# Chapter 7 A Psychometrics Approach to Entropy

### Joana Machado

Centro ALGORITMI, Universidade do Minho, Portugal

# Isabel Araújo

Cooperativa de Ensino Superior Politécnico e Universitário, Portugal

# António Almeida-Dias

Cooperativa de Ensino Superior Politécnico e Universitário, Portugal

# Jorge Ribeiro

https://orcid.org/0000-0003-1874-7340
Instituto Politécnico de Viana do
Castelo, Portugal

## **Henrique Vicente**

https://orcid.org/0000-0001-8456-7773 Universidade de Évora, Portugal

### José Neves

Centro ALGORITMI, Universidade do Minho, Portugal

### **ABSTRACT**

Today's metrics for women housework work (WHW) operate at a quantitative level, specifically measuring time expended on a task and the totality of tasks women perform, not considering that it is a process that is eminently qualitative in nature. To fill this gap, an innovative framework for representing and thinking about big data or knowledge is presented, borrowing from the field of artificial intelligence the methods and methodologies for problem solving, from logic programming the artifacts to improve practice through theory, and from the laws of thermodynamics the construct of entropy, interpreted as the degree of disorder or unpredictability in a system, a principle that may be used to understand system evolution. Last but not least, it also considers the relationship among the disciplines of psychometrics and psychology or sociology (i.e., how certain psychological and sociological concepts such as cognition, knowledge and personality affect WHW satisfaction).

DOI: 10.4018/978-1-7998-9172-7.ch007

15 pp.

Copyright © 2022, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.