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Mind genomics and its applications: A survey

Abstract

This study presents a summary of the new science of Mind Genomics and the considerable number of publications applying this technology in many areas of social sciences. First, a list of papers describing the theoretical foundations of this new science is presented. Next, publications are grouped based on the field of Mind Genomics applications, such as education, law, political and social sciences, and marketing and food industry, where most of the applications using Mind Genomics have been performed.

With the advent of AI, Mind Genomics incorporated AI capabilities to automatically provide summarizers that analyze results with a greater depth.

Keywords: mind genomics, consumers, food industry, AI

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Mind genomics applications

It has long been evident that understanding what and when consumers desire to buy is essential to successful marketing. It is also known that only some customers want and have the means to buy many things. Customers are divided into groups based on their income, interests, and lifestyle. In marketing, this division is called horizontal segmentation.

Fundamentally, understanding the market's horizontal segmentation means understanding how to advertise products to different customer groups. This knowledge allows companies to acquire a larger audience, increase their market share, and maximize marketing effectiveness.

A complex tool is needed to ensure knowledge of the market and different groups of people with similar economic conditions and lifestyles. Such a tool will enable reaching most of the marketing targets; such a tool is Mind Genomics.[1,2]

Numerous papers[3–7] to mention a few, have laid the theoretical groundwork for the science of mind genomics.

Every Mind Genomics study starts with a deep analysis of the subject to discover the four most relevant topics, referred to as silos. Then, for each silo, four elements or answers representing all potential points of view are carefully designed, thus, completing what is called the four-by-four model. An algorithm composes vignettes, representing combinations of elements from each silo, never taking two elements from the same silo. Vignettes are presented to study participants for evaluation. After collecting the participant's input, Mind Genomics automatically calculates detailed results distributed around ten independent variables representing different study aspects.

Today, Mind Genomics is used with considerable success in many studies, leading to numerous publications in well-known journals. Thus, in the field of education it is worth mentioning.[8–11] In the field of healthcare there are several contributions such as.[12–17] In social and political sciences it must be mentioned.[18–22]

Mind Genomics' most significant scientific contributions are in the food industry and marketing. Moskowitz and Gofman present a strategy for winning consumers' hearts in a best-selling book.[23] The writers make clear the difficulty: Customers find it difficult to express precisely what they need, want, or enjoy. They explain how to solve it: Using methodically constructed prototypes, determine and investigate the elements that pique consumers' interest. Then, characteristics should be integrated into the most advantageous configurations—even if customers have never tried those particular combinations.

The ideas presented in the best-selling book were implemented later in many publications. Thus,[24] study revealed four distinct mindsets, with groups of respondents who thought alike regarding milk. At that time, focusing on foods as the source of health and wellness was just beginning.

AA Saulo & Moskowitz.,[25] evaluated consumer interest in and perceived safety of food attributes that consumers believe are significant when they make a purchasing decision applying conjoint measurement and experimental design concepts. Zemel et al.,[26] present a systematic approach to understanding consumers' beliefs about the health messaging of "raw beverages." A Saulo et al.,[27] study the influence of the Muslin Qur'anic and the Torah origin of kosher labels in the food price. Ilollari et al.,[28] studied how mobile banking technology was received in Albania.

Several studies focused on the COVID-19 impact on the tourism industry, especially in countries where tourism is the primary economic sector.[29–31]

The advent of AI immediately impacted the Mind Genomic structure. AI was implemented into Mind Genomics to offer more choices for silo and element selection. The AI involvement is likely to increase the effectiveness of future Mind Genomics-based experiments.

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Conflicts of interest

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