


# Chapter 11

## Correlating Resonance: Configurational Analysis, Neutrosophy, and Wickedness

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### **ABSTRACT**

*The complex problems facing the world today resist solutions. The reasons are the complex, multidisciplinary, interdependent variables, and the non-optimal behaviour of stakeholders that lead to unsolvable “wicked” problems. Analysis of these complex situations requires methodologies that can deal with this complex, incomplete, and inconsistent data. Neutrosophy has evolved specifically to deal with the indeterminate nature of such data. Some researchers have considered both configurational analysis and neutrosophy. Neutrosophy examines the neutralities and the interplays between opposites whereas configurational analysis isolates the neutralities and focuses on the interplay between opposites. This chapter examines a configurational approach that is simple and arithmetic in nature and does not preclude a focus on the neutralities, so is compatible with neutrosophic logic, statistics, and probability analysis.*

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## INTRODUCING RESONANT CORRELATIONS

Resonant Correlations is a method developed to bring quantitative rigour and automation to quantitative analysis of complex problems. In addition to these quantitative advantages, it was developed to address the inter-dependent, multi-valued variables present in complex problems that resist analysis. This method assumes that the available data may be irrelevant, incomplete, contradictory, or indeterminate. Rather than attempting to determine the accuracy of an individual datapoint to facilitate statistical analysis, it determines the significance of each datapoint by considering its relationship with other datapoints. Thus, it takes all data at face value rather than their accuracy and reliability and examines the resonance and dissonance between data points based on the aggregation of their correlation to each element of the data set. Regardless of the accuracy and or reliability of an individual datapoint, the resonance between clusters of data highlights concepts (values) that regularly appear together and so likely to be related. Further, dissonant clusters reveal mutually exclusive values. By focusing on the resonant, dissonant, and neutral clusters of correlations we find configurations of patterns in the data that offers a starting point for further exploration. This statistical analysis of the qualitative data reveals groupings that suggest potential significance.

This approach evolved as a quantitative method that confirms and clarifies the thematic analysis of qualitative research and is an extension of the Systematic Qualitative Literature Review (SQLR) (Pickering & Byrne, 2014). Because of that history, the data discussed in this paper are concepts or themes, identified in bodies of text. It is proposed that the method could be useful for other data types, such as quantitative data in physical experiments. The use of a similar approach to identify relevant content in web searches (Ebbs, 2018) supports this proposal. In addition to documenting and mapping the process by which themes emerge during qualitative analysis, this method provides the opportunity to rigorously explore possible relationships that have been missed by the qualitative researcher. It also provides scope for the comparative analysis of the emergent clusters between populations of texts, allowing a rigorous comparison of the concepts that contribute to the meaning and beliefs inherent in different bodies of data.

Examining the resonance and dissonance between concepts within and across datasets, highlights those concepts that contribute to a commonly held paradigm and those which undermine such understanding and contribute to the wickedness of the problem. This is useful for facilitation of policy intended to address wicked problems, such as the sustainable development goals (SDGs). While the example provided here analyses two sets of research papers examining sustainable development in small business, the method has been subsequently tested against a body of 186 submissions to the Australian Parliamentary Inquiry into Food Security with

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