Preface

In recent years, many studies have focused on the best practices which make stores more attractive and appealing for consumers. The application of innovative technologies at the point of sale is a promising and relatively unexplored field of study, in particular when considering the introduction of digital content and interactive technologies allowing consumers to access products in new ways. Many e-retailers have already exploited the opportunities offered by interactive technologies, such as 3D virtual models, digital products management, and knowledge transfer to consumers, in order to enhance consumers shopping experience. Their use in real stores, however, is still limited.

In this scenario, the development and use of innovative shopping assistants for supporting and influencing consumers during their shopping experience plays a key role for retailers and researchers alike. On the one hand, it improves the consumers in-store experience, on the other it gives marketers useful information on consumer preferences and needs, response to new services and retailing strategies, and on market trends. As a consequence, several current research projects focus on developing new virtual salesperson or existing shopping assistant systems, based on shopping trolleys equipped with digital displays or cameras to scan products barcodes. Adding digital and customized content to these tools can be a powerful means to influence customers’ experience. The aim is to support consumers, through a user-friendly interface, by giving them fast and detailed information on products, sales, new arrivals, and so on. Consumers may use the offered information to choose among different alternatives, search for promotions, and calculate the value of purchases, by saving time and enjoying the experience.

The main characteristics are interactivity and multimodality of the interaction, in order to achieve an efficient, flexible, and meaningful feeling of interaction with a human. Therefore, it becomes very useful to deepen our understanding of the advanced technologies in a retailing context and their impact on consumer’ behavior. In particular, this book aims to investigate the most useful applications of advanced technologies to retailing, the modality of the interaction between consumers and system, and the main benefits of the effective interaction. It also addresses implications for managing products and for improving consumers’ knowledge to influence their subsequent buying behavior. Thus, contributions in this book relate to different fields such as Marketing, Computer Science, Psychology, and Management, to provide an integrated approach to the topic.

THE OBJECTIVES OF THIS BOOK

This volume contains original research that contributes to our understanding of applications of advanced technologies, their impact on the design and development of innovative points of sale, and of consumer behavioural intentions towards these technologies. In particular, Section 1, “Advances in Technologies
Management for Retailing,” deepens our knowledge of the current developments for improving retailing and consumer in-store experiences. A selection of 6 chapters has been chosen to illustrate the changes in the point-of-sale caused by innovative technologies capable of totally modifying store layout, payment modalities, and information transfer from and to consumers. The first chapter provides a detailed review of the current technologies available at the point of sale, by focusing barcode scanning, electronic shelf tags, shelf-checkouts, RFID tags, and fingerprint authentication; subsequent chapters highlight the evolution of the store from the traditional point-of-sale to an innovative point-of-consumer. Chapters 3 and 4 investigate the introduction of a specific technology in the store, respectively the Retail Digital Signage, and an advanced Virtual Shopping Assistant; Chapter 5 “Information and Communication Technologies in Marketing Channels: Product Considerations” analyzes the new technologies introduced in the different distribution channels more generally, with emphasis on consumer evaluation of these technologies. The last chapter of this section focuses on the Enterprise Architecture for retailing, in order to underline its benefits for innovating, improving, enriching, and increasing the interaction between business and technology.

Section 2, “Digital Contents Management for Technology-Based Retailing,” analyses digital contents management for innovative, technology-based retailing in terms of information representation, transferring, and searching. In particular, Chapter 7 highlights an integrated conceptual representation of consumer group knowledge, which includes both the influence of collective variables on the decision making process and the investigation of scientific inquiries concerning the role of advanced technologies in relation to the conceptual representation. The successive chapters focus on the use of Web 2.0 or social media as a powerful tool for customizing digital contents, supporting consumer decision making, and improving consumer consumption experience, with emphasis on how these technologies might be successfully used for building consumer loyalty, improving relationships with consumers, and creating value for e-retailers in the tourism sector. Furthermore, it is possible to exploit Customer Intelligence to collect a substantial amount of information on consumer needs, attitudes, and preferences towards a certain retailer in order to enhance the consumer-retailer relationship and improve the business decision, as illustrated in Chapter 9. With the same purpose in mind, Chapter 10 provides useful ideas for retailers for collecting and managing a large amount of information on consumers, by outlining which variables are capable of major improvements in information sharing in online settings. In the chapter “You Never Get a Second Chance to Make a First Impression: Meet Your Users’ Expectations Regarding Web Object Placement in Online Shops,” the authors propose a mental model for the development of efficient website interfaces, which can be used for the improving websites devoted to online shops.

The chapters included in the Section 3, “Impact of Advanced Technologies on Consumers Behavior,” aim to investigate the impact of advanced technologies on consumers behavior in terms of consumer opinions, interaction modalities, and purchasing decisions. In particular, Chapter 12 analyses the online recommendation systems by outlining the strength link between consumer acceptance of these systems and the quality and shopping relevance of the provided recommendations. The various chapters focus on the relationship between Human-Computer Interaction (HCI) and aspects of consumer behavior with emphasis on the electronic retail context (e-tailing), by highlighting how 3D interfaces become a key factor for the success of online retail environments. Chapters 14, 15, and 16 exploit the use of the Technology Acceptance Model for analyzing consumers’ intentions to adopt a new technology. In particular, chapter 14 focuses on the introduction of mobile purchasing decision support systems at the point of sale, by evaluating their impact on consumer behaviour. Chapter 15 outlines the direct and indirect effects of perceived usefulness, ease of use, and enjoyment on consumer acceptance of new technology in grocery retailing, by taking into account individual experience with Information Technologies. The last chapter investigates the impact of WiFi on consumer behaviour and attitude towards the new technology.
THE TARGET AUDIENCE

The book should be interesting for scholars of Economics, and in particular of Marketing, Management/Industrial Engineering, scholars of Computer Science, and scholars of Psychology. Researchers in these fields can obtain useful information about the latest results in these fields of study, as well as on the potential use of advanced technologies in retailing.

THE VALUE OF THIS BOOK

Presenting a wide number of technologies linked to consumer behaviour in retail environments (i.e. RFID, Shopping Assistant Systems, smart mirror, and so on), the book undoubtedly has an appeal for scholars in Marketing and Management, as well as in Psychology. In particular, it discusses case studies investigating the phenomenon of consumer-computer interaction, which suggest applying these new technologies to influence buying behaviour. The book adds to current research by enriching the frameworks at the disposal of the scholars interested in this field of study, highlighting how the technologies may be used to influence consumer behaviour in a retailing context.

The book provides:

• Complete analysis from a bibliographic point of view on the application of advanced technologies in retailing, including the research on the consumer acceptance of these technologies, product knowledge transfer, and consumer-computer interaction
• A complete view of consumer behaviour in ubiquitous/pervasive environments
• A complete view of research on the digital contents management for retailing
• A first collaborative approach to retailing and the potential of Computer Science in the generation of advanced systems capable of influencing consumer buying behaviour.

Therefore, this book is unique in its kind because the literature on the topic addresses only some of the subjects described, and almost completely separates consumer behaviour and the field of Computer Science. In particular, the authors emphasize the relevant connections between Retailing, Computer Science, and Psychology. These connections can be exploited to individualize innovative advanced systems for influencing consumers’ buying behaviour, based on the current research in retailing, knowledge management, and human-computer interaction. The book fills an important gap, because there does not yet exist a text specifically devoted to the application of advanced technologies to retailing.

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