

# BRANDS RELATIONSHIPS ANALYSIS IN A SPORT EVENT SYSTEM USING CAUSAL MAPPING

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## INTRODUCTION

Popular events, such as the Olympic Games and FIFA Football World Cup, have powerful brands. These are within a brand system which encompasses the hosting city and country, the sponsors, the teams and famous athletes. From a managerial point of view, it is important to analyse associations related to brands, as well as the interactions between brands (e.g event and sponsor's brands, event and its competitor's brands...).

John et al. (2005) stressed the fact that understanding brand associations as they exist in consumers' minds presents a challenge for both practitioners and researchers today. A review of the relevant literature reveals that researchers in marketing use various concepts to express cognitive structure related to brands (i.e. brand association or knowledge, brand image...). Keller (1993) defines brand associations as information nodes linked to a brand node in memory, which contain the meaning of the brand for consumers. This definition is based on an associative network memory model (Anderson and Bower, 1973; Anderson, 1983, Wyer and Strull, 1989; Ellis and Hunt, 1993) which views knowledge as consisting of a set of nodes and links that vary in strength.

Three methods that use cognitive mapping to analyse consumers' cognitive structure and which have informed our research are: concept mapping (Joiner, 1998; Zaltman's Metaphor Elicitation Technique (Zaltman, 1997; Zaltman and Coulter, 1995; Christensen and Olson (2002); and Brand Causal Maps (John et al. 2005).

All three methods adopt the following three stages: elicitation of consumers' maps; aggregation of individuals' maps; and construction of a final consensus brand map by researchers. They are consistent with this theoretical framework in analysing the information distributed over a large set of nodes. Nevertheless, they are failing in respect of the activation prompted by the initial input then propagated through a network of links, the structure and the strength of these links. Consequently, there is a need for new methodology for producing a consensus causal map to represent consumers' perceptions of a brand through a brand association network that reflects their beliefs about the causal relationships among concepts and also takes into consideration the strengths of these relationships.

## METHOD

The ANCOM-2 methodology<sup>1</sup> (ANalyse and COMpare individual Maps) presented here is motivated by the validated technique that has been applied earlier in several management studies (Chameeva et al, 1996; Bouzdine, 2004; Scavarda et al, 2006). The ANCOM-2 combines the individual maps for all respondents into a consensus causal map. A consensus map is constructed on the basis of a comparative qualitative and quantitative analysis of individual causal maps. The four dominant consensus causal maps are built: an aggregated map (that is a sum of individual maps); a map of unanimity, a map of majority and a map of enlightened majority. We apply this method combining ideographic and nomothetic approaches (Tan and Hunter, 2002) to analyse brand association networks of two groups of 30 French fans in relation to the UEFA Champions' League (UCL) and matching the audience profile.

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<sup>1</sup> <http://decision.bordeaux-bs.edu/>

## SELECTED RESULTS

We compute a map of enlightened majority. It is made of 13 concepts divided into three clusters: the largest one (nine concepts) is related to the event's characteristics and benefits; the second cluster (three concepts) concerns the business of sport; and the last refers to the societal dimension of UCL. Due to the heterogeneity of respondent cognition it was not possible to compute a map of unanimity with concepts and links chosen by all participants.

Considering the aforementioned respondents' heterogeneity, a clustering was performed based on their cognitive chains in the individual maps. We obtained 4 segments based on the causality of the links indicated by the participants. A symmetrical canonical correspondence analysis was computed. Results demonstrate that not only are the four segments clearly delineated, but also they are in close connection with either illustrative variables such as gender and attachment or active variables such as intensity of TV watching.

Brands are interacting within the system and one of the major issues relates to event brand and sponsor relationships. Interaction between Sony Playstation (one of the main sponsors) and UCL were analysed. A map of enlightened majority combining the two cognitive structures related to the brand was computed. It is made of 21 associations with causal links creating 4 clusters. The main one is made of 14 associations. 4 are specific to Sony Playstation, 6 to UCL and 3 are common to event and sponsor. It identifies the causal links between the associative networks belonging to those two brands. It is made up of the three following associations: to have fun, conviviality and pleasure.

## DISCUSSION

ANCOM-2 offers a significant addition to existing methods, as it allows researchers to build models based on causal links and to assess the strengths of these links. Furthermore it allows making a segmentation based on causality. These characteristics are consistent with a theoretical framework based on cognitive psychology, particularly with theories of human associative memory (Anderson, 1983). This method contributes also to brand management. It allows assessing both peripheral and coring associations related to a brand and their causal relationships. It aids decision-making about the management of that brand (John et al., 2005). Furthermore, ANCOM-2 opens a new perspective for analyzing the transfer of associations between two or more brands. It concerns brand extensions, co-branding, celebrity endorsement and sponsorship strategy.

This methodology has four main limitations. Firstly, it is limited by the reliability of the coding process. Secondly, like Brand Concept Maps which consider the strength and the direction of the causal relations, ANCOM-2 doesn't take into account possible negative relationships between associations. Thirdly, the complete process can be time consuming. In addition, respondents must be aware of the meanings of each association and able to determine the existence and strength of their links.

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