch, Nicolas A. J.; Scheibehenne, Benjamin; Rieskamp, Jörg; Matthäus, Max

Author(s) at UniBasel [Rieskamp, Jörg](#) ;

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Many cognitive theories of judgement and decision making assume that choice options are evaluated relative to other available options. The extent to which the preference for one option is influenced by other available options will often depend on how similar the options are to each other, where similarity is assumed to be a decreasing function of the distance between options. We examine how the distance between preferential options that are described on multiple attributes can be determined. Previous distance functions do not take into account that attributes differ in their subjective importance, are limited to two attributes, or neglect the preferential relationship between the options. To measure the distance between preferential options it is necessary to take the subjective preferences of the decision maker into account. Accordingly, the multi-attribute space that defines the relationship between options can be stretched or shrunk relative to the attention or importance that a person gives to different attributes describing the options. Here, we propose a generalized distance function for preferential choices that takes subjective attribute importance into account and allows for individual differences according to such subjective preferences. Using a hands-on example, we illustrate the application of the function and compare it to previous distance measures. We conclude with a discussion of the suitability and limitations of the proposed distance function.

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