Electron Commer Res (2009) 9: 135–148
DOI 10.1007/s10660-009-9030-8

Retail spatial evolution: paving the way from traditional to metaverse retailing

Michael Bourlakis · Savvas Papagiannidis · Feng Li

Published online: 10 March 2009

Abstract This paper examines the evolution of retailing, i.e. from traditional to electronic to metaverse retailing and sheds light on the ways metaverses influence that evolution. The spatial dimension is taken into consideration as retailers could operate simultaneously in three different, but intertwined spaces. Particular emphasis is paid to key promotional aspects and we highlight the key challenges and opportunities faced by traditional retailers, e-retailers and metaverse retailers. For the metaverse phenomenon, the authors analyse Second Life and a range of findings emerge. One key finding is that retailers need to employ a holistic and overarching approach when devising their promotional strategies, especially if they aim to operate at the metaverse stage as well. At the end, the authors recommend a range of future research avenues and note the immediate need for policy development dealing with the metaverse phenomenon.

Keywords Retailing · Metaverses · Second Life · Marketing · Promotion

1 Introduction

The business environment has been going through significant changes at both the national and global levels. These changes have been underpinned by two fundamental

M. Bourlakis
Business School, Elliott Jaques Building, Brunel University, Uxbridge, Middlesex, UB8 3PH, UK
e-mail: Michael.Bourlakis@brunel.ac.uk

S. Papagiannidis (✉) · F. Li
Business School, Armstrong Building, Newcastle University, Newcastle upon Tyne, NE1 7RU, UK
e-mail: Savvas.Papagiannidis@ncl.ac.uk

F. Li
e-mail: Feng.Li@ncl.ac.uk

processes. On one hand, the nature of the economy has changed from an industrial-based economy to being an information-oriented economy, which can be measured by the significant and rapidly growing informational (intangible) elements of our products, services and production processes and by the proportion of the workforce whose primary activities are informational rather than physical. The intangible element of the economy, which is often referred to as information, knowledge or intelligence, has become the most important resource upon which the efficiency and competitiveness of all organisations depend, and this includes public sector organisations [1]. On the other hand, the so-called 'ICTs revolution' continues to gather pace, providing us with increasingly more powerful, versatile, available and affordable tools whose sole purpose of existence is to deal with 'information'—to capture, store and retrieve, manipulate, transmit and present information. This combination is extremely powerful, not only because the most important resource of the world economy has changed to 'information', but also because we have increasingly more powerful tools to deal with it, often in ways impossible or inconceivable in the past. Consequently, organisations large and small today can, should and, indeed, must do things differently in order to survive and thrive in the new economy. This gives rise to the need for a new generation of organisation and management theories, with profound implications for all industries and sectors [1]. Until now such theories had to primarily deal with two spaces, the physical 'offline' one and the online one. This has been true even in the information age as the world's institutional and legal structures are largely still geographically based. However, new technologies made it possible to add new virtual spaces and environments, often referred to as metaverses, within which economic and social activities can take place.

In this paper we examine how adding and extending the available spaces using metaverses (online virtual worlds) that individuals and organisations operate in influences the marketing of products and services and more specifically the effect they can have on electronic retailing. Particular emphasis will be paid to key aspects of promotion and advertising and the challenges and opportunities when it comes to retailing. The paper starts by first reviewing the transition from traditional retailing to electronic retailing (e-retailing) and then to metaverse retailing. Before proceeding we will first present important background information about metaverses and their development.

2 Living in multiple-spaces: the new business environment

Technological developments such as the telephone, computer networks, the Internet and mobile phones have significantly reshaped our business and social environment enabling the development of an electronic space, which intertwines with the physical space and place of our physical world [2]. The manifestation of the intertwined 'two spaces'—the physical and the electronic spaces—has been reflected in the rapid development of e-commerce and e-business since the mid-1990s, and in the way we live, work, communicate, learn and play [1]. The emergence of the electronic space created a plethora of activities in the name of e-commerce, e-business, e-government and e-learning, and such developments called for a new generation of organisation

Table 1 Extending the traditional taxonomy by adding the 'meta' dimension. Adopted from Papagiannidis *et al*. [3]

	Real	Electronic	Meta
Real	B_r2B_r	B_r2B_e	B_r2B_m
Electronic	B_e2B_r	B_e2B_e	B_e2B_m
Meta	B_m2B_r	B_m2B_e	B_m2B_m

and management theory, reflected clearly by the introduction of the 'e' prefix to distinguish activities taking place in the electronic space, as shown in Table 1. Papagiannidis *et al.* [3] have argued that the table needs to be further extended by including the prefix 'meta', short for metaverse. Metaverses (a phrase first used in Neal Stephenson's [4] novel *Snow Crash*, in order to describe how a virtual reality-based Internet might evolve in the future) are virtual worlds extending our physical universe by adding new dimensions and domains for economic, social and leisure activities [3]. They are often referred to as synthetic worlds, highlighting the fact that these worlds are products of human actions [5].

In most cases metaverses started as games, referred to as massively multiplayer online role play games (MMORPGs), but rapidly evolved into alternative realities, extending in the process our physical and electronic spaces. With the exponential growth in the number of people spending a significant amount of time in such metaverses, a new social and business environment has emerged which incorporates not only the physical and electronic spaces, but also multiple virtual spaces. As the economic and social interactions between the players of these games and between the players and both in-world and real-world physical and e-businesses increase, the economic and social crossings-over between the virtual, the electronic and the physical worlds become significant.

These developments are leading to the development of a multi-spaced business environment far more complex than what we are used to. The nature and characteristics of this new business environment incorporating the intertwined physical, electronic and virtual spaces need to be systematically mapped out and conceptualised, as the economic, social and policy implications are likely to be very significant. Metaverses are already a fast growing area of research that has attracted academic interest from a number of different disciplines. For example, there are economic and business [3, 6], psychological studies [7, 8], marketing and advertising studies [9–12], legal studies [13], industry specific studies, e.g. in the music industry [14], and studies looking at the development of metaverses and their attributes [15–17].

The virtual world market has been estimated to be a billion US dollar industry [18], with income generated usually by the subscriptions users have to pay to participate in MMORPGs. These are usually themed worlds which define the roles users need to assume and the actions they need to take, although worlds that encourage free style role playing also exist. Popular examples of metaverses include *World of Warcraft*, *EverQuest*, *EveOnline*, *Star Wars Galaxies* and *Second Life.* In this paper we will use Second Life, a continuous and persistent world that was designed to provide users with control over nearly all aspects of their world, in order to stimulate users' creativity and self-expression, translating into a vibrant and dynamic world full of interesting content [19].We chose Second Life as it enables users to create

Table 2 Estimating the number of Second Life business owners using Positive Monthly Linden Dollar Flow (PMLF)

USD Equivalent PMLF	12/07	01/08	02/08	03/08	04/08	05/08	06/08	07/08
< $10 USD	26,922	28,711	28,896	31,082	29,598	31,142	30,657	32,826
$10 to $50 USD	14,618	16,417	16,212	16,566	16,999	17,383	16,889	17,673
$50 to $100 USD	3,156	3,740	3,465	3,754	3,642	3,725	3,594	3,792
$100 to $200 USD	2,237	2,436	2,357	2,389	2,493	2,468	2,419	2,452
$200 to $500 USD	1,971	2,115	1,981	2,093	2,191	2,282	2,173	2,284
$500 to $1,000 USD	830	863	861	935	961	955	979	943
$1,000 to $2,000 USD	462	464	513	537	515	558	556	573
$2,000 to $5,000 USD	324	333	307	367	358	378	366	391
> $5,000 USD	158	156	155	165	173	189	188	202
Total Unique Users with PMLF	**50,678**	**55,235**	**54,747**	**57,888**	**56,930**	**59,080**	**57,821**	**61,136**

Source: Second Life economic statistics [20]

objects from scratch, and not just craft them out of limited resources controlled by the world's developers. The copyright of any content created by users belongs to the users themselves, who may exploit it commercially. Linden Labs, the developers of Second Life, operate an in-world economy based on the Linden Dollar, the currency in which all transactions are undertaken. Linden Dollars can be exchanged for real currency, which allows content creators to benefit not only within Second Life, but also in the real world. As in Second Life no license is required to operate a business, it is not possible to know exactly who is trading and how successful the virtual entrepreneurs are. Still, Linden Labs uses the Positive Linden Dollar Flow (PMLF) to obtain an estimate of how many of the more than 14 million users of Second Life are 'business owners', as shown in Table 2. Even though those who earned less than $10 USD account for more than half of the estimated business owners there is a significant number of entrepreneurs who makes a healthy profit even by real world standards. Especially when it comes to developing countries, the low entry barriers provide an alternative employment opportunity, even if only a few dollars are to be made every month. One has to remember also that Second Life is only one metaverse and similar opportunities can be found elsewhere.

Many real world companies and organisations have established a presence in Second Life, spanning a wide range of industries, markets and functions. Examples include ABN AMRO, Adidas, American Apparel, Dell, Harvard Law School, IBM, Microsoft, Pontiac, Reuters, Sony Ericsson, the Swedish Government, Toyota, and many others. In most cases engaging with the customer is purely for marketing purposes (e.g. holding events, giving away freebies, or offering interactive activities related to their brand). Early examples of companies actually trading in Second Life have been seen or announced, albeit a mainstream integration of Second Life in the supply chain is yet to be seen.

This is of course not true for virtual entrepreneurs who sell their content within Second Life. Many of them also offer content on third-party web marketplaces that facilitate the transaction between the seller and the buyer. The customer transfers

Linder dollars to the web marketplace and then uses them to buy content as one would normally do when shopping online. Once the purchase is complete, the content is delivered to the avatar (the virtual character representing the user) in Second Life. Popular items include apparel, furniture, animations and buildings.

An important question arising here is whether someone selling virtual apparel or furniture can be considered a retailer or not, because the purchase involves a digital and hence intangible reflection of the real item. This question requires further investigation and could be the focus of another paper. In the present paper, we examine the evolution of retailing from traditional retailing to electronic and then to metaverse retailing, resulting in multiple space retailing.

3 From traditional retailing to e-retailing to metaverse retailing

E-retailing has revolutionised retailing with the introduction of new technologies, especially that of the Internet [21]. These transform many key aspects of the shopping experience by altering key attributes of what is being offered significantly [22].

To start with, in traditional retailing the key elements of product atmospherics (e.g. smell, taste, touch) are prevalent and the customer has the opportunity to trial a product, which can increase consumer confidence when the customer is not familiar with the product [23]. This is not the case in e-retailing and this may result in products being returned when the customers are not satisfied with their quality or features. This may be the case, *inter alia*, for expensive, high status luxury, personal products such as cars, jewellery or beauty products. In addition, traditional retailing appeals to all consumer segments, especially the social shoppers, while e-retailing may appeal more to those seeking convenience or the early adopters that would not mind experimenting with new methods of shopping [23]. Moreover, the users' exposure and knowledge of the technologies involved may affect their choice of preferred channel [24]. For example, youngsters who grew up using the Internet are expected to be more familiar with e-retail compared to older consumer segments [25].

From the retailers' point of view, e-retailing offers many opportunities and challenges. First of all e-retailing may reduce the investment required or change the nature of the capital investments. Instead of focusing on the management of hard assets, great emphasis is now being put on building the IT and knowledge infrastructure that will facilitate the transacting channel. Collecting, storing and using customer data becomes of critical significance and is considered a core function. As a result, the required skills and competencies are different from traditional retailing, for which traditional logistics, store locations, people selection and their management are key attributes of the retailers' success. In e-retailing the focus is shifted towards IT-enabled logistics (often referred to as e-supply chain management), which improves order processing, customer relationship management and interconnectivity [23]. Such a shift needs to be underpinned by a creative, innovative and open-minded senior management that encourages experimentation with new technologies and will not hesitate to use them in order to gain competitive advantages.

The challenges that traditional retailers are facing also differ from the challenges that e-retailers face. For example, traditional retailers may have stock management

issues (e.g. product availability, minimum choice), the daily face-to-face interaction with customers, the queues in front of the cashier, the 'cut-throat' competition and their need to set up the right store atmosphere for their customers. E-retailers have to deal with the constant security threats, the challenges of delivering on time, the need to always look ahead for the latest innovations and technological trends, develop new metrics to assess their performance [26] and get the right 'atmosphere' for their digitally connected customers. These result in a number of different key uses for the two types of retailers. For example, traditional retailers need to worry about operational issues during opening hours, their firm size is critical and their labour costs are often high [23]. On the other hand, e-retailers operate almost constantly, their size is less important and their labour costs may be much lower than those of traditional retailers. In addition, they have reduced search transaction costs compared to those of traditional store retailers, who may offer up to 130,000 products, as is the case with food supermarkets. When it comes to the risks involved, Vijayasarathy and Jones [27] note that specific types of risk such as economic, social, performance, personal and privacy risks are applicable to e-retailing, whilst only the first three are applicable to traditional retailing. Of course, there is not always a clear boundary between traditional and electronic retailers and there are many commonalities between them. For example, traditional retailers can not afford not to pay attention to technological developments which may provide them with operational efficiency. Many firms can be both traditional and e-retailers simultaneously and, as the UK retailer Tesco has proved, they can be very successful on both fronts.

3.1 Metaverse retailing

Metaverse retailing, i.e. retailing that takes places in metaverses, is a rapidly evolving phenomenon that may spark the next evolution of retailing, which would now be undertaken in a three dimensional environment, generating opportunities for existing and new retailers alike. In many respects, metaverse retailing could be considered as an evolution of e-retailing (see Fig. 1).

According to Kotler and Armstrong [28], consumers have been traditionally looking for the right product (product-oriented, traditional retailing stages in Fig. 1). Retailers responded by offering the right product for the right consumer (segmentation strategy) and gradually developed a customer-oriented strategy. For example, grocery retailers have developed different stages/levels for own brands to accommodate the demands of various customer segments [29]. Hence, retailers evolved their strategies with e-retailers becoming particularly successful with developing and applying customer relationship management tools using the web extensively and by targeting specific customers via the use of emails (see for example, [30]). Figure 1 also shows that, nowadays, we have started dealing with consumers who are 'experience-oriented' or, in other words, we are dealing with consumers who are seeking the new and unique experience that metaverses, like Second Life, could offer. In the retail literature, a similar phenomenon has been described as 'retail theater' [31], retailers provide a service that is different and special and consumers enjoy an increased opportunity to interact and participate in the overall experience. Hence, these consumers do not envisage just consuming the product or service, but they anticipate interacting with it and experiencing it within the three dimensional metaverse.

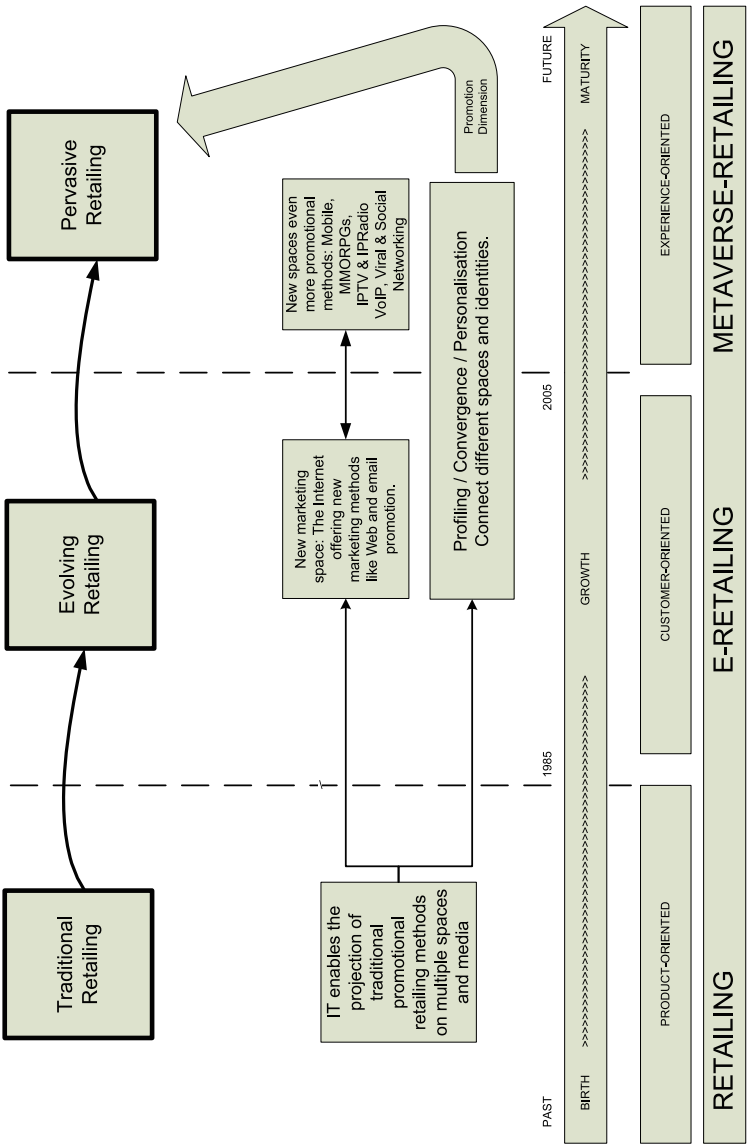

Fig. 1 Retailing evolution: from retailing, to e-retailing to metaverse retailing

The new multi-space business environment calls for a pervasive approach to retailing (see Fig. 1), requiring retailers to use a number of promotional methods and tools in order to target consumers anytime and anywhere (both online and offline). Treating each space separately may not be a viable option as it is the interconnectivity among spaces that yields the more exciting opportunities. This was already demonstrated when the first two spaces, the physical and online, came together offering synergies for retailers to explore. Metaverses could extend these synergies further by connecting to existing Internet-based systems capitalising on infrastructure already in place. In fact, this is the case in web marketplaces that offer metaverse content, such as SLExchange.com. Other web-based services such as a social networking service and a search engine targeting metaverses users have also appeared. The 3D environment could then be used to enhance the user experience without disrupting existing services, which could continue running in parallel. For example, instead of going to Tesco's website, a user could opt to visit the virtual supermarket, pick up a shopping basket as in real life, and browse among the aisles, picking up the products required. The products themselves could be presented to the shopper as 3D objects making the experience more real, or could alternatively be displayed as images on the shelves, similarly to what is already happening on the website. Still, the real-world-like experience of physically visiting the supermarket, even if this only exists in a virtual world, may provide a better shopping context than that of a website. On the other hand 'traditional' web-based retailing may be a much faster and more convenient retail tool for the customer, who may prefer this to a more context-rich approach. Nevertheless, by having both web and metaverse retailing tools in their arsenal, retailers can offer the consumers the option of retail space. The consumers can then decide based on their personal preferences and circumstances, which is in principle the same as selecting to shop offline or online.

Virtual worlds, though, pose a number of limitations. For example, Second Life introduces an additional layer of technological complexity, which, although it may enhance the experience of many customers, may end up perplexing others. In many respects this is reminiscent of the early days of the web, when it was still a novelty to shop online. User-friendliness and navigation issues will require particular attention, as controlling an avatar through the virtual supermarket aisles may not be as straightforward and convenient as one would have hoped. This is also the case for accessibility issues, which would now be even more complex. In addition, designing three dimensional representations of often thousands of products would be a very time-consuming and costly task. Security issues still apply, although in Second Life there is a built-in transacting model on which the in-world economy is based. Having a simple company to regulate, monitor and control the economy may not necessarily appeal to all retailers, who may prefer alternative transacting models. If metaverse retailing was to scale and to extend to real world products, it would be envisaged that direct payments between the retailer and the consumer in real currency and not the Linden dollar (the official 'currency' of Second Life) will be undertaken within Second Life, in order to avoid the potential confusion over exchange rates. Furthermore, relying on a single company to maintain a proprietary world may not appeal to retailers either. What would happen if Linden Labs decided to close down Second Life or even just went out business? Finally, the technology itself needs to mature before it can facilitate demanding retail applications involving thousands of products.

3.2 Retail promotion in multiple spaces

Figure 1 also illustrates the use of various promotional methods at different stages of the retail evolution. This section will discuss these methods and their associated tools and illustrate the way they could be employed by traditional, electronic and metaverse retailers.

Specifically, direct mailing has been regarded as one of the first promotional tools used by retailers and with traditional store-based retailers using promotional tools such as, *inter alia*, coupons, tokens, gifts, bogofs [32]. Retailers also use store loyalty cards to offer extra points (and incentives) when consumers purchase products [33] exploiting their loyal consumers' habits and capitalise on repeat purchasing situations. These tools are used by e-retailers as well, aiming to capitalise further on the cross-selling opportunities offered by the Internet selling medium. In addition, they try to make distinct price comparisons and make their website as appealing as possible. Second Life retailers face a more complex tasks as they have to make a three dimensional space an attractive place to shop. Traditional retailers have the experience to deal with retail atmospherics, which may not be the case for retailers operating in Second Life. Even for those experienced traditional retailers translating the traditional atmospherics in Second Life may not be a straight forward task. Simply translating real-world experiences is not going to be enough [34]. For example, according to Reynolds [35], Armani's mistake was to focus on the established strength of the brand and the verisimilitude of the virtual store, failing failed to devote enough effort to the quality and resolution of their virtual clothing.

Moreover, Internet retailers organise personalised promotional campaigns to maximise their success although despite the technological advances of the last decade a holistic approach to delivering personalised messages and keeping track of the process is still too cumbersome. Nevertheless, Internet users create accounts and profiles to access retail products and services, which are used to personalise them and provide a platform for the delivery of targeted promotion. Even when profiles are not available, the users' interaction with an Internet retailer, e.g. a search facility, provides a plethora of opportunities to deliver targeted messages. Such profiling techniques could be imitated in Second Life, albeit in significantly different ways. For example while users browse through furniture in a virtual shop, a tracking system could identify the types of furniture users spent the most time looking at or even tried. Then, the system perhaps in the form of an automated shop assistant could make recommendations and even offer a discount if the user has been identified as a previous customer. Tracking users raises privacy issues, but these are not any different to using cookies to track users browsing through web pages.

In more complex cases, targeted promotion is achieved by looking at group profiles, with the retailer's Amazon technique, 'users who bought this item were interested in this item as well', probably being the most famous example of all. Other techniques that can be used by Internet retailers include [36]:

- rules-based matching (club members, frequent visitors, etc.) (e.g. Tesco.com)
- matching agents (established profile can be matched with other profiles displaying similar purchasing behaviour) (e.g. Amazon)

- collaborative filtering (feedback on products and services defines groups of individuals with similar interests) (e.g. Amazon)
- community ratings (e.g. like those used on E-bay)
- feedback and learning (fields of interest)
- attribute searches (e.g. all books with reduced prices)
- full-text search based on keywords provided by the user

Second Life offers similar tools at various cases. For example, users are rated by other users for a number of different categories, while retailers often encourage users to vote for a place so that it can feature in the popular places and hopefully attract more attention. Searches using a number of criteria are also available. Still the above are offered at a 'platform level' and not on a retailer level.

A recent Internet promotional phenomenon is viral marketing, which refers to a message that 'infects' a market and is spread from node to node in the network. Although viral marketing does not need any technology, the connectivity that the Internet provides makes it an ideal platform for viral campaigns. In viral marketing, although the content has to be of interest for each node to pass it to the next level, the connections among the nodes are equally important. These connections are not just the means for the promotional message to go from A to B, but also act as a filtering and a profiling system; the recipient of the advert implicitly decides to whom the message is relevant and forwards it. A number of retailers such as Procter & Gamble, Unilever, Adidas, Sony Ericsson, Nike and General Motors have employed viral marketing techniques as part of their promotional strategy [37]. Second Life can be a potential candidate to host similar viral campaigns. In fact, an indirect viral method is used to attract users to a Second Life region. Retailers and entrepreneurs, in general, offer users a few Linden Dollars in exchange for their presence in their area for blocks of time. For example, a retailer may pay 10 Linden Dollar per 15 minutes to any avatar that is willing to clean the windows of the retailer's shop. Other 'activities' include dancing, sitting idle, or even sun bathe next to a pool. When other users look at the map they are attracted to regions where other users are. Having many users in one's area also serves other purposes; after all who would like to go to an empty club or shopping mall?

Retailers also use targeted promotion towards mobile phones aiming to deliver their message anywhere at any time. Current promotional messages are confined within the narrow location boundaries of the medium they were created to serve. Nevertheless, the new generation mobile phone services have promised to deliver location-based services and they do deliver already to a certain degree. Popular mobile portals such as Vodafone Live! can approximately locate a phone's position and offer relevant information [38]. In the future, localised wireless technologies like Bluetooth may be able to provide more precise location positioning services. Perhaps, though, even more important than locating someone carrying a mobile device is that he is carrying and using it most of the time [39]. In 2003, 67% of the 'young communicators' (survey responders between 16 and 34 years old with a positive attitude to buying new technology) in the UK said they could not live without their mobile phone [40]. This renders mobile devices, especially mobile phones, an invaluable tool that offers unlimited promotional opportunities to retailers: "While it is undoubtedly an effective one-to-one communications channel that can be easily personalised, it is

also an invaluable conduit for pulling together strands of any multimedia marketing and/or marketing campaign. It is a ubiquitous and immediate point of convergence that has an enviable reach if used responsibly and effectively" [41]. However, retailers should be aware that a continuous message bombardment can become a 'curse' for customers as they may end up becoming the constant recipients of promotional messages for services and goods [42]. In metaverses this is often the case when a user visits busy retail areas. Automated systems sense the user's presence and deliver 'notecards' that offer information about various products and services. Sometimes, instead of notecards, freebies, such as a promotional t-shirt, may also be given away. Even though the user has the option of muting an automated agent, having to do so a number of times can be distracting and frustrating.

The common thread of the above is that retailers are currently employing different promotional tactics for individual spaces. At the same time, we are dealing increasingly nowadays with multiple spaces that are highly intertwined, interconnected, multifaceted and integrative. This implies that promotional strategies (and not only these) devised by retailers should contain an overarching and holistic approach taking into account the various spaces that the retailer operates in. Retailers should also appreciate the emergence of a new consumer who is not product-oriented, but experience-oriented. Hence, traditional retail marketing mix strategies may not necessarily travel well in another space such as the metaverse environment. The incremental development of a new retail marketing mix that will capture the dynamics and unique tenets of the metaverse phenomenon and will centre on the 'experience' dimension may require urgent attention. The current paper sheds light on one aspect of the retail marketing mix, i.e. retail promotion emphasising the retail theater concept.

4 Conclusions and future research

> *"Marketing must go where the people are, and so, synthetic worlds are the logical next frontier. At least as attractive as their numbers is the intensity of participants' engagement with these environments. But marketers must beware: synthetic worlds offer the chance to be part of a dream—or to kill it."* [10]

The introduction of metaverses is a significant extension of the traditional retail business environment that already affects many retail business operations for forward looking companies.

Metaverse retailing raises a range of research questions. For example, what is the impact of this retailing revolution on the consumer? How does the consumer react to the different retail levels, from traditional to e-retailing to meta-retailing? Apart from the consumer, we need also to take into account the corporate dimension. A successful traditional store retailer may not necessarily be successful at e-retailing or even at metaverse retailing. Even if they are, they will need to make important decisions as to which metaverse they would participate in, similar to their real life marketing positioning. Moreover, research will be required to identify the key elements for achieving success at all these three levels simultaneously. However, is this operationally feasible and financially sustainable?

The above also poses a range of questions for the retail promotion dimension. Specifically, which type of promotion can work equally at all stages and can be transferred and be successful at all stages of that evolution? Which type of promotion can create better awareness for the retail products and services involved and what will be the long-term impact of these alternative types of promotion at different stages of the evolution? Is there a possibility for damaging the retailer's image by simultaneous promotion at all these stages or is it advisable to protect the retail brand and image by focusing on promotion at one or two stages only? For many retailers, metaverse retailing may not be the optimum stage to compete, as happened with many traditional retailers which faced problems moving to e-retailing. At the same time, other retailers like Tesco, for example, have been equally successful in both store and e-retailing and could be equally successful in metaverse-retailing. However, which retailers will have bigger chances to succeed in Second Life? The 'traditional' retailers, the e-retailers or the ones who have been successful in both stages? Another key research concern is that, in Second Life, the retailers do not sell a product or a service but they sell the 'experience of using the product or service' by operating in multiple spaces and in multi-faceted environments Hence, are we dealing with another type of retailing and another type of customer satisfaction that needs to be addressed? These are some of the emerging questions from our current work where empirical research is urgently needed to shed light from different angles.

Last but not least, the current paper has unveiled the urgent need for policy development. Specifically, will retailers making sales in Second Life be taxed on their profits if they did not transfer the money outside the virtual world as it is still debatable whether virtual currency is actually a real currency. Which regulatory body will oversee these retail sales and whether they are rightly priced in order to protect consumers from being exploited? Will we experience the development of a Competition Commission in Metaverse retailing as in UK retailing that will guarantee the good working of metaverse retailers? What will be the criteria for a retailer establishing a presence in Second Life? Currently, there are none, giving the opportunity for possible unethical practices to be developed in terms of promotion, pricing and selling of products and services [43]. These are some of the key policy issues that require immediate attention and should stimulate further discussion between various stakeholders.

References

1. Li, F. (2007). *What is e-Business? How the Internet transforms organisations*. Oxford: Blackwell.
2. Li, F., Whalley, J., & Williams, H. (2001). Between the electronic and physical spaces: implications for organisations in the networked economy. *Environment and Planning A*, *33*, 699–716.
3. Papagiannidis, S., Bourlakis, M. A., & Li, F. (2008). Making real money in virtual worlds: MMORPGs and emerging business opportunities, challenges and ethical implications in metaverses. *Technological Forecasting and Social Change*, *75*, 610–622.
4. Stephenson, N. (1992). *Snow crash*. New York: Bantam Book.
5. Malaby, T. (2006). Parlaying value: capital in and beyond virtual worlds. *Games and Culture*, *1*, 141–162.
6. Castronova, E. (2005). *Synthetic worlds: the business and culture of online games*. Chicago: University of Chicago Press.

7. Yee, N. (2006). The psychology of MMORPGs: emotional investment, motivations, relationship formation, and problematic. In R. Schroeder & A. Axelsson (Eds.), *Avatars at work and play: collaboration and interaction in shared virtual environments* (pp. 187–207). London: Springer.
8. Yee, N. (2006). Motivations of play in online games. *CyberPsychology and Behavior*, *9*(6), 772–775.
9. Papagiannidis, S., Bourlakis, M. A., & Vafopoulos, M. (2007). Banking in Second Life: marketing opportunities and repercussions. In *1st biannual international conference "strategic developments in services marketing"*. Chios, Greece.
10. Castronova, E. (2005). Real products in imaginary worlds. *Harvard Business Review*, May, 20–22.
11. Hemp, P. (2006). Avatar-based marketing. *Harvard Business Review*, June, 48–57.
12. Barnes, S. (2007). Virtual worlds as a medium for advertising. *ACM SIGMIS Database*, *38*(4), 45–55.
13. Bartle, R. (2004). Pitfalls of virtual property. http://www.themis-group.com/uploads/Pitfalls%20of%20Virtual%20Property.pdf. Accessed 3 November 2004.
14. Berry, J., & Papagiannidis, S. (in press). Live music and performances in a virtual world. In M. Pagani (Ed.), *Encyclopedia of multimedia technology and networking*, Idea Group Reference: Hershey.
15. Manninen, T., & Kujanpää, T. (2007). The value of virtual assets—the role of game characters in MMOGs. *International Journal of Business Science and Applied Management*, *2*(1), 21–33.
16. Lehdonvirta, V. (2005). Real-money trade of virtual assets: new strategies for virtual world operators. In *Proceedings of future play*. Michigan State University.
17. Lehdonvirta, V. (2005). Real-money trade of virtual assets: Ten different user perceptions. In *Digital art and culture*. IT University of Copenhagen.
18. BBC. Virtual worlds are 'worth $1bn' (2007). http://news.bbc.co.uk/2/hi/technology/6470433.stm. Accessed 9 April 2007.
19. Ondrejka, C. (2004). A piece of place: modeling the digital on the real in Second Life. http://ssrn.com/abstract=555883. Accessed 3 November 2006.
20. Linden Labs (2008). Economic statistics. http://www.secondlife.com/whatis/economy_stats.php. Accessed 21 August 2008.
21. Tiernan, B. (2000). *E-tailing*. Chicago: Dearborn.
22. Chaston, I. (2001). *E-marketing strategy*. New York: McGraw-Hill.
23. De Kare-Silver, M. (2001). *E-shock: the new rules, e-strategies for retailers and manufacturers*. Basinstoke: Palgrave Macmillan.
24. Dholakia, R. R., & Chiang, K. P. (2003). Shoppers in cyberspace: are they from Venus or Mars and does it matter? *Journal of Consumer Psychology*, *13*(1/2), 171–176.
25. Dennis, C., Fenech, T., & Merrilees, B. (2004). *E-retailing*. London: Routledge.
26. Kearney, A. T. (2000). *E-business performance*. Chicago.
27. Vijayasarathy, L. R., & Jones, J. M. (2000). Print and Internet catalog shopping: assessing attitudes and intentions. *Internet Research*, *10*(3), 191–202.
28. Kotler, P., & Armstrong, G. (2007). *Principles of marketing* (12th ed.). Upper Saddle River: Pearson Education.
29. Laaksonen, H., & Reynolds, J. (1994). Own brands in food retailing across Europe. *Journal of Brand Management*, *2*(1), 37–46.
30. Feinberg, R., & Kadam, R. (2002). E-CRM Web service attributes as determinants of customer satisfaction with retail Web sites. *International Journal of Service Industry Management*, *13*(2), 432–451.
31. Harris, K., Harris, R., & Baron, S. (2001). Customer participation in retail service: lessons from Brecht. *International Journal of Retail and Distribution Management*, *29*(8), 359–369.
32. McGoldrick, P. (2002). *Retail marketing* (2nd ed.). Maidenhead: McGraw-Hill.
33. Wright, C., & Sparks, L. (1999). Loyalty saturation in retailing: exploring the end of retail loyalty cards? *International Journal of Retail and Distribution Management*, *27*(10), 429–440.
34. Papagiannidis, S. (2008). From 2D to 3D: Making the transition from web to metaverse retailing. *Cutter IT Journal*, *21*(9), 14–18.
35. Reynolds, J. (2008). Store Showcase: It may be a second life, but product quality is still number one in the Armidi Shopping Village. *The Retail Digest*, Summer, 34–39.
36. van Amstel, P.. et al. (2000). An interchange format for cross-media personalized publishing. *Computer Networks*, *33*(1–6), 179–195.
37. Marsden, P. (2006). Introduction and summary. In J. Kirby & P. Marsden (Eds.), *Connected marketing: The viral, buzz and word of mouth revolution* (pp. xv–xxxv). Oxford: Butterworth-Heinemann.
38. Papagiannidis, S., Carr, J., & Li, F. (2006). M-commerce in the UK. In N. Dholakia, M. Rask, & R. Dholakia (Eds.), *M-commerce in North America, Europe and Asia-Pacific*. Hershey: Idea Book Publishing.

39. Papagiannidis, S., & Bourlakis, M. A. (2007). Advertising in the networked environment: Implications for fair use, media convergence and consumer privacy. In M. Quigley (Ed.), *Encyclopedia of information ethics and security* (pp. 15–22). Hershey: Idea Group Reference.
40. Mori (2002). The British mobile communications survey. http://www.mori.com/polls/2002/pdf/vodafone.htm. Accessed 29 January 2005.
41. Kerckhove, A. D. (2002). Building brand dialogue with mobile marketing. *International Journal of Advertising and Marketing to Children*, *3*(4), 37.
42. Haig, M. (2001). Talking to the teen generation. In *Brand strategy* (p. 30).
43. Papagiannidis, S., & Bourlakis, M. A. (2007). The consumer ethics of the virtual environment: an aetiology. In M. Khosrow-Pour (Ed.), *2007 IRMA international conference* (pp. 156–158). Vancouver: IGI.

Michael Bourlakis is a Senior Lecturer at Brunel Business School and Director of Postgraduate Studies. He graduated with a BSc in Business Administration from Athens University of Economics and Business and completed an MBA and PhD degrees at the University of Edinburgh. Michael previously held academic positions at Newcastle University, Oxford Institute of Retail Management at Templeton College, Oxford University and Leicester University Management Centre. Michael has published over 100 papers in numerous journals, books, conference proceedings and other academic and professional outlets and is an Editorial Board Member of five academic journals. He is also the Coordinating Editor for the International Journal of Business Science & Applied Management.

Savvas Papagiannidis is a Lecturer in Management in the Newcastle University Business School, UK and the Degree Programme Director for the MSc in Ebusiness and Information Systems. His research interests include management of Internet and emerging technologies, high-technology entrepreneurship, e-marketing and e-learning. His work has been published in several academic journals and presented at international conferences. Savvas has started a number of electronic business ventures and also worked as a freelance Internet developer, winning entrepreneurial awards.

Feng Li is Chair of E-Business Development at Newcastle University Business School (UK). For two decades his research has centrally focused on using information and communications technologies (ICTs) to facilitate the development of new strategies, business models, and organizational designs in different sectors. He has worked closely with organisations in banking, telecommunications, manufacturing, retailing, the creative industries and public services through research, consultancy and executive development. Feng was a Council Member of the British Academy of Management (BAM), and he has been the Chair of BAM E-Business & E-Government Special Interest Group since 2003. He served as Guest Editors and is on the Editorial Boards of several refereed international journals. His research on Internet Banking Strategies and Business Models, and on the evolving Telecommunications Value Networks and Pricing Models was extensively reported by the media. He is the author of 'What is e-Business? How the Internet Transforms Organizations', published by Blackwell (Oxford).